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Customer's perception towards online share trading in Kanpur

Abstract

Indian stock market is gaining lot of popularity in the recent years. People are aware about trading of shares in stock market. Share trading is carried out with the help of offline and online procedure. With technology up gradation, investors are shifting from offline share trading to online share trading. But still, investors are more focused towards offline share trading. As they believe offline share trading as a safer mode of investment. In 2000, NSE was dematerialized as it started online share trading procedure onshore. Although one decade has passed, investors are not inclined towards online share trading as they consider it risky and cumbersome. To understand customer perception towards online share trading, the following research is conducted in Kanpur city. This study will help to understand the reasons of disinterest among investors towards online share trading.

Keyword: online share trading, stock market

Introduction

Online share trading refers to the use of internet & software platforms for facilitating trading of shares across stock exchanges. Online trading is not limited to equity trading but also extended in commodity trading & mutual fund investments. With the use of internet across various trading channels, consumers have better insight and understanding on how to make best use of their savings and plan their investments in the best possible manner. Online trading in shares, stocks, commodities is done using DEMAT account and a bank account. Both the accounts are linked. Shares, stocks are transferred in virtual format into the DEMAT account of investor.

The birth of online share trading came with the debut of the Internet. Prior to this, everyone who traded placed their order through a broker who greatly influenced their purchase decisions. As a matter of fact, only large businesses had access to it. Today, however, daily investments are made by individuals through the Internet as online trading continues to remain one of society's most popular ventures.

Internet trading started in India on 1st April 2000 with 79 members seeking permission for online trading. The SEBI committees on internet based securities trading services has allowed the net to be used as an Order Routing System (ORS) through registered stock brokers on behalf of their clients for execution of transaction. Under the ORS the client enters his requirements (security, quantity, price buy/sell) on broker's site.

Where traders once had to physically call in their transactions, online trading opened a new window of opportunity. Traders were able to place their transactions independent of an external broker. Online brokerage firms became the new way to conduct business. The idea of being self-sustained as a trader was appealing. There was no need to get a broker involved and business could be conducted around the clock. If an individual was able to conduct appropriate preparatory research and had reasonable management skills, he was able to succeed online.

Applying conventional trading systems in India leads to many aspects of problems like manipulation, lot's of paperwork, insiders' illegal activities and etc. These problems cause traders' dissatisfaction and the lack of technological foundations creates an inefficient market. Stock market is growing up and the number of traders rapidly increasing, therefore following conventional method in handling and controlling the market, may in turn directs us to lose the potential power of this market in order to integrate the traders' small capital. With no doubt, traders leave the market where there is no appropriate surveillance over the activities because the unsatisfied customer will not take all the risk in stock market. So it is clear that if stock market as a supervision organization could not



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offer suitable services to the traders, market expansion is meaningless. In other words, it seems that providing and recovering service quality in this market may enhance traders' satisfaction and encourage investing more and more.

The benefits of online trading outweigh offline by a great margin. Perhaps the greatest benefit is the ability to take control of your own future. Online trading eliminates the "middleman," those sales agents who don't really have your best interests at heart. Online stock trading allows you to call your own shots. Using online trading, internet marketing and different online platforms, the trader and investor companies find it easy to spread the awareness and benefits of investments. On the other hand, the beginners and professional investors find it simple to browse through available investment policies, compare them and buy the suitable ones. With the help of this research, researchers will be able to locate the awareness of customers towards online share trading in Kanpur area. Still, there is a large segment of investors, who are not aware about the online share trading scenario.

Review of literature

Investments are largely dependent on various factors. Investors are focused towards various factors like risk, return, marketability, tax and convenience. In support of these factors, book written by Prasanna Chandra, "The dynamics of Indian financial markets" answered many questions like what is the relationship between risk and return, what is the importance of diversified investments and how risks can be shared within the diversification.

As we are aware about the uncertainty of share market, most of the investors are conservative in nature. They try to invest their money in stock market with the help of the brokers. According to them, brokers help them to reduce risk and unpredictability of stock market. To enhance this thought, study conducted by Jyoti Shanker Sahoo (2012), reflects that most of the Indian investors believe offline trading as a safer and easiest way to trade in stock market. As investors appreciate the thinking of stock traders and invest according to their advice and research.

Due to lack of exposure towards technology, investors consider online share trading as a challenging task. Investors need good knowledge and experience for operating the demat of Chinmaya (2010), most of the investors are unaware of online trading and they are not confident that they can do trading independently. But he also states that online trading has a bright future in upcoming days because of the technological development.

In the study carried out by Kasisomayajula (2012), people are facing problems for trading in stock market due to lack of information of stock market. Investors are more focused to invest their money in post office schemes, banks etc. investors are very confined towards stock market.

Technology is updating on a rapid rate, due to this investors are focusing towards demat account as it saves their time and brokerage. With the help of

online share trading, investors are able to judge their portfolio and continuously keep on upgrading it. In support of this, Researchers at Monash University's Australian Centre for Retail Studies (2009) have found easy Internet access and online retail spaces are a threat to some stores, though retail where the buying experience is required is likely to thrive. According to them, a boom in online trading and a surge in an "anti-retail movement" could spell the demise of some retail outlets by 2020 unless they revolutionise the way they do business. Moreover, manufacturers prefer to sell directly to the public and consumers opt to bypass stores and deal directly with wholesalers or even each other.

In order to increase the awareness towards online share trading, various awareness programs are conducted by BSE in various cities of India. The Investor Awareness program covers extensive topics like Instruments of Investment, Portfolio approach, Mutual funds, Tax provisions, Trading, Clearing and Settlement, Rolling Settlement, Investors' Protection Fund, Trade Guarantee Fund, Dematerialization of shares, information on Debt Market, Investors' Grievance Redressal system available with SEBI, BSE & Company Law Board, information on Sensex and other Indices, workshops and Information on Derivatives, Futures and Options etc.

Research Methodology

According to Clifford Woody, "research comprises defining and re-defining the problem, formulating hypothesis or suggesting solution, collecting, organizing, and evaluating data making deductions and reaching conclusions and at last carefully testing the conclusion to determine whether they fit the formulated hypothesis.

Objective of the study

To study about customer awareness towards online share trading in Kanpur.

Sources of data:

Primary data: Questionnaire

Secondary data: periodicals, journals, news papers, and website

Type of scale: nominal scale

Type of sample: probability sampling

Type of statistical tool: chi square

Level of significance: 5%

Hypotheses :

H₀: customer's awareness towards online share trading in Kanpur city

H₁: customers are not aware towards online share trading in Kanpur city.

1.1 Awareness about online share trading

Particulars	fo	Fe	(fo-fe)	(fo-fe) ²	(fo-fe) ² /fe
Yes	40	30	10	100	3.34
No	20	30	-10	100	3.34

$$\chi^2 = 6.67$$

Critical value (0.05, 1) = 3.8415

$\chi^2 >$ critical value so H₀ is rejected.

1.2 Method adopted for trading in share market

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Online	54	15	39	1521	101.4
Manual	2	15	-13	169	11.27
Both	3	15	-12	144	9.6
investment firm	1	15	-14	196	13.07

$X^2 = 135.33$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.3 Availability of Demat A/c with investors.

Yes	54	30	24	576	19.2
No	6	30	-24	576	19.2

$X^2 = 38.4$

Critical value (0.05, 1) = 3.8415

$X^2 >$ critical value so H_0 is rejected.

1.4 Frequency of trading in share market.

Daily	22	15	7	49	3.27
Weekly	14	15	-1	1	0.07
Monthly	3	15	-12	144	9.6
according to market	21	15	6	36	2.4

$X^2 = 15.33$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.5 Duration from which investors are trading online

less than 1 year	8	15	-7	49	3.27
1-2 years	22	15	7	49	3.27
2-5 years	26	15	11	121	8.07
above 5 years	4	15	11	121	8.07

$X^2 = 22.67$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.5 Knowledge of trading timings among investors

Yes	48	30	18	324	10.8
No	12	30	-18	324	10.8

$X^2 = 21.6$

Critical value (0.05, 1) = 3.8415

$X^2 >$ critical value so H_0 is rejected.

1.6 Means adopt for accessing Demat A/c.

by internet	17	15	2	4	0.27
personal meeting with broker	12	15	-3	9	0.6
by phone	30	15	15	225	15
by any other means	1	15	-14	196	13.07

$X^2 = 13.93$

$X^2 >$ critical value so H_0 is rejected.

1.7 Collection of cash after placement of order

received immediately	0	15	-15	225	15
T+2 days	42	15	27	729	48.6
don't answer	12	15	-3	9	0.6
no answer	6	15	-9	81	5.4

$X^2 = 69.6$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.8 Confirmation of trading received through

by email directly	27	15	12	144	9.6
by SMS	9	15	-6	36	2.4
by brokers email	18	15	3	9	0.6
any other means	6	15	-9	81	5.4

$X^2 = 18$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.9 Online trading helps to attract new investors

Often	21	15	6	36	2.4
Sometimes	27	15	12	144	9.6
Seldom	10	15	-5	25	1.67
Never	2	15	-13	169	11.27

$X^2 = 24.93$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.10 Reason for adopting online system for trading

time suitability	9	15	-6	36	2.4
user friendly	18	15	3	9	0.6
place convenience	26	15	11	121	8.07
all of above	7	15	-8	64	4.27

$X^2 = 15.33$

Critical value (0.05, 3) = 7.8147

$X^2 >$ critical value so H_0 is rejected.

1.11 Transparency in online system of trading

yes	47	30	17	289	9.63
no	13	30	-17	289	9.63

$X^2 = 19.26$

Critical value (0.05, 1) = 3.8415

$X^2 >$ critical value so H_0 is rejected.

1.12 Electronic trading is an easy and fast way of trading

Yes	49	30	19	361	12.03
No	11	30	-19	361	12.03

$X^2 = 24.06$

Critical value (0.05, 1) = 3.8415

$X^2 >$ critical value so H_0 is rejected.

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With the above research, null hypothesis of the study is rejected. Investors are not aware about online share trading and their advantages.

Recommendations

Even through the exchanges were mechanized, they are to be accessible to rural areas and such the capital market should be made more rural friendly. There is a recommendation to the exchange authorities to take steps to educate Investors about their rights and duties to increase the investors' confidences. Still, there is lack of awareness in the rural area as investors are less technology addicted. Different training programs should be conducted in different areas in order to increase the practical knowledge of online share trading. Retail investors should focus on the regular income and regular investments. Different advertisements should float on the various media like televisions, radio, newspaper etc.

Conclusion

Online investing has benefits to offer investors as well as brokers. These benefits include low transaction costs, convenience, speed, boundary spanning, improved communication, and risk management. However, these benefits do not come without costs. Some costs of online trading include information-processing costs, unobservable costs, information illusion, and smaller commissions for brokers. Although online investing is gaining prominence, it will not be for everyone. Some will not trust the security of trading online and others will not have the time to do the research required and will prefer to have traditional brokers invest for them. Overall, online investing will only encourage new investors to trade in the stock market, bringing together buyers and sellers to make the market more efficient. After some of the kinks are worked out of online trading, it will tend to be more beneficial to the financial industry in the long run without many negative effects. Even though online trading has slowed down somewhat at the present time, it is our belief that it will pick up speed in the future. Once investors have become more comfortable with the current economic conditions and foresee brighter economic conditions they will return.

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A critique of the developmental model of underdeveloped states of India with Bihar as the test case



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Abstract

Of late, public discourse has been filled with journalistic writings praising the developmental work done by Government of Bihar under Mr .Nitish Kumar. In this article, an attempt has been made to find out what exactly is the development model that Mr. Nitish Kumar is being credited for having devised. Furthermore, it has also been attempted to test the efficacy of this developmental model.

Although, the paper tries to restrict itself to the case study of Bihar yet, it could very easily be a critique of the developmental model of any other state of India or for that matter even of Union Government itself. During the course of researching for this paper, it was found that the developmental models of no two states in India are significantly different from each other. What differentiates one state from the other or in other words the 'performing' states like Gujarat, Maharashtra, Tamilnadu, Karanataka etc from the 'non-performing' states like UP, MP, Bihar, Rajasthan, West Bengal, Orissa etc is the seriousness displayed by the administration of the respective states to implement whatever model they have developed for themselves. It is in this aspect that the so-called performing states tend to fare better than the so-called non-performing states.

In a nutshell, it can be said that the basic aim of this paper is to check if the Nitish Kumar model of development is really suitable for a state like Bihar.

Keyword: Development model, Bihar, Nitish Kumar, Indian States, Economic policies, State finances, Policy reforms, Education, Health care etc.

Introduction

Bihar presents a rather unique case among all the states of India. This is a state which defies almost all forms of economic logic by clinging on to the quagmire of counter-productive politics and mind boggling poverty. Not just this, it is also a state which has the unique distinction of having successfully undertaken the journey from its past position as the crown jewel of India to a member of the 'BIMAROU' club. From being envied and looked up to by rest of India to becoming a butt of jokes and a subject of ridicule, Bihar indeed presents a picture which is difficult to resist from a researcher's point of view.

The last 20 years or so in the life of Bihar have been nothing short of a truly amazing journey wherein the state has lurched from one crisis to other without ever managing to find the right answers to the questions facing it. The period starting with the tenure of Mr. Jagannath Mishra and continuing right up to the present has baffled observers endlessly. In fact, a deeper look into the various forms of malaise facing the state can sometimes lead one to believe that the entire focus of the state has gone wrong.

Methodology:

This article is loosely divided into three parts. In the first part, there is an attempt to identify the various developmental models currently available to policy makers. It must be noted that no attempt has been made to substantially restate any of the existing models or the commentaries thereupon by various scholars. All the discussions on various models have been taken from various online sources with proper acknowledgements wherever applicable.

In the second part, data available from various secondary sources has been gathered to check the applicability or otherwise of the current developmental model of Bihar. In the third and final part, a very modest attempt to suggest outlines of a possible alternative course of policy making has been made. In spirit, this article is essentially a representation of the problem from a policy maker's perspective rather than from a pure academic perspective.

Theoretical framework of the critique:

The scope of economic development includes the process and policies by which a nation improves the economic, political, and **social well-being of its people**. Before actually delineating the contours of the alternative economic model, it is important to first understand what a 'model of economic

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Mansell and Wehn in their work '**Knowledge Societies: Information Technology for Sustainable** economic growth namely the increases in per capita income and an improvement in the standard of living. The theory of economic development, as stated by **Schumpeter** in his work '**The Theory of Economic Development**', is basically a set of techniques that can be employed to break the condition of stasis that persists in a pre-industrial economy or in an economy experiencing stagnation. According to **Schumpeter (2003)**, the changes in this equilibrium state of stasis can only be caused by intervening factors coming from the outside.

W.W. Rostow, the great structuralist economist in his seminal work 'The Stages of Economic Growth: A Non-Communist Manifesto' talked about economic growth being a process marked by milestones separating one stage of development from another. According to this model, the economic growth of any society can be divided into five basic stages of varying length namely:

1. Traditional society:

- Subsistence agriculture;
- Limited technology.
- Almost non-existent physical and social infrastructure

2. Pre-conditions to "take-off"

- Growth of primary industries
- Mechanization of agriculture
- Investment in physical infrastructure
- Mass education & Social mobility
- Nationalism and a sense of shared economic interests

4. Take-off:

- Migration of man power from agriculture to industry
- Mass manufacturing of low value added goods.
- The "secondary" sector expands rapidly
- Urbanization

5. Drive to maturity:

- Diversification of the industrial base and rise of new industries
- From an investment-driven to consumption driven economy
- Large-scale investment in social infrastructure

6. Age of High mass consumption:

- Huge industrial base of the economy
- Low share of the primary sector

c. Mass consumerism and mass prosperity

Rostow's model rejects the Marxist emphasis on self reliance and equitable development. Rostow argued that economic take-off must initially be led by an engine comprising only a few sectors. This approach fitted beautifully with the the idea of comparative advantage propounded by David Ricardo. It is in this sense that it is said to form the foundation of the theory of modernization in social evolutionism. Rostow's model is however not the only model of development.

Share of different sectors in the state's GDP:

Year	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01(Q)
Total produce of primary sector	1069537	1225776	1031494	1501876	1357663	1664747	1707985	1812780
SGDP	2097127	2372810	2206268	2982862	3110655	3859907	4099794	4453263
%age of primary products in SGDP	51.00	51.66	46.75	50.35	43.65	43.13	41.66	40.71
Manufacturing	192219	182350	201393	222750	332451	479820	499200	519814
%age of manufacturing in SGDP	9.17	7.68	9.13	7.47	10.69	12.43	12.18	11.67
(Transport, Communication, Hotels & Restaurant)	405312	467347	412970	588698	662787	836804	883108	956075
%age of Transport, comm, Hot & Res) in total SGDP	19.33	19.70	18.72	19.74	21.31	21.68	21.54	21.47
Finance & real estate	107045	122292	146922	184610	216974	231551	272185	321778
%age of fin & real estate in SGDP	5.10	5.15	6.66	6.19	6.98	6.00	6.64	7.23

Some of the other important theorizations on development that form the crux of the body of developmental studies can be summarized as follows:

1. 'Backwardness' model by Alexander Gerschenkron:

Whereas the Rostow model can be said to be largely structuralist anchored in the idea of of linearity of stages of development, this model is a non-linear model which means it allows for different stages to coexist or for one or a few stages being skipped completely by an advancing society to take a leap to higher stages of development. Gerschenkron had cited the example of Meiji restoration as an instance where a society leapfrogged quite a few stages of Rostow's linear model to reach higher stages of development.

2. Core-Periphery theory of development i.e. Friedmann's Model:

This model too is a structuralist model and is based upon the idea of duality of core and the periphery. Core is defined as industrially development and periphery as backward. Often is the periphery dependent on the core. The relationship between core and periphery is one of producer-consumer.

The model can be divided into four basic concepts:

- Core** – usually capital city or a large port city dominating the economy
- Upward transitional stage** – Proximity to core as an advantage.
- Downward transitional areas** – Distance from core as a disadvantage.
- Resource frontiers** – Periphery as supplier of primary goods.

The model leaves open the possibility of multiple cores. In fact, as per the model, the greater the number of cores, the faster and more equitable would be the process of development.

Dependency Theory:

This theory is a direct result of the experience of colonialism and can be understood as a variant of core-periphery model. The coloniser exploits resources in the colony and reduces the later to the position of supplier of primary goods and a consumer of the finished products coming. Policies like trade protectionism and import substitution were some of the important prescriptions coming from this model.

Bihar: A case study of missed economic opportunities:

It is hard to dispute the fact that almost all the important economic indicators narrate the story of sordid state of affairs in Bihar.

Source: Directorate of Statistics and Evaluation (State Income), Bihar, Patna

<http://gov.bih.nic.in/Depts/PlanningDevelopment/Statistics/reptab25.pdf>

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The present day Government of the state is claiming to be working to reverse the decades old rot that it inherited from its predecessors. However, there seems to be a disconnect between the claims of the Government and the objective reality out there on the ground. The following tables depicting the state of certain economic parameters only confirm this intuitive inference:

Share of different sectors in the state's GDP:

Rank	State/Union Territory	HDI (2011)
High human development		
1	Kerala	0.790
2	Delhi	0.750
Medium human development		
1	HP, Goa, Punjab, North eastern India (excluding Assam), Maharashtra, TN, Haryana, J&K, Gujrat & Karnataka	0.617 for Goa to 0.519 for Karnataka

Source: Indian Human Development Report 2011, which is based upon data from 2007 to 2008.

It is not just the relative strength of individual industries in Bihar's economy which determines its backwardness. When the SGDP of the state is viewed as a percentage of the national GDP, the story does not change much.

Share of some states in the GDP of India:

State	Agr & Allied	Industry	Services	GDP in Rs (cr)	GDP in \$ (Bn)	Growth Rate	Share of India's GDP	Per-capita GDP
MH	150,622	382,715	715,116	1,248,453	234	16.86%	14.95%	101,314
UP	193,419	152,098	342,319	687,836	129	13.85%	8.23%	30,051
AP	140,343	186,172	349,282	675,798	127	14.74%	8.09%	68,970
TN	77,655	192,174	369,196	639,025	120	12.82%	7.65%	84,496
GJ	96,862	194,778	221,532	513,173	96	15.33%	6.14%	89,668
BR	66,185	46,394	140,113	252,694	47	24.40%	3.03%	22,691

Note: Exchange rate of INR53.3784 has been used to convert the GSDP in USD.

Source

http://unidow.com/india%20home%20eng/about_unidow.html

The table above clearly shows the heavy weightage of primary sector in the economy of Bihar, low levels of human development, extremely low share of the state in the national output especially when seen against its share in national population etc. However, the trend started very early, perhaps in late sixties, and has been continuing ever since with **intermittent periods of growth leading to some hope but ultimately to the repetition of the same story**. A look at the following table only reinforces this notion.

Growth of Factory units in Bihar and India			
Year	Bihar (Units)	India (Units)	Bihar's Share (%)
1994-1995	3600	121,010	2.92
1995-1996	3617	134,571	2.68
1996-1997	3317	134,556	2.50
1997-1998	3297	135,551	2.43

Source: Prasad Jagdish, "Bihar-Dynamics of Development", Mittal Publication, pp. 33

However, not withstanding the picture that emerges from the tables above, Bihar was not always like this. The available literature on Bihar's economic journey over the past 50 years clearly shows a secular trend of relative decline.

Economic history of Bihar in post-independence India:

In order to understand the broader trends, one can divide the history of post-independence Bihar into epochs representing different phases in the economic life of the state. Those epochs are as follows:

1. Golden age of congress (1947 – 80)
2. Era of economic consolidation and the decline of congress (1980 – 89)
3. Dark age of the state – Era of economic collapse (1980 – 2005)
4. Rebirth of hope (2005 onwards)

Golden age of Congress (1947 – 80):

This was the time when the atmosphere was one of hope and ambitions. Being the party in power, Congress party, guided by Nehruvian socialism, tried to shape the contours of Bihar's economy. The state Government tried to adopt a public sector dominated model of development with special focus on heavy and agro-based industries. Some of the well known parameters pointing to the economic state of affairs in Bihar during those days are as follows:

1. Until the mid 50s, 25% of India's sugar output was from Bihar.
2. Dalmianagar was a large agro - industrial town.
3. Creation of a dense cluster of heavy industries in south Bihar.
4. Large-scale mining industry.
5. There were attempts to industrialize the northern half of the state between 1950 and 1980:
 - a. An oil refinery in Barauni,
 - b. A motor scooter plant at Fatuha,
 - c. A power plant at Barauni and Muzaffarpur.
 - d. Creation of SME clusters in Muzaffarpur, Hazipur and Bhagalpur

So, in a nutshell, we can conclude that during this epoch, Bihar was by and large marching parallel to the rest of the country in the developmental journey.

Era of economic consolidation and the decline of congress (1980 – 89):

Data published by Indian government from 1980 to 1990 shows that undivided Bihar experienced a GSDP growth of 72% during this period in spite of the various socio-economic problems of the state which means it was one of the fastest growing economies in the country.

By late 1980s, the budgetary deficits of the state ballooned to such an extent that the state was forced to reduce its expenditure. Out of the two available options of increasing revenue and reducing expenses, the state chose the later. They achieved this reduction by cutting down on capital expenditure.

Dark ages of the state – Era of economic collapse (1990 – 2005):

This period coincides with the ascendancy of Mr. Lalu Prasad Yadav. He never had any concrete economic agenda and after the split from Janata Dal, in order to cement position of his fledgeling new party, he was forced to take recourse to increasingly divisive and sectarian agenda which was completely devoid of any sound economic rationale.

The characteristics of this period were as follows:

Symbolism over substance e.g. social justice

Policy formulation and governance was outsourced to the bureaucracy

Criminalization of politics and the resultant flight of financial & human capital

Large scale decay of institutions e.g. educational institutions
With the carving out of the separate state of Jharkhand, Bihar suffered a big loss of revenue with the new Bihar producing only 60% of its former output.

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Economic Indicators under the RJD rule:

Pre-RJD (1980s)	Post-RJD (1990s)
The non-agricultural sector grew by 6.62% against the national average of 6.61%.	3.19% against national average of 7.25%.
Per capita income grew by 2.45% against 3.32% for India as a whole.	0.12% as against 4.08% for India.
Agriculture growth of 2.21% against India's 3.38%,	It was 2.35% in Bihar against national average of 3.14%.

Source: <http://www.peopleofbihar.com/forum/topics/bihar-economy-history>

Return of hope (2005 onwards):

The end of the RJD rule or the 'Jungle Raj' signaled the end of the darkest hour. The victory of NDA marked the reemergence of the development plank. The new Government did all in its powers to send out the right signals. Following are some of the statistics sums up post Lalu Bihar.

- Bihar's SGDP grew by 12% per year for eight years..
- Impressive gain of around 17% on literacy front.
- Female literacy improved even faster, by 20 percent.
- Improvements on infant mortality rate (44/1000).
- Bihar's life expectancy is now 65.8 years, just short of the national 66.1.
- Bihar's death rate is down to 6.7/1000 against the national average of 7.1.

Source:

<http://blogs.timesofindia.indiatimes.com/Swaminomics/entry/bihar-champion-athlete-does-not-need-steroids>

The real state of affairs in the state:

One has to give credit to the present NDA regime in the state for having turned the tide of the things in terms of the overall national perception about the state. A good evidence of this lies in the frequency with which the 'Memorandums of Understanding' i.e. MoUs are being signed between the state Government and the investors. However, the pathetic rate of conversion of MOUs into actual investments is however a cause of worry. Furthermore, if one were to discount the projects initiated during the first term of the present Government then the pipeline seems to have gone even drier during its second term. Going by the growing murmurs of dissatisfaction amongst the people, the state Government definitely seems to be on a sticky wicket. The fact that the present Government, after reaping the rewards of the Governance agenda, seems to be falling into the same trap of 'politics of symbolism', is symptomatic of the creeping malaise. So, before things really get out of control, it is important to do a course correction.

Present economic model of the state:

The policy thrust of the current regime can be summarized through the following excerpts taken from its document on economic policy:

- Development of physical infrastructure.
- Creation of a land bank to meet the land related needs of industry
- Creation of marketing infrastructure to benefit the MSME sector
- Proactive monitoring to ensure financial health of the industries
- Setting up of effective single window system
- Industrial parks by BIADA to promote industries in rural and urban areas

Source: <http://industries.bih.nic.in/Documents/IIP-2011-EN.pdf>

According to the 'Bihar industrial license policy – 2011' document released in 2011, the state Government has

identified the following industries as focus areas to ensure development of the state:

1. **Agro based Industries**
2. **Tourism related Industries**
3. **Super Speciality Hospital**
4. **Higher / Technical Educational Institutions**
5. **Information Technology based Industries**
6. **Electronic Hardware Industry**
7. **Textile Industry**
8. **Energy / Non-Conventional Energy**

Looking at the focus areas mentioned above and the pattern of investments made by the NDA regime in Bihar, it is clear that Government of Bihar has opted for an eclectic mix of industries with varying degrees of requirement of capital.

However, in order to attract investments, there are two questions that must be answered from the perspective of the State Government and one from that of the the industry itself, which are as follows:

Do these industries represent the right choice in terms of targets to be pursued for investment?

Whether the Government is doing all the right things to attract the required levels of investments?

And, the question from the point of view of the industry is as follows:

Given the scarcity of funds and large number of possible investment destinations, does Bihar really represent a compelling case for investment?

Each of these questions is quite vast in terms of their scope and hence any attempt to deeply analyze the answers would be way beyond the scope of a small article like this.

As a result, we would rather try to seek answers in a syncretic fashion so as to achieve a holistic understanding. For success in any drive to attract investment, the following must be ensured:

Raw materials

Power supply

Labor supply

Access to finance

Efficient logistical network

Well developed network of support industries

Favorable law & order situation

Comparative advantage over alternative investment destinations.

Let us now try to see where Bihar is placed on the above mentioned parameters that finally tilt the scales in favor of/against any particular investment destination. In fact, from the point of view of food processing industry, Bihar has at least the natural advantage in terms of potential to produce the required raw materials, for other industries Bihar has almost nothing to offer.

Large supply of cheap raw materials i.e. raw food:

A cursory look at a 2009 ICAR report, shows that more than 50% of Bihar's district are areas of low agricultural productivity. In fact, not just that, according to various reports published by multiple research bodies, Bihar does not figure in the list of top three producers of many of the important agricultural products.

However, in absolute terms, the state does have some potential for a fruitful albeit limited in scale food processing industry. This conclusion is based on the fact that the state contributes about 10 per cent of India's common fruit and vegetable output, but less than 1 per cent of processed output. This means that the state can aspire to have a share of at least 10% of India's total food processing output.

Large base of cheap and adequately trained manpower:.

On these parameters, Bihar seems to be one of the worst performers in India. According to a UNDP report, over 50 percent of the population over 15 years of age is illiterate.

Another parameter that defines the usefulness of the labor force is its health. Here too, according to the same UNDP

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report, health quality of workforce in Bihar is one of the worst in India.

3. **Large domestic market:** Although the population of Bihar is large yet, it is a population with limited disposable income for anything beyond the bare necessities. According to the NSSO Consumption Survey (2004-5), Bihar is the state with the lowest level of per capita expenditure in the country. Therefore the large population of Bihar is, in that sense, not really a market that can be exploited in the near term by any industry producing anything beyond the fundamental necessities.
4. **Dependable supply of water and power:** Bihar seems to be better placed than many other states in view of its geographical advantages reflected in the form of ample rainfall and a sound network of rivers that can be exploited. However on the question of power, Bihar has a poor track record. Bihar, with its current meager demand for electrical power, faces a daily shortage of 1100 MW. Large scale load shedding and over dependence on diesel generators is therefore the norm in this state.
Bihar is a power-deficient state with an abysmally low annual per capita consumption of power at 122.11 kWh against the national average of 778.71 kWh. The power deficit during 2010-11 was 44.53 % and it went up to 65% in 2012. The upcoming addition to the generation capacity is only around 2000 MW (NTPC Barh project phase I & II combined). Out of this half would go to the national grid. Hence even the proposed capacity addition would just about meet the present needs leaving very little to spare. In such a situation, it is difficult to understand how would the state get the additional power that would be required by industry?
5. **Well developed logistics network:** About 77% of roads in Bihar are rural roads unsuitable for large scale exploitation by industry. Moreover, according to a report only about 50% of the roads are all weather, surfaced roads.
The civil aviation infrastructure in the state leads much to be desired. There are only two fully functional airports namely Patna and Gaya in the state. And, both these airports are severely resource constrained. Railway network in the state is relatively better than road and air transport infrastructure. All the important places in the state are well connected through railway lines.
6. **Well developed network of support industries:** There are no ancillary industries worth their names in Bihar. As a result, all the industries that come up in Bihar would either have to set up their own feeder units or rely upon import. This would adversely affect the RoI for any investment made in Bihar.
7. **Easy accessibility of credit:** Credit is not a state subject hence there is not much that a state can do directly on this front. However, there are important ways by which state Governments, even though they don't own the banking channel, do play a significant role in enhancing the credit infrastructure for domestic industries e.g. setting up of state industrial finance corporation. Whatever be the option selected by the State Government, what stands out is the fact that banking channel is unwilling to lend its money to industries in Bihar. In fact, as per the report of the SLBC, in 2011 not more than 36% of the total deposits mobilized in Bihar were disbursed as credit to local industries. So, availability of credit is certainly not a factor that is going to encourage potential investors to invest in Bihar.
8. **Excellent law and order and policy regime:** Post the split of NDA in Bihar, Nitish Government in order to build a vote bank of its own, has shown a readiness to mingle with many of the shady elements of the last regime. If this continues then it is unlikely to send positive signals to the investors.
On the question of a predictable and favorable policy regime, Bihar today definitely seems to be much better placed. However, the only question is can Nitish sustain this

in view of his now diminished strength in the assembly? In this context, it is important to take note of the following factors:

- **Inability of Nitish to build a dependable vote base of his own**
- **A relatively eventless second term**
- **Rising clout of elements of the old regime**

Based upon the above analysis and in view of the fact that most states in India are competing for the same investible capital, it becomes quite clear that the path ahead for Bihar would not be easy.

Keeping its present resource base in mind and taking note of the present and future demographics of the state, Bihar should focus on **low capital, low gestation period, labor intensive and high multiplier effect industries.**

Comparison of Industries based upon their Economic Impact Multipliers:

Before we actually start identifying industries suitable for Bihar or other states facing similar socio-economic challenges, it is imperative to have an idea about the potentially macro-economic pay-offs resulting from the pursuit of different industries.

Comparison of Industry Economic Impact Multipliers				
Industry	Jobs created per million \$ of investment		Total multiplier	
Industry	Direct jobs	Total jobs	Output	Employment
Aircraft	1.6	9.9	3.0	6.2
Automobiles	0.8	9.2	2.7	12.2
Computers	0.6	8.6	2.8	14.1
Comp. Services	11.5	30.7	2.1	2.7
Iron and steel	1.4	10.9	2.7	7.5
Pharmaceuticals	1.8	10.6	3.1	6.0
Scientific R&D	5.8	19.5	2.8	3.4
Software	1.9	12.3	2.6	6.4

Source: 2010 U.S. IMPLAN Economic Impact Model

Relevant short to medium term conclusions based upon the table above:

Capital intensive manufacturing industries are by and large low in their capacity to create direct jobs per dollar of investment. Services industries are better at creating direct jobs per dollar of investment

Indirect jobs created as a result of investment in manufacturing sector are more than similar investment in services sector

Options available with Government of Bihar:

Given the resource limitations faced by the state and the need to tide over the gigantic developmental challenges facing it, there is a pressing need to delineate the industries that would have to be nurtured as part of the alternative policy.

The right choices, in light of the resource constraint faced by the state, the strengths and weaknesses of individual industry, are as follows:

Education:

According to noted columnist **Lance Dickie** every dollar spent on the university system, returns back to the state in the form of tax revenues of \$1.48 i.e. a return of 48%. Similarly according to **Vermont Business Roundtable** report of 2004, for an investment of \$150 million on higher education, the economy received benefits of \$5-\$7 per dollar i.e. an RoI of 400 - 600%. So, whatever be the final returns, investment in education definitely seems to pay rich dividends.

Some facts about the potential of education sector in India:

According to India Ratings, a Fitch group company, the sector grew at a compounded annual growth rate of 16.5% during FY05-FY12. The higher education (HE)

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segment was at 34.04% (\$17.02billion) of the total size in FY10 and grew by a CAGR of 18.13% during FY04-FY10. The expansion on this scale and the lack of finances available with the Government only means that only a more active participation from the private sector can bridge resource gap. And, within India, Bihar represents really a microcosm reflective of all that is wrong with our educational policy.

Space for Bihar in this sector:

Why can't the policy planners in Bihar aim to capture the educational market within India? As can be seen from the figures cited above, the size of the Indian market itself would be so large that any service provider would find himself profitably engaged by just servicing this segment.

2. Media including Entertainment:

According to various reports like FICCI Frames, PWC report on entertainment industry in India, this industry is growing at a CAGR of above 15%. And, it is expected to continue doing so in the near and medium term.

At the moment, Bollywood is suffering in Mumbai because of the following reasons:

- High cost of Mumbai
- Limited talent pool available in Mumbai
- Misguided taxation policies of Govt

Moreover, almost all the Bhojpuri films and television serials are being serviced the post-production activities level at Mumbai. This by itself is a big market. Therefore, if right policies are pursued, at the very least there is the possibility of retaining that revenue which Bhojpuri industry is providing to Mumbai and additionally of attracting at least a segment of Hindi film & TV related requirements to Bihar.

3. Healthcare:

Two separate reports produced by India Brand Equity Foundation (IBEF) and Overseas Indian Facilitation Centre (OFIC) provide some interesting pieces of information about the Indian health care market:

- CAGR of 15% and size of US\$ 250 billion by 2020.
- Estimated to reach US\$ 100 billion by 2015, growing 20 per cent year-on-year (y-o-y), as per rating agency Fitch.

According to **RNCOS report titled 'Indian Healthcare - New Avenues for Growth'**, India is one of the most competitive destinations with advantages of lower cost and sophisticated treatments. The report further elaborates that several key trends are backing the growth of India's healthcare sector.

Trends and Investments:

As per Venture Intelligence, a research firm, this sector in 2012, received PE investments worth US\$ 1.2 billion. Similarly, according to DIPP, between 2001-12, this sector attracted FDI of around US\$ 12 billion. As per RNCOS report titled 'Indian Pharma Sector Forecast 2014', Indian Pharma sector would continue to have double digit growth in near future. According to Gartner, 2013 saw an IT spend of around 5700 crore by Indian healthcare sector.

As per an RNCOS report, by 2015, the hospital services market would be worth around US\$ 81.2 billion.

Space for Bihar in this sector:

Health care and allied sector of India, as can be seen from various reports like RNCOS and DIPP reports would continue to remain attractive for foreign as well as domestic investors..

This means that there is an urgent need for capacity expansion in this sector. Following areas would drive the investments in this sector in the near future:

- Rising spend of Indians on healthcare
- Medical tourism
- Need for healthcare for the rising population of elderly in the advanced economies
- Need to meet the demand for affordable drugs especially in developing countries

Bihar has a great opportunity to meet these requirements and thereby emerge as an important player in this sector.

4. R & D, IT&ITES (BPO, LPO etc):

Some facts about the R&D space in India:

According to Zinnov Management Consulting, around \$42billion worth of R&D work will be outsourced to India by 2020. According to the same report, in 2012, India had 874 captive R&D facilities servicing MNCs.

This sector would be driven by economics of labour. This means, any place which can offer the possibility of reduction on expenditure on highly skilled manpower, the key component of any knowledge driven industry, would emerge as a preferred destination for investments in this sector.

Here too, a glance at the economic policies of various state Governments in India indicates that no one has really understood the fundamentals of *late-capitalism* as described by Ernest Mandel in his 1972 book *Der Spätkapitalismus*. As a result, the policies of none of the state Governments seem designed to take advantage of this particular phase in the history of capitalism. Bihar therefore has an opening here. All that is needed is for the state to make investments to produce the right kind of manpower in large numbers.

Construction:

The way to improve the productivity of agriculture sector do that is through mechanization. However, improved productivity would lead to freeing of labour from agriculture and so, one of the aims should be to create avenues where this newly released and unskilled workforce can be employed. It is here that construction comes to the rescue of policy planners.

In addition, construction is that economic activity which leads to the creation of physical infrastructure which is a sine-qua-non for most industries. Therefore construction does not represent a mere choice but also a compulsion for policy makers in Bihar.

Readymade garments:

Readymade garments industry is another segment which can help policy planners create employment avenues especially for rural women who already possess the basic skills needed by this industry. Women especially the rural women, because of the typical feudal socio-economic conditions prevalent in many parts of India are not in a position to opt for employment far away from there.

However, this same social order which prevents large scale geographical mobility of women also ensures that almost all of them have some fundamental skills like sewing, weaving, tailoring, knitting etc. All these are skills that can be used by the readymade garments industry. Moreover, taking into account the clothing related needs of its large population especially the poor ones, there is an imperative for policy makers in India to ensure the availability of low cost and durable clothing for its population. This industry in that sense ensures the following:

Bihar can therefore easily emerge as the hub for this industry in the eastern parts of the country.

Agriculture:

The goal of any sound agricultural policy should be to improve the productivity of the sector. Umpteen number of studies have shown how improvements in productivity of agriculture leads to fastest rate of decline in absolute poverty. The most chronic problems facing Bihar's agriculture have their roots in the following:

- Lack of dependable irrigation facilities
- Lack of sufficient power supply to agriculture
- Lack of credit for agriculture

Lack of marketing network to sell the produce

Therefore any meaningful agricultural policy must aim to attack the above mentioned factors afflicting the agriculture sector in Bihar.

Pre-requisites for the economic reforms to work:

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At present the biggest economic actor on the scene is the state itself. Therefore, to begin with, the state would have to reform itself. Now, there are two aspects of the functioning of a state namely **legislation and administration**.

A closer look at the reform effort in India reveals that it has been largely focused on the legislative side with very little effort on the administrative part. Having travelled thus far on the road to legislative reforms and still not having reached the desired goals, it is not so difficult to conclude that we need some serious catching up on the political and administrative reforms. Some of the questions that would need to be taken up in this context are as follows:

Delineating a grand narrative:

- The question of identity and destiny

Electoral reforms:

- Defining the role of political executive
- An inviolable code of conduct for political players
- Ensuring fruitful interaction between academia and politics
- Ensuring true democratization of the political space
- Ensuring accountability of political executive

Bureaucratic reforms:

- Defining the role of Indian bureaucracy
- Defining the relationship between bureaucracy and political executive
- Right sizing the bureaucracy
 - How far can one go if one becomes a career bureaucrat
 - What would these institutions do?
 - How would they be different from the existing institutions – Concept of accountability and authority

A larger discussion on the type and extent of political and bureaucratic reforms in light of the questions mentioned above is beyond the scope of an article like this.

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Foot Notes

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Harmonic Elimination by Shunt Active Power Filter

Abstract

In this paper, three phase shunt active power filter is given for compensating multiple non-linear loads. The circuit models a standard shunt AHF with IGBT inverter and series inductor on the AC side and DC capacitor energization. The AHF uses a PLL to generate a reference sinusoidal source current which is in-phase and has the same RMS gain as the load current. Current control is implemented through feedback modulation of a dynamic hysteresis band PWM controller. The shunt line current tracks the reference current within a hysteresis band. By comparing the reference currents calculated by the controller with the measured values of compensation currents, the command signals for the inverter semiconductor switches can be produced.

Keyword: Shunt AHF, IGBT inverter, Series Inductor

Introduction

Nonlinear loads cause voltage and current waveforms distortion in the ac power network. It results in harmonic related problems including substantially higher transformer and line losses, reactive power and resonance problems, over-voltages, over-heating, Electro Magnetic Interference (EMI) problems, and other undesirable effects. The result is reducing system stability [1]-[3]. Passive filters alone have been traditionally used to eliminate the harmonics in utilities due to their low cost and high efficiency. Shunt-connected passive filters, tuned to show low impedances at different dominant harmonic frequencies, are widely used. However, these filters have multiple drawbacks including that at fundamental frequency they generate fixed quantity of reactive power affecting sometimes the voltage regulation at the PCC. Active filters were developed to mitigate problems of passive filters. They are more effective in harmonic compensation and improved system performance. But using only active filters is a very expensive solution because it requires comparatively high power converter ratings. Hybrid Active Filter (HAF) topologies which combine the advantages of both active and passive filters [4]-[6] is more appealing in terms of cost and performance. They are cost-effective by reducing the KVA rating of the active filter as much as possible while offering harmonic isolation and voltage regulation [5].

Two kinds of hybrid active filters have been developed: a hybrid series active filter and a shunt hybrid active filter. To compensate for both current and voltage system harmonics, a shunt and series active filter configuration must be used respectively. Integrating this filter serves to eliminate load harmonics whilst ensuring the supply remains fundamental. For harmonic elimination, active filter can be classified on the basis of various control technique- open loop system & closed loop system. Open-loop systems sense the load current and the harmonics it contains. They inject a fixed amount of power in the form of current (mainly reactive) into the system, which may compensate for most of the harmonics and/or reactive power available. No reference current is required for this type. Closed loop control systems incorporate a feedback loop providing greater accuracy of current injection for harmonic compensation as well as reactive power reduction well over open loop system [7]-[10]. There is reference variable to check the performance and accuracy of the filter.[11-18]

Active harmonic filter

Proposed methodology uses a combination of a grid current forcing shunt APF with a series reactor installed at the Point of Common Coupling (PCC) to handle the harmonic and unbalance problems from mixed loads.[20] The three-phase shunt active power filter is a three-phase current controlled "voltage-source inverter" (CC-VSI) with a mid-point earthed, split capacitor in the dc bus and inductors in the ac output (It is essentially three independent single phase inverters with a common dc bus).

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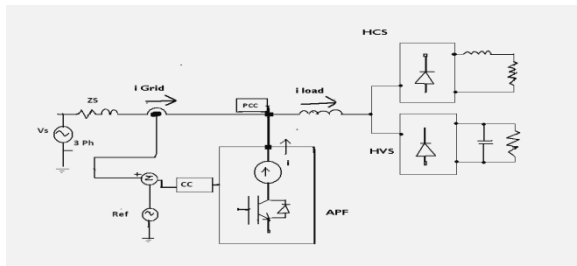


Figure1.

Proposed Active Power Filter Configuration

The circuit models a shunt AHF with IGBT inverter and series inductor on the AC side and DC capacitor energization. The load consists of two diode rectifiers which are phase-shifted by 30 degrees. The Delta-Y connected rectifier is connected after 10 cycles to change the load from 6-pulse to 12-pulse.

The AHF uses a PLL to generate a reference sinusoidal source current which is in-phase and has the same RMS gain as the load current. The current error between the load current and the reference current is generated by the IGBT Bridge through hysteresis switching. The AHF aims to inject this current error at the point of common coupling in order to match the source current as closely as possible with the reference current.

PLL (Phase Locked Loop)

Three different types of harmonic detection strategies used to determine the current reference for the active filter. These are-

1. Measuring the load harmonic current to be compensated and using this as a reference command;
2. Measuring source harmonic current and controlling the filter to minimize it; and
3. Measuring harmonic voltage at the active filter point of common coupling (PCC) and controlling the filter to minimize the voltage distortion.

Proposed methodology involves measurement of the load current and subsequent extraction of its harmonic content. The harmonic components, so extracted, are adjusted for polarity and used as reference commands for the current controller. For estimation of reference current various techniques are used- High pass filter method, Low pass filter method, Time domain approaches- Instantaneous reactive power algorithm, Synchronous detection algorithm, Constant active power algorithm, Constant power factor algorithm, Fictitious power compensation algorithm, Synchronous frame based algorithm, Synchronous flux detection algorithm, Frequency domain approaches- Conventional Fourier and FFT algorithms Sine multiplication technique, Modified Fourier series techniques.

Proposed methodology uses PLL (phase Locked loop) and hysteresis switching for estimation of reference current.[12]

Let the load current, input frequency and terminal voltage be the input to the PLL. Three phase distorted supply voltages are sensed and given to the PLL which generates sine terms. The sensed supply voltage is multiplied with a suitable value of gain

before being given as an input to the PLL. Here $K=1\dots N$, be the gain value assigned for controlling.

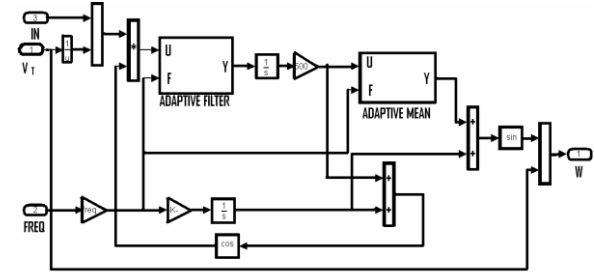


Figure 2: Proposed reference signal generation (PLL)

Here I_L is the load current V_T is the load voltage, ω is the output signal of the adaptive detecting circuit; and f is the fundamental reference frequency which is in phase with ac source voltage. As the input sinusoidal reference signal, i.e. the fundamental component of the system voltage has the same frequency and in phase with the desired fundamental components of load current and load voltage, the dc component of the output of integrator will tune accordingly until they are equal in magnitude. The corresponding fundamental real components of the current and voltage are then extracted from the sampled load current and load voltage.

The output signal of the adaptive detecting current and voltage are just the reactive power and harmonic components of the nonlinear load voltage and current.

Hysteresis Switching

Current control is implemented through feedback modulation of a dynamic hysteresis band PWM controller. The shunt line current tracks the reference current within a hysteresis band. By comparing the reference currents calculated by the controller with the measured values of compensation currents, the command signals for the inverter semiconductor switches can be produced.

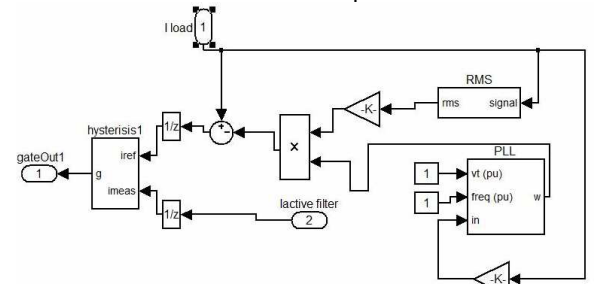


Figure 3: Proposed hysteresis controller

In proposed methodology, the load current, and the current of active filter be the input to the shunt firing unit. The gate signal obtained from this unit is the input to the IGBT. Thus obtaining gate signal by means of hysteresis current controlling technique is performed. The gate signal is obtained by means of using hysteresis current controlling technique. To detect the current to be compensated, reference current should be obtained. PLL value is improved by means of RMS value of load current.

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Simulation Results

Simulation is carried out on a Matlab /Simulink software.[19] Figure 4 represents the simulation model. Harmonics generated by non-linear loads is removed by PLL based Shunt Active Power Filter. Proposed model not only considers the harmonics due to non-linear load but it also considers the disturbance occurs in supply. In this simulation the input current wave shape is non-sinusoidal which represents unbalanced supply. Simulation time is 0.25 seconds. Figure 5 shows the Simulation Results. Table 1 shows experimental & simulation parameters.

Table 1

SAPF Experimental and Simulation Parameters

S.No.	Parameters	Value
Source	Voltage	$4160 \cdot \sqrt{2} / \sqrt{3}$
	Frequency	F
Load	Two Diode Rectifiers	Resistance
		Snubber Resistance
		Snubber Capacitance
		$1 \cdot 10^{-3}$ ohms
		$1 \cdot 10^3$ ohms
		$1 \cdot 10^{-6}$ ohms

Conclusion

This project proposes the implementation of a three-phase active power filter together with a decoupling reactor in series with the load operated to directly control the ac grid current to be sinusoidal and in phase with the grid voltage. From the simulation results, this system provides unity power factor operation of non-linear loads with harmonic current sources, harmonic voltage sources, reactive, and unbalanced components

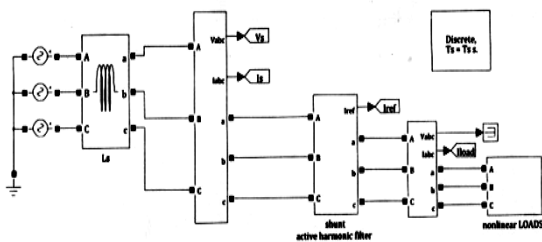


Figure 4.

Simulation Model of Shunt Power Active Filter

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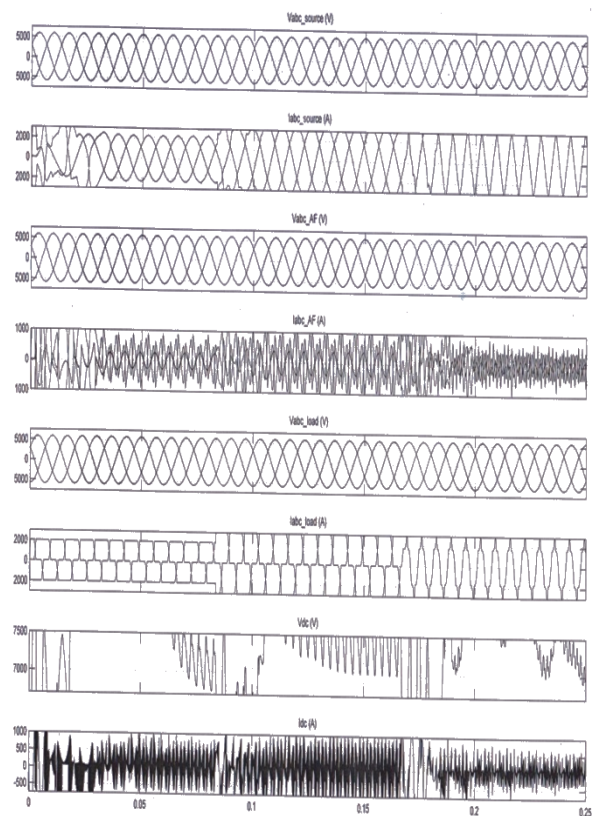


Figure 5. Simulation Results

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Periodic Research

A community based study on non medical maternal factors affecting infant survival in Gujarat



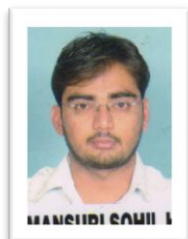
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Abstract

The community based study aims at finding the factors affecting survival of infants and to recommend how to control the factors affecting survival of infants. A total number of 953 mothers, with the past history of pregnancy during last year, were interviewed by recall method for maternal factors and infant survival. Infant mortality rate was found to be 38.73 per thousand live births. It was statistically proved that infant mortality was higher in join families with illiterate mothers of lower socio economical class

Keyword: Maternal factors, Infant survival

Introduction

For ensuring positive health to individuals, it is necessary to see that the foundation is made from the period of child is in the womb. We accept the fact unequivocally that mother and baby are the crucial part of general health and is central to human development. Many of the causes of maternal deaths and disabilities also jeopardize the survival and health of newborn infants.

Every year, on average nearly four million newborn babies die and millions more are disabled because of inadequately managed pregnancies and deliveries because of women's poor health and poor nutritional status. Tragically most maternal and neonatal deaths and diseases are preventable. Neonatal infection accounts for 30% of deaths in newborn babies, asphyxia and trauma at birth 28%, premature deliveries and low birth weight 24% and congenital anomalies 10%. Poor maternal health results in low birth weight and premature babies. Infant and childhood diarrheal diseases, acute respiratory infection and malnutrition contribute to high infant mortality rates. Female infant have higher mortality than male infants due to influence of social factors.¹

By virtue of their numbers, mothers and infants are major consumers of health services. These groups are subjected to marked physical and physiological stress. They are exposed to unusual risks of wide spread infection, poor nutrition and hazardous delivery, which might cause death or impairment of health. Deaths within first year of life account for one third of total death in India. Half of them are neonatal death. About 50% of all neonatal death occurs during the perinatal period.²

Infant mortality rates in Asia are Srilanka (14.2), Thailand (16), China (15.6), Indonesia (27), India (44), Pakistan (69.7), Bangladesh (38) and Nepal (41.4).³ In India death in age group 0-1 year account for 24% of the total deaths in the country.⁴

Infant Mortality Rate (IMR) has been steadily decreasing in India. It was 134 per thousand live births before independence, 69 in year 2000 and 44 in year 2010. This has been possible due to environmental control of communicable diseases, immunization, nutrition, supplementation and better availability of health facilities. However, the IMR in India is still higher than in developed countries, where it is less than 15.²

Additionally, in India, across the board (rural or urban areas), there are more female deaths in the age group of 0-14 than

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elsewhere. Although the IMR has decreased from 146 per 1000 births in 1951 to 44 per 1000 births in 2010, and sex differentials are narrowing, again there are wide inter-state differences recorded in 2010.³

Total still birth rate is 8.0 in Gujarat.⁵ And Total IMR in Gujarat is 41, in rural 60 and in urban 36 per 1000 live births.⁶

The objectives of the study is to identify the factors affecting survival of infants and to recommend how to control the factors affecting survivals of infant.

Material And Methods:

Hajipur primary health centre was randomly selected from kalol taluka of Gandhinagar district. Total population of Hajipur is 42538. All the 10 villages of PHC were included in this study. House to house survey of total 6408 families were carried outs to interview the mothers with past history of pregnancy during the period August '11 to July '12. Total 953 mothers were interviewed by recall method. Data collection was done from August '12 to July '13. The questionnaire was predesigned and pretested to elicit relevant information. To find out the correlation between two variables, test of significance applied is standered error between two proportion.

Observation And Results:

4.07% mortality was noted among the joint family and 1.05% in Nuclear family.

There is statistically significant correlation between type of family and survival of infant ($Z=2.9$, $p<0.05$) (Table-1)

Maximum percentage of infant death (5.39%) was in S-E class V, followed by 2.62% in S-E class IV and 2.33% in S-E class II. The difference of survival of infant between class V and class I to IV is significantly high ($Z=2.15$, $p<0.05$). (Table-2)

The difference of infant death between the illiterate and literate is statistically significant ($Z=2.71$, $p<0.05$). percentage of infant death among illiterate was higher (5.61%) and for primary educated (2.55%) mothers. One infant of the mother who was educated up to HSC died due to congenital malformation. (Table -3). There was 33.33% infection followed by 21.21% low birth weight and 12.12% premature baby. 9.09% aspiration and other unknown causes, one case of spinabifida and anencephaly. (Pie-diagram)

Discussion:

Type of Family:

As study area was rural and main work of community was farming and animal rearing, number of joint families were (79.96%) comparatively more than the nuclear families (20.04%).

Infant mortality was significantly more in joint family (4.07%) than in nuclear family (1.05%) ($Z=2.95$, $p<0.05$)

Socio-Economic (S-E) status:

One of the most important variables affecting IMR, both directly and indirectly is S-E status.

IMRs are highest in the slums and lowest in richer residential localities. Reduction in infant mortality require continuing S-E development.⁷

In present study, IMR was highest (5.39%) in S-E class V, followed by (2.62%) among S-E class III and IV. Mortality was not found among the S-E class I and II suggesting that availability and quality of health care and nature of child's environment are closely related in S-E status.

A study carried out in Egypt by Yassin Khaled et al (2003) observed that utilization of care was shown to be low and significantly associated with poverty and husband illiteracy. Likewise, trained health care workers did not attend most deliveries, and these unattended deliveries were shown to be associated with nonutilization of antenatal care, illiteracy, nonownership of cattle, and inaccessibility to potable water.⁸

Education:

In Indonesia, the children of women with no formal schooling are almost three times likely to die than those born to women with at least a secondary education.⁹

Female literacy rate in rural area of Gujarat is 57.78 by 2011.⁶

IMR was significantly less ($Z=2.71$, $p<0.05$) in educated mothers might be due to small family, utilization of health care facilities, good sanitation and higher S-E status.

One infant, whose mother had studied up to HSC, died due to congenital malformation (spinabifida).

Gita Rav et al noted (1998) numbers of infant death are three times more in illiterate women.⁹

Research also indicates mother's education is less important for infants than for children.¹⁰

Probable cause of death of infant:

33.33% of infant had history of infection and 21.21% had LBW. 12.12% had premature birth.

9.09% had history of aspiration pneumonitis. Only 3.03% had congenital malformation and asphyxia. 9.09% died due to some unknown etiology. Two infants had congenital malformation (Spinabifida and anencephaly).

Out of 856 deliveries, one twins delivery and out of two, one baby expired.

Both the infant who lost their mother also died within perinatal period.

Conclusion:

In present study, IMR was 38.73 per 1000 live births.

Among the commonest cause of infant mortality, one-third were due to infection, one-fifth were due to low birth weight. It was statistically proved that infant mortality was higher in joint families with illiterate mothers of lower socio economical class. These indicate the inverse

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relation between education and survival of infant. A young women's lack of schooling also has profound effect on survival of her children.

Recommendation:

Medical intervention is not shortcut to problem, what is more important is to cut away the rigid religion and harmful social practices and to stimulate social practices such as raising the age of marriage and increasing female education. To enhance the income of the family, exclusively housewives should be provided vocational and skill training.

To encourage regular, adequate, effective prenatal care and safe management of routine deliveries and immunization of infant to prevent deaths due to infection and low birth weight.

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TABLE-1
CORRELATION BETWEEN TYPE OF FAMILY AND SURVIVAL OF INFANT

Type of family	Infant death				Total	%
	Yes	%	No	%		
Nuclear	2	1.05	189	98.95	191	20.04
Joint	31	4.07	731	95.93	762	79.96
Total	33	3.46	920	96.54	953	100

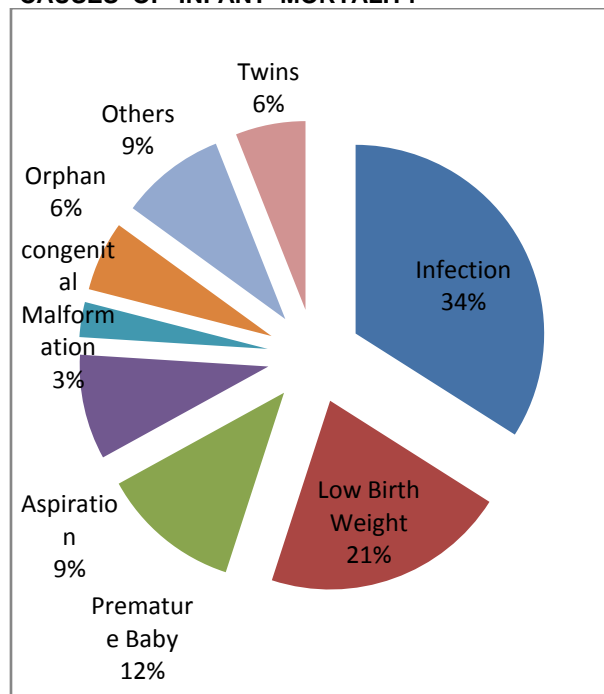
TABLE-II
CORRELATION BETWEEN SOCIO ECONOMICAL STATUS AND SURVIVAL OF INFANT

S-e class	Infant death				Total	%
	Yes	%	No	%		
Class-V	18	5.39	316	94.61	334	35.05
Class- IV	13	2.62	483	97.38	496	52.05
Class-III	2	2.33	84	97.67	86	9.02
Class-II	0	0	29	100	29	3.04
Class-I	0	0	8	100	8	0.84
Total	33	3.46	920	96.54	953	100

TABLE-III
CORRELATION BETWEEN EDUCATION AND SURVIVAL OF INFANT

Education of mother	infant death				Total	%
	Yes	%	No	%		
Illiterate	25	5.61	420	94.38	445	46.69
Primary	7	2.55	268	97.45	275	28.86
Secondary	0	0	156	100	156	16.37
Higher secondary	1	1.79	55	98.21	56	5.88
Graduate	0	0	18	100	18	1.89
Post graduate	0	0	3	100	3	0.39
Total	33	3.46	920	96.54	953	100

CAUSES OF INFANT MORTALITY



Periodic Research

General health of the villagers in the western part of the West Bengal, India, with a special reference of Ainch Bari, Bishnupur, Bankura

Abstract

Data related to different health issues were collected from the village of Aich bari, situated in the Bishnupur sub-division of the district of Bankura, West Bengal, and analyzed. General health awareness and the sense of basic hygiene were found to be higher in the females when compared to that of the males. The poor food habit could be attributed to the low income status and low literacy rates among the villagers. The general health, growth and maturity were again found to be better in females. These finding can be explained on the basis of lifestyle and social constrains.



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Keyword General Health, Food, Nutrition, Growth

Introduction

In India, there exists extensive intra- and inter-district variability in health scenario in different states. Therefore district-level planning is critical for health systems delivery and strengthening. In the absence of strong district-level vital statistics data, state estimates are used for planning and impact measurement, thereby diluting information about some of the high-focus areas in a specified state. As a result, there has been growing demand for vital statistics that are more regularly and locally reported, for use in planning and evaluation.

The western part of West Bengal (districts of Purulia, Bankura and West Midnapore) is lagging behind according to the scale of development in health scenario as a whole, when compared to the rest part of the state. The conditions are worse especially for the remote villages that are far from and not well connected to the district or sub-divisional headquarters. The majority of the rural population is smallholders, artisans and labourers, with limited resources that they spend chiefly on food and necessities such as clothing and shelter leaving no money left to spend on health. The rural populations work in hazardous atmosphere, live in abysmal living conditions and often become the first victim of epidemics. Unsafe and unhygienic birth practices, unclean water, poor nutrition, subhuman habitats, and degraded and unsanitary environments are challenges to the public health system in these areas. This present paper attempts to review critically the current health status of the villages in the western part of West Bengal, with a special reference to the village Aich bari (23.01° N, 87.28° E), situated in the Bishnupur sub-division of the district of Bankura. No report describing similar studies on the above mentioned areas has been found hitherto.

2. Materials and Methods

2.1. Data Collection

A health camp was organized on 28th March, 2012 at the village of Ainch Bari, Bishnupur as a part of the National Service Scheme (NSS) programme, organized by Ramananda College, Bishnupur, Bankura. More than 1000 people of the village participated enthusiastically in the health camp. In this health camp, there was a health awareness programme for the participants. A survey work was done in detail on the lifestyle, food habit, occupation and education among the villagers. In the health camp there was the facility of measuring the height, weight and the blood pressure of the participants. There was also an option of testing the blood group.

2.2. Data Analysis

Data Collected from survey work and measurements were categorized to analyze and demonstrate the health awareness and general health among the villagers of Aichbari.

Attendance of the villagers to the health camp was used to study the health awareness while the height and weight data were utilized to reveal the nutrition, growth and maturity among the villagers.

3. Results and Discussions

3.1. Response to the health camp

More than 75% of the villagers came to participate in the health camp organized. Though the sex ratio of the village was found to be male: female=1:0.989, yet the number of female participants were found to be greater than male indicating more health awareness among females that compared to male. Figures 1(a) and (b) show the age distribution curves for male and female participants of the health camp. Figure 1(a) shows the data for females fitted well with Gaussian distribution of peak value around 45 years. The distribution is symmetric with respect to the peak indicating both the young and old females participated in the camp. The full width at half maxima (FWHM) of the curve indicates that more awareness was seen for the age group 35-55 years of female. Figure 1(b) shows the data for males fitted well with Lognormal distribution of peak value around 25 years. This indicates younger males are more aware to health programme compared with that of females. The distribution is not symmetric with respect to the peak showing tail in the older age side. This indicates older males participated in the camp more when compared to the older females. The full width at half maxima (FWHM) of the curve indicates that more awareness was seen for the age group 15-45 years of male.

3.2. Food, feeding behaviour and nutrition

The main food of the villagers of Aichbari is found to be rice, chapati and vegetables. The average diet is found to be rich in carbohydrate. Percentage of protein in the daily diet is found rather low. The main sources of protein in the daily diets are dal, small fishes and soyabean nuggets. Villagers consume milk, home made paneer, egg and meat (chicken and mutton) in very less proportion.

Proteins are an indispensable part of human nutrition. Food proteins are essentially needed for the formation of tissue proteins. From the biochemical point of view, both the quality as well as the quantity of the proteins is taken into consideration by our metabolic system. Proteins are regarded to be the "Building Blocks of our body". It has already been established that the nutritive value of a protein depends on its digestibility and essential amino acid content. A protein containing adequate and balanced amount of all the essential amino acids, has a high nutritive value, again, if a protein is deficient in one or more of the essential amino acids, it is considered to be a poor protein as much as its amino acids cannot be readily utilized for protein synthesis. Animal sources, such as milk, egg, fish and flesh have been found to be rich in the essential amino acids, but many of the plant sources, such as cereals, pulses,

oilseeds and nuts are deficient in some essential amino acids. Therefore it is advisable to eat mixed food with more than one item of protein. This type of food habit is not seen among the villagers of Aichbari. Most of the villagers have rice thrice daily. Practice of taking other foods and fruits or small intake in regular intervals are not found in the village. Most of the villagers drink water collected from the deep tube wells but some of them also collect drinking water from pond or river. This type food intake and feeding behaviour can be attributed to the higher percentages of low income status among the villagers and also to the low literacy rates.

Nutrition is a basic human need and a prerequisite for healthy life. A proper diet is essential from very early age of life for growth, development and active life. Therefore it is essential to take care of all the factors of which food is composed and the way in which proper nourishment is brought about. The average nutritional requirements of groups of people are fixed and depend on such measurable characteristics such as age, sex, height, weight, degree of activity and rate of growth. Figure 2 shows the bar diagram of daily required protein intake per kilogram body weight of different classes of people for healthy living as prescribed by the World Health Organization (WHO). Figure 3 shows the data of daily protein intake per kilogram body weight as a function of the body weight for the villagers of Aichbari and for the people of Bishnupur (23.08°N, 87.32°E), the nearest urban population from Aichbari, for comparison. In both cases, the daily protein intake value is found to be lower than that prescribed by WHO but in case of Aichbari the deficit in daily protein intake is found to be higher than that of the Bishnupur. Figure 3 (inset) shows the deficit in the daily protein intake for the villagers of Aichbari and the people of Bishnupur. In both cases, the data show similar qualitative trend showing a peak in the body weight range of 40-65 Kg. This observation can be attributed to the fact related to the social behaviour that being the able, matured and responsible member of the families, male and females having their body weights in this range of 40-65 Kg share their food of high protein value with their growing children or aged superiors of their families.

3.3. General health, growth, and maturity

The overall health scenario of Aichbari can be established from the data collected through the survey work. In general the villagers are found to be health conscious. More than 80% of the villagers drink safe water collected from the deep tube wells. More than 75% of the villagers are aware of the auxiliary health workers. They sought help for ailments at government outposts such as Bishnupur sub-divisional hospital. Less than 20% of the villagers still have the sole belief on the local quacks for different ailments. Most of the villagers in the age group of 55-75 (in male) and 50-62 (in female) belong to this group.

The growth and health of the community can be estimated by analyzing the height (H) and weight

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(W) that were recorded for individual participant during the health camp. The data are categorized for male and female participants.

It is assumed that the height (H) and weight (W) obey the relationship governed by simple power law

$$W=AH^B \quad (1)$$

where the coefficient A is the intercept in the y-axis and the exponent B indicates the strong ness of dependence of W on H. The statistical significance level of r^2 was estimated and the parameters A and B were obtained by linear regressions on the transformed equation

$$\ln W = \ln A + B \ln H \quad (2)$$

using the experimental data (Fig.4a and 4b). The B value is found to be lower in males ($B=1.659$; $r^2=0.953$) (Fig. 4a) compared to that in females ($B=1.841$; $r^2=0.965$) (Fig. 4a). Analysis of covariance revealed significant differences between sexes for the slopes (B) of the regression lines ($P < 0.001$). Both the values are found to be lower than that of the isometric growth ($B=2.000$) indicating lower growth rate in the village. Lower B value in males compared to that of females indicates that the general health and growth is better in females compared to that of the males in this village.

This result is influenced greatly by food habit, life style etc. Lower income status in the males of the village build up economic and social insecurities among them causing stress among the males. Many of them are found to be alcoholic and smokers. Many of the males of this village currently have their occupation in different small towns and major cities. These persons are reported for higher rates of smoking, higher exposures to second-hand smoke, higher overweight/obesity rates and lower rates of fruits and vegetable consumption. It should also be noted that higher levels of stress and a lower sense of community belonging are found as levels of urbanity increased in case of these peoples.

Some of the males from Aichbari are engaged in the fields related to the forestry, farming and fishing, manufacturing, and mining labour forces. These latter occupations are often accompanied with greater health and safety hazards due to the use of complex machinery, exposure to chemicals, working hours, noise pollution, harsher climates, and task related physicality. Poor Health and growth in males compared to females can be thus explained.

4. Conclusion

A survey was done in detail on the lifestyle, food habit, occupation and education among the villagers of Aichbari, Bishnupur during a health camp. Measurement of the height, weight and the blood pressure of the participants are done and the data are analyzed to get the general health scenario of this

locality. General health awareness and the sense of basic hygiene are found to be higher in the female when compared to that of the male. The general health, growth and maturity are also found to be better in females. The health camp threw light on the general health of a remote village in the district of Bankura. More health camps of this type will help us to gather knowledge about the different villages in the western part of the West Bengal.

Acknowledgement

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Figure 1

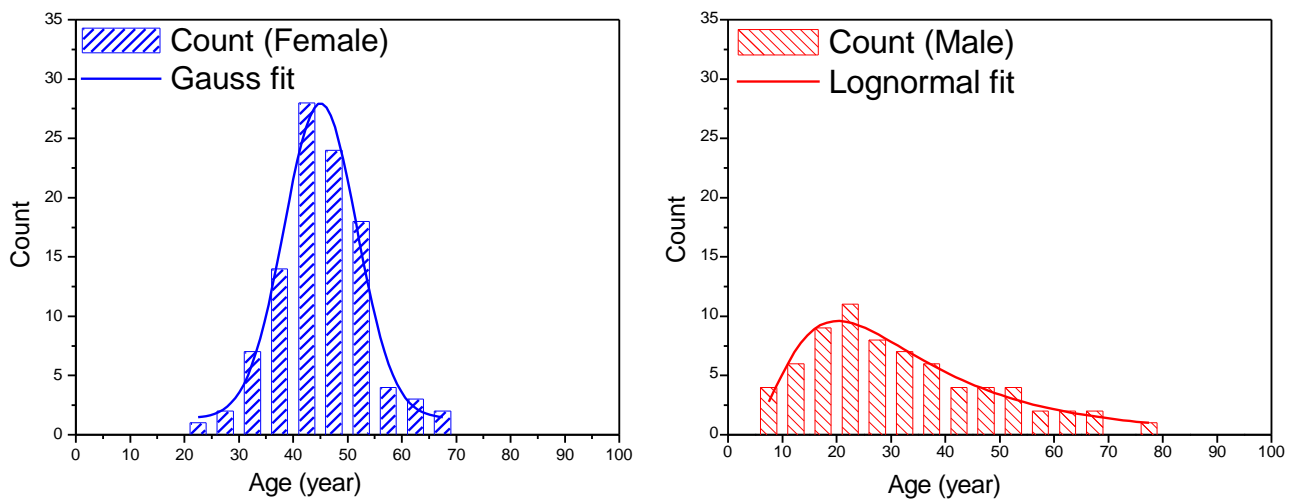


Figure 1- (a): Age distribution curve of the female participants in the health camp; (b): Age distribution curve of the male participants in the health camp

Figure 2

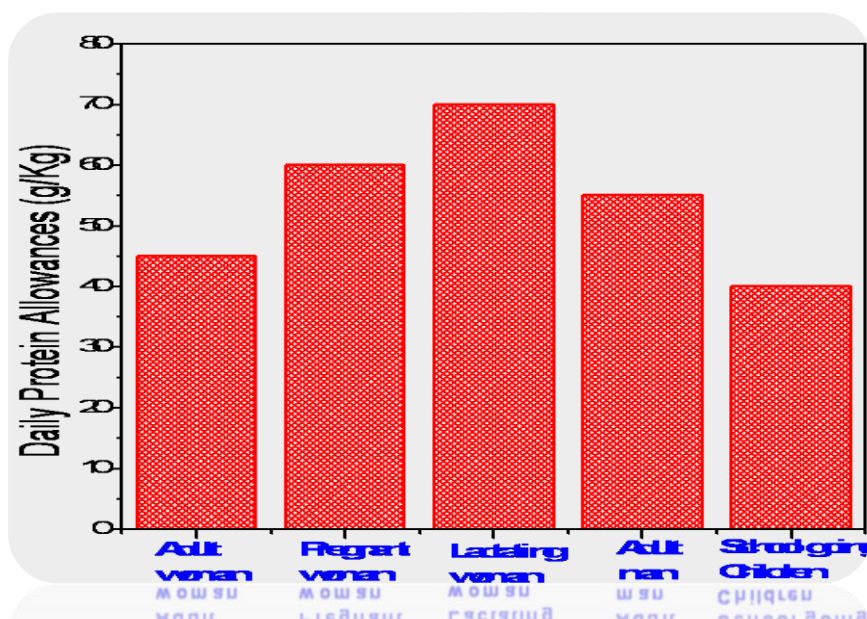


Figure 2- Standard value of daily required protein intake per kilogram body weight for different classes of people as recommended by WHO.

Figure 3

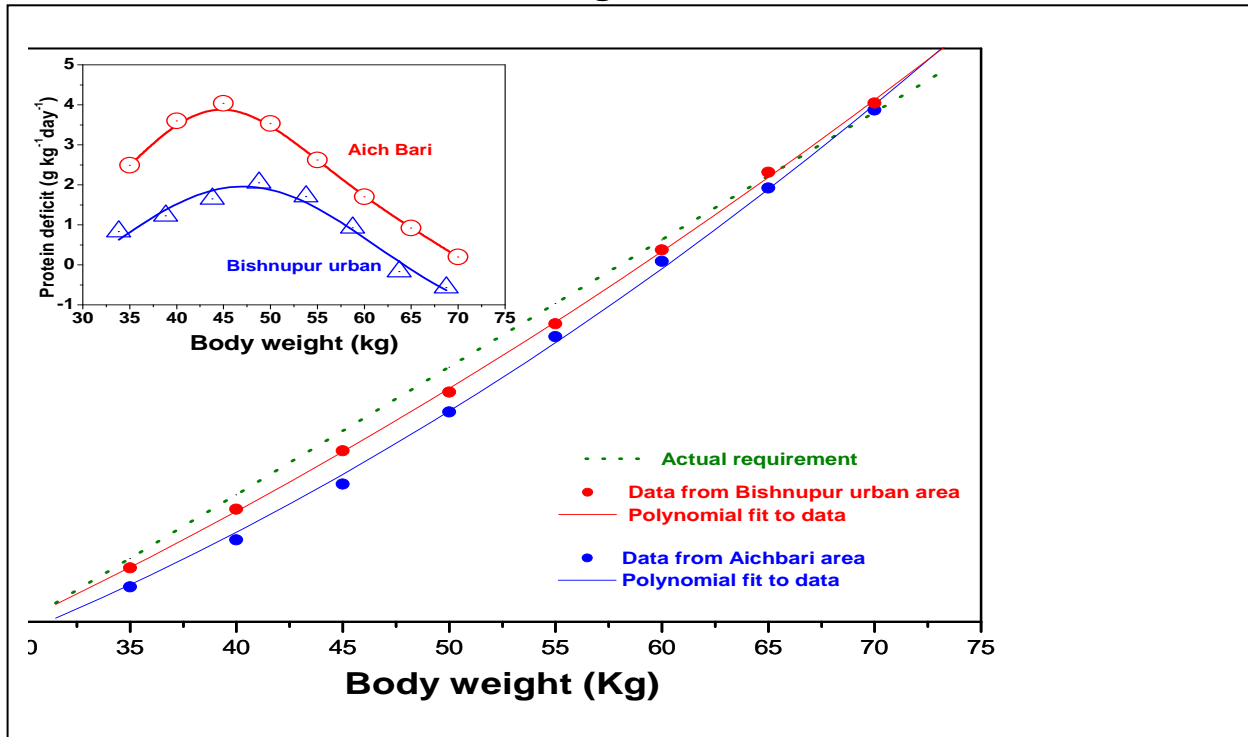


Figure 3- Daily protein intake per kilogram body weight as a function of the body weight for the villagers of Aichbari and for the people of Bishnupur. (inset) the deficit in the daily protein intake per kilogram body weight as a function of the body weight for the villagers of Aichbari and the people of Bishnupur.

Figure 4

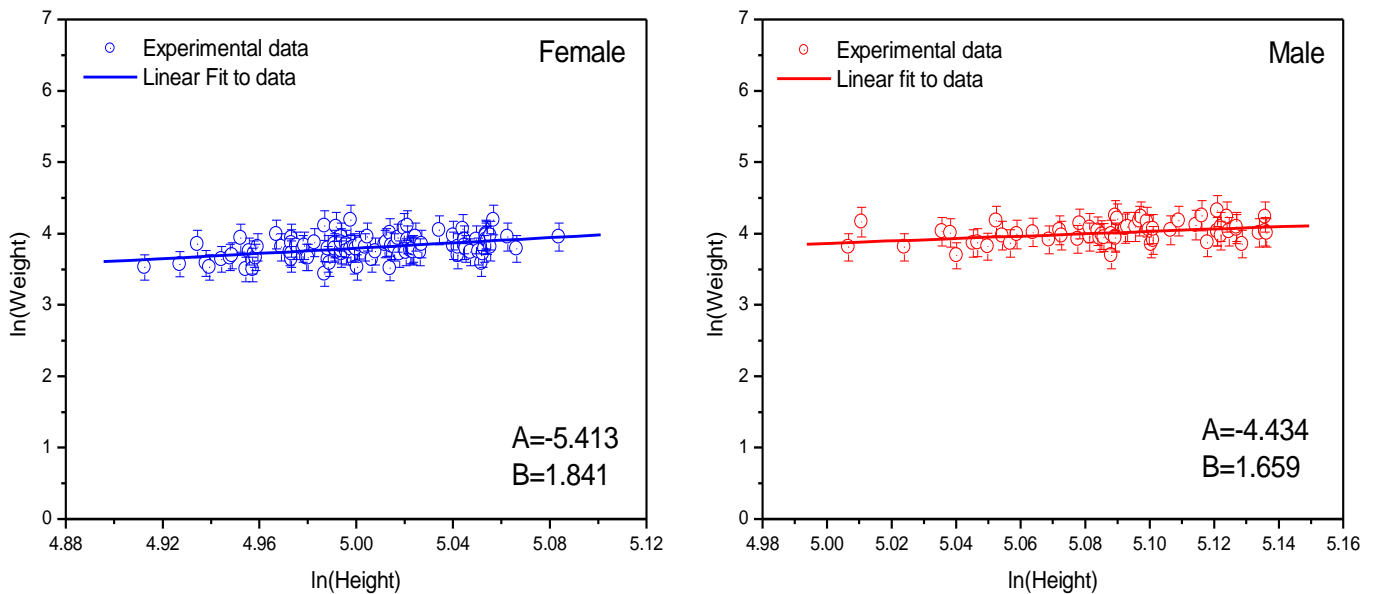


Figure 4- (a): Height-Weight relationship of the female participants in the health camp; (b): Height-Weight relationship of the male participants in the health camp.

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Passive latent heat thermal energy storage systems: PCMs-A review



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Abstract

In modern age, energy storage plays an important role in conserving available energy and improving its utilization, as most of the energy sources are confined within the fixed limit in nature. Globally, only buildings are responsible for 40% of the total world annual energy consumption which is responsible for one-third of green house gas emissions around the world, while the rest of 60% energy is utilized in other fields of life. A significant portion of this energy is used for lighting, heating, cooling, and air conditioning purposes in buildings. In most applications short term storage of energy is essential only for a few hours, while in some applications long term storage of energy for a few months may be required. One of the technologies which help to reduce energy consumption is the thermal energy storage by phase change materials (PCMs). Phase change materials (PCMs) are environmentally favorable salts or organic compounds with variable environmental credentials, which store and release latent heat by changing a phase transformation due to change in chemical bonds. During the phase transformation (solid-liquid and vice-versa) when PCMs reach melting point (phase change temperature) they absorb large amounts of heat without getting hotter. When the temperature of surroundings drops, the PCM solidifies with the release of its stored latent heat. PCMs absorb and emit heat while maintaining a nearly constant temperature.

This paper reviews how and where phase change materials (PCMs) are used in passive latent heat thermal energy storage (LHTES) systems. The main aim of this paper is to provide a comprehensive list of the different type of PCMs and main criteria that govern the selection of PCMs. The paper concludes with some current problems that need to be addressed for further research in this area.

Keyword : Phase change material (PCM), Latent heat thermal energy storage (LHTES); Passive heating and cooling, Energy efficiency.

Introduction

A phase-change material (PCM) is a substance having a high heat of fusion which, while melting and solidifying at a certain temperature is capable of storing and releasing large amounts of energy. When the material changes from solid to liquid and vice versa heat energy is absorbed or released. Hence, PCMs are characterized as latent heat storage (LHS) materials.

Fig.1: A sodium acetate heating pad



This can be achieved through solid-solid, solid-liquid, solid-gas and liquid-gas phase change. Practically only phase change used for PCMs is the solid-liquid change. Solid-solid phase changes are typically very slow and have a rather low heat of transformation. Liquid-gas or solid-gas phase change materials are not practical for use as thermal storage due to the large volumes or high pressures required to store the materials when in their gas phase. Liquid-gas transitions do have a higher heat of

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transformation than solid–liquid transitions. These material store, release or absorb heat as they oscillate between solid and liquid form eg., When the sodium acetate solution crystallises, it becomes warm as shown in Fig 1.

Such type of materials are very suitable for use in buildings because they can store a large amount of cold and heat. Solar energy is available only during the day time, so that the excess heat collected during sunshine hours requires an efficient thermal energy storage system that may be stored for later use during the night. Similar problems arise in heat recovery systems where the waste heat availability and utilization periods are different, requiring some thermal energy storage system. The same difficulties arise with electrical energy consumption which varies significantly during the day and night. In extremely hot and cold climate countries the major part of the variation is due to domestic space heating and air conditioning. Such variation leads to an off peak period, usually after midnight until early morning. Hence either power station have to be designed for capacities sufficient to meet the peak load or very efficient power distribution would be required. But if some of the peak load could be shifted to the off peak load period by some means than a better power generation management can be achieved. This has been achieved successfully by incorporating PCMs in passive latent heat thermal storage systems (LHTES) of heat or coolness. Here “passive” means that the phase-change processes without resorting to mechanical equipment.

Unlike conventional storage materials PCMs absorb and release heat while maintaining a nearly constant temperature. Within the human comfort range of approximately 16-25°C PCMs latent heat thermal storage systems(LHTES) have been found to be very effective. PCMs store 5 to 14 times more heat per unit volume than sensible storage materials such as water masonry or rock. A large number of PCMs are known to melt with a heat of fusion in any required range. Thus PCMs can be used for any heating and cooling requirement in buildings, vehicles or fabrics, including insulation and engine cooling, refrigeration, process cooling or contributing to process heat, and combined heat and power systems.

Types of PCMs and main criteria that govern their selection

Materials to be used for phase-change TES (thermal energy storage) should possess melting/freezing temperature in the practical range of application and they must have a high latent heat of fusion and a high thermal conductivity. Moreover, to be used in the design of passive LHTES systems, PCMs should have desirable thermophysical, kinetic, chemical and economic properties as suggested by many authors. PCMs should also have desirable environmental properties to decrease the environmental impact of the systems during their lifecycle. The main criteria for selecting PCMs are given in Table 1.

Table 1: Main criteria for selecting PCMs

Thermal and physical properties	– Suitable phase-transition temperature in the desired operating temperature range
	– High thermal conductivity and good heat transfer
	– High latent heat of transition per unit mass
	– High specific heat and high density
	– Good heat transfer
	– Congruent melting and long term thermal stability
	– Favourable phase equilibrium and no segregation
	– Small volume change on phase-change
	– Small vapour pressure at operating temperature
Kinetic properties	– High nucleation rate and little or no supercooling of the liquid phase
	– High rate of crystallization
Chemical properties	– Complete reversible melt/freezing cycles
	– Long term chemical stability and no degradation after a large number of melt/freezing cycles
	– No corrosiveness and capability with construction materials
	– Nontoxic, non-flammable and non-explosive
Economic properties	– Abundant and available
	– Cost effective
Environmental properties	– Low embodied energy
	– Separation facility from the other materials and recycling potential
	– Low environmental impact and non-polluting

PCMs are classified as organic, inorganic and eutectic. These are available in any particular required temperature range. Organic PCMs are further divided as paraffins and non-paraffins. The non-paraffins include a wide selection of organic materials such as fatty acids, esters, alcohols and glycols. Inorganic PCMs are further divided as hydrated salts including Glauber salt (sodium sulphate decahydrate) and metallic (metals have too high melting temperatures for passive building applications). A eutectic is a minimum-melting composition of two or more components, each of which melts and freeze congruently forming a mixture of the component crystals during crystallization.

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Eutectics PCMs are subdivided in organic–organic, organic–inorganic and inorganic–inorganic. Several authors have presented a comparison of the advantages and disadvantages of the different types of PCMs. The main advantages and disadvantages for each type are compared and summarized in Table 2.

Table 2. Comparison between different types of PCMs: advantage and disadvantages.

Classification	Advantages	Disadvantages
Organic: Paraffins and non-paraffins	– Availability in a large temperature range	– Low thermal conductivity
	– High latent heat of fusion (fatty acids have high heat of fusion values comparable to that of paraffins')	– Lower volumetric latent heat storage capacity, i.e. lower phase-change enthalpy
	– Freeze with little or no supercooling	Lower density
	– Congruent phase-change	– Flammable (possible to use fire-retardant additives)
	– Self-nucleation properties	– Non-compatibility with plastic containers
	– No segregation and good nucleation rate	– More expensive (commercial paraffins are cheaper and more available than pure paraffins and fatty acids are 2–2.5 times more expensive than technical grade paraffins)
	– Predictable and thermally and chemically stable, i.e. good stability of material properties during repeated thermal cyclings	– Relative large volume change (however some fatty acids could undergo small volume changes)
	– Low vapour pressure in the melt form	

Classification	Advantages	Disadvantages
	– Not dangerous, non-reactive and non-corrosive (fatty acids could be mild corrosive)	
	– Compatibility with conventional material of construction	
	– Recyclable	
Inorganic:	– Higher volumetric latent heat storage capacity, i.e. higher melting enthalpy	– Poor nucleating properties and supercooling problems
Hydrated salts	– Higher latent heat of fusion	– Incongruent melting and dehydration in the process of thermal cycling
	– Low cost and readily available	– Phase segregation during transition and thermal stability problems
	– Sharper phase-change	– Their application could require the use of some nucleating and thickening agents
	– Higher thermal conductivity	– Decomposition and phase separation
	– Non-flammable	– Non-compatible with some building materials
	– Lower volume change	– Corrosive to most metals and slightly toxic
	– Compatible with plastics	
	– It is better to use salt hydrates than paraffins to reduce the	

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Classification	Advantages	Disadvantages
	manufacturing/di sposal environmental impact	
Eutectic	– Sharp melting temperature (could be used to deliver the desired melting temperature required)	– Limited data are available on their thermophysical properties
	– Volumetric thermal storage density slightly above organic compounds – No segration and congruent phase- change	– Some fatty eutectics have quite strong odour and therefore they are not recommended for use as PCM wallboard

The melting point and heat of fusion of few organic PCMs are given in Table3

Table 3: Organic PCMs (typical values)

PCM	Melting Point (°C)	Heat of Fusion (kJ/kg)
$\text{CH}_3(\text{CH}_2)_{16}\text{COO}(\text{CH}_2)_2\text{CH}_3$ Butyl stearate	19	140
$\text{CH}_3(\text{CH}_2)_{11}\text{OH}$ 1-dodecanol	26	200
$\text{CH}_3(\text{CH}_2)_{12}\text{OH}$ 1-tetradecanol	38	205
$\text{CH}_3(\text{CH}_2)_n(\text{CH}_2)_m$ Paraffin	20-60	200
45% $\text{CH}_3(\text{CH}_2)_8\text{COOH}$ 55% $\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$ 45/55 capric-lauric acid	21	143
$\text{CH}_3(\text{CH}_2)_{12}\text{COOC}_2\text{H}_5$ Propyl palmitate	19	186

Source: Feldman *et al.* 1993

Table 4: Salt hydrate PCMs (typical values)

PCM	Melting Point (°C)	Heat of Fusion (kJ/kg)
$\text{KF} \cdot 4\text{H}_2\text{O}$ Potassium fluoride tetrahydrate	18.5	231
$\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$ Calcium chloride hexahydrate	29.7	171
$\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$ Sodium sulphate decahydrate	32.4	254
$\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$ Sodium orthophosphate dodecahydrate	35.0	281
$\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ Zinc nitrate hexahydrate	36.4	147

Source: Feldman *et al.* 1993

Fig.2

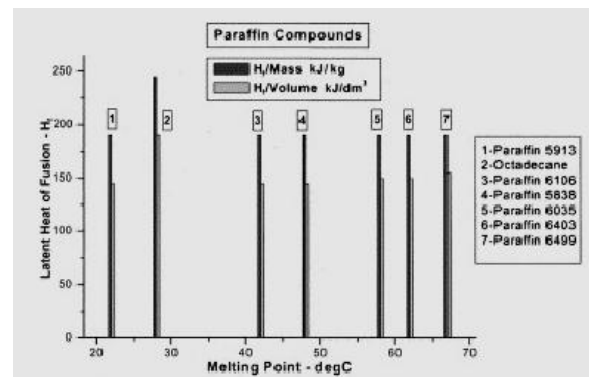
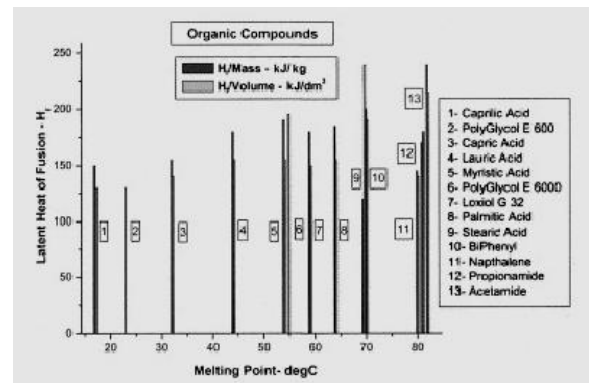


Fig.3



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Fig.4

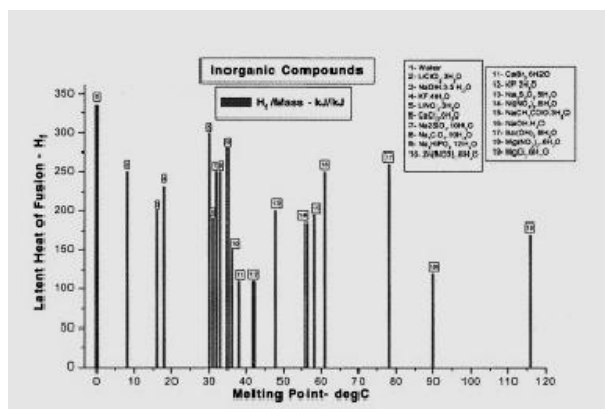


Fig.5

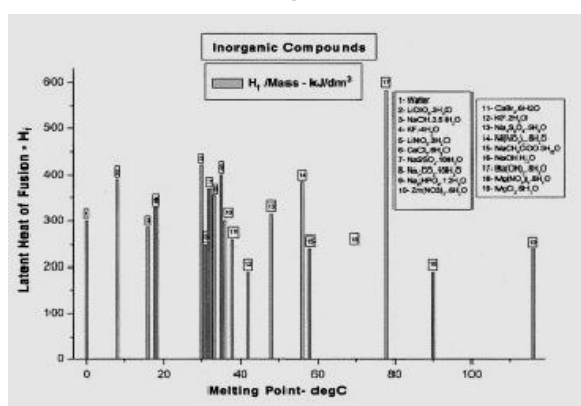
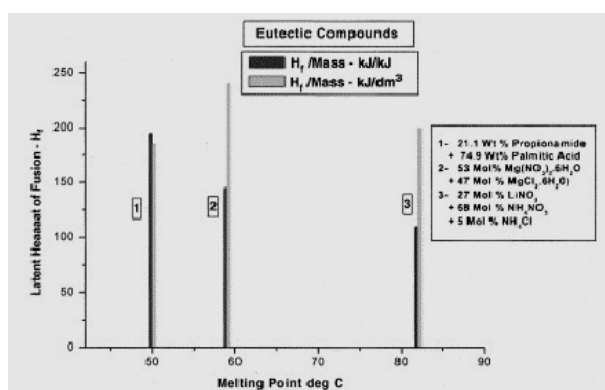


Fig.6



Applications

The LHES method has attracted a large number of applications in several fields of life.

1. Thermal energy storage (TES) is most often used as an effective means of shifting electrical peak load used from daytime peak periods to less expensive periods of the day or at nights, saving money, stabilizing load on power plants and increasing over all power generation and distribution system efficiency.

2. Protection from extreme environment has always been a critical requirement of textile industries. Clothing that protects from water, extreme winter intensive heat, open fire, high

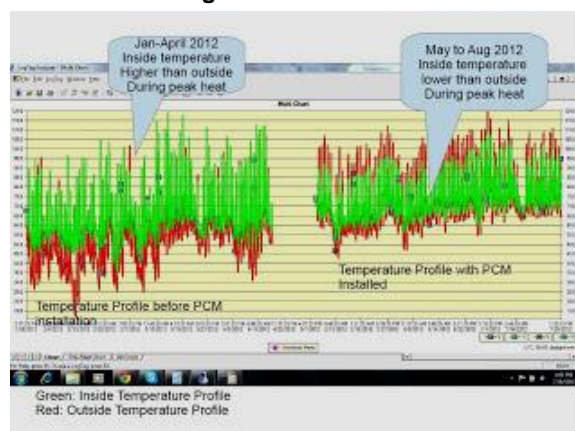
voltage, propelled bullets, toxic chemicals, nuclear radiations and biological toxins, etc. are some of the examples. These clothing finds application as a sportswear, fire fighting wear, defence wear, bulletproof jackets and other professional wear. Textile products can be made more comfortable when the properties of textile material adapt to the environment. One of such important intelligent material at the present is Phase Change Material (PCM), which absorb, stores or release heat according to the change of temperature during Phase Change Process is most frequently used in the manufacturing of smart textiles.

3. Initially Phase Change Material (PCM) were employed for building space suits for astronauts for space programs. These suits kept astronaut warm in a black void of space and cool in a solar glare.

4. Some of these PCMs change phase within a temperature range just above and below human skin temperature. This property of certain substance is used for making protective all season outfits, and for abruptly changing climatic conditions. Fibre, fabric and foam with built-in PCMs store the warmth of body and then release it back to the body, as it needs it. Moreover, phase change material are used, but never get used up.

5. In green house passive heating and cooling is also used. In Fig. 7 the light color represent the inside temperature of the Sycamore greenhouse while the dark color represents the temperature outside the greenhouse. The left side of the graph exhibits temperatures inside and out of the greenhouse before the PCM installation. From the end of January to mid-April, 2012, when its hot outside, its even hotter inside the greenhouse. In the right side of Fig. 7, a PCM 22P was installed at the end of April shows how phase change materials (PCMs) passively control temperature inside the greenhouse. Considerable good results observed that temperatures from January to April are cooler than in mid-summer. Without the PCM installation, greenhouse temperatures would've been much hotter during the summer months. The fact that temperatures inside the greenhouse are consistently

Fig.7-Green House Effect



15-20 degrees lower with the PCM than without it, is significant and exciting.

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6. Now a days pizza continues to be one of the favorite food and staple in India and several other countries for youngest to the oldest. The most pizza chains strive to make deliveries within 30 - 45 minutes by using insulated delivery bags to ensure their pizzas stay hot as food temperature is important. But due to bad traffic, cold weather and GPS failure, it is a challenge to keep pizza hot. American students made some bottles with PCMs, the results were amazingly good. Two bottles at 53C / 127F and two more at 58C/136F were inserted into the pizza box. After 2 hours the pizza recorded at 46C/115F still deliciously hot while the pizza in insulated box without PCM checked at approximately 31C/88F

Conclusion

This paper provides a comprehensive review on previous studies related to the different types of phase change materials (PCMs), criteria of selection and where PCMs are used in passive LHTES systems. It is also concluded that PCM passive LHTES systems can contribute in different aspects of life:

- Provide thermal comfort in buildings during the whole year with a minimum auxiliary energy for heating.
- Decrease the conditioning power needed (reduction of the heating and cooling peak loads).
- Reduce energy consumption.
- Take advantage of off-peak energy savings.
- Contribute for the reduction of CO₂ emissions associated to heating and cooling.
- Keep food warm or cool on delivery depending on requirement.
- Used In textile industry.
- Employed in making space suits for astronauts for space programs.
- Maintain temperature in green house.

There may be several more applications of PCMs. But the challenge to greater use of PCMs is their packaging, cost and knowledge, both technical and among potential customer and user communities.

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Influence of the Solar sources and Geomagnetic Disturbances for Intense Geomagnetic storms Occurred between 2003-2008

Abstract

Geomagnetic storms are intervals of time when a sufficiently intense and long-lasting interplanetary convection electric field leads, through a substantial injection of energy into the magnetosphere-ionosphere system, to an intensified ring current, strong enough to exceed some key threshold of the quantifying storm time Dst index. We have studied all the 23 intense geomagnetic storms (peak Dst \leq -100 nT) observed during the January 2003 to December 2008. Solar activity plays a major role in the average intensity of geomagnetic storms. Some results were found as follows, (1) The intensity of a geomagnetic storm in a solar active period is significantly stronger than in a solar quiet period. (2) The magnitude of negative Bzmin is larger in a solar active period than in a quiet period. (3) Solar wind speed in an active period is faster than in a quiet period. (4) V Bmax in an active period is much larger than in a quiet period. (5) Solar wind parameters, Bzmin, Vmax and V Bmax are well correlated with geomagnetic storm intensity.

Keyword: Solar Sources, Geomagnetic, Disturbance

Introduction

On one hand we have the solar wind plasma constantly flowing out of the Sun throughout interplanetary space at typical speeds of the order of 400-500 km/s, carrying the Sun's magnetic field frozen into it, given its high conductivity. Superposed on this ambient plasma there are transient injections of material, often faster than the solar wind, and also carrying strong magnetic field, the so called coronal mass ejections [1]. To complete the set of structures present in the interplanetary medium, we can find the high speed solar wind streams, which have lower density than the solar wind, and travel with speeds of the order of 800 km/s, coming from the coronal holes [2]. On the other hand, we have the Earth's magnetic field, shielding Earth from the variety of interplanetary structures mentioned above, forming the cavity known as magnetosphere. If the solar wind magnetic field is such that its direction points anti-parallel to the Earth's magnetic field, energy can be injected into the magnetosphere, increasing the equatorial ring current, causing a geomagnetic storm. [3] found that a dawn-dusk convection electric field greater than 5 mV/m, which means 10 nT magnetic field and 420 km/s speed, lasting for at least 3 hours, is the minimum interplanetary condition for the occurrence of an intense geomagnetic storm, i.e. storm-time Dst index less than -100 nT.

Results and Discussion

An overview of the 23 storm events with Dst \leq -100nT, that occurred in the interval January first 2003 to December 31st 2008 has been studied. The solar wind plasma field measurement and Dst data with 1 h time resolution were obtained from the OMNI website as: <http://omniweb.gsfc.nasa.gov>. Table 1 gives a summary of some representative parameters for the 23 storms events. They are the selected time interval for the study of Dst growth the peak Dst value, and the average value of B, the southward component of magnetic field Bz, of the solar wind speed is 'V'. From the table 1 following results are concluded;

1. For all geomagnetic storms IMF turns southward.
2. For 87% geomagnetic storms Bz < -10 nT.
3. For all 23 geomagnetic storms B > 12 nT.
4. Solar wind speed for geomagnetic storms Dst \leq -100 nT is greater than 450 km/sec.
5. The total number of geomagnetic storms in 2004 and 2005 are more as compare to the other years.

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Table 1. Shows intense storm events (2003-2008).

Day	Dst(nT)	Bz(nT)	B(nT)	Speed (km/s)
18/06/2003	-141	-17.2	19.8	626
18/08/2003	-148	-17.4	22.2	522
30/10/2003	-383	-30.9	38.1	1084
20/11/2003	-422	-45.9	55.8	703
22/01/2004	-149	-15	25.4	666
11/02/2004	-109	-11.3	16.5	451
04/04/2004	-112	-9.3	12.4	515
24/07/2004	-101	-15.5	18.9	672
26/07/2004	-148	-21.9	21.5	692
28/07/2004	-197	-17.7	25.3	890
30/08/2004	-126	-14.3	15	444
18/11/2004	-373	-44.6	47.8	730
22/11/2004	-109	-4.7	37.7	667
18/01/2005	-121	-16.8	21.8	957
22/01/2005	-105	-6.9	29.5	950
08/05/2005	-127	-11.9	16	804
15/05/2005	-263	-41.2	54.7	955
30/05/2005	-138	-16	17	469
13/06/2005	-105	-16.9	24.2	503
24/08/2005	-216	-40.9	52.2	720
31/08/2005	-128	-16.9	18.6	493
14/04/2006	-111	-12.2	19.8	540
15/12/2006	-146	-15.6	17.9	894

A geomagnetic storm is a multi-faceted phenomenon that owes its origin to physical processes in which energy transferred from the solar wind to the Earth magnetosphere is redistributed in the magnetosphere-ionosphere coupled system in the form of electric currents. The primary causes of geomagnetic storms are strong dawn-to-dusk electric fields generated by the interplanetary magnetic field (IMF) transition to a southward direction and lasting for sufficiently long intervals of time. In this configuration the IMF is coupled with the Earth's magnetic field and allows solar wind energy transfer into the Earth's magneto-tail / magnetosphere. It was established that (i) IMF B has a minimum at solar minimum (ii) maximum in V occurs during the declining phase and (iii) density and pressure have minima during solar activity maximum [4].

2.1 Statistical relation between Dst index, IMF and solar wind parameters

In the present work an effort has been made to achieve a better understanding of the geomagnetic indices and their relationships with various plasma and field parameters during different geomagnetic storms. The main conclusions can be summarized as following.

- Peak values of Dst index are well correlated ($r = -0.7$) with peak values of B, (Figure 1)
- Peak values of Dst index are well correlated ($r = 0.8$) with peak values Bz, (Figure 2)
- There is good correlation between peak Dst and peak solar wind velocity ($r = -0.6$), (Figure 3)
- Peak values of Dst index are well correlated ($r = 0.7$) with $V \cdot B_z$, (Figure 4)

Wu and Lundstedt [5] and Wu and Lepping [6] studied the correlations of Dst with the maximum of solar wind speed V and Bz component of IMF and found that Bz component is essential for determining the magnetospheric activity. Our result is in agreement with the results by Kane and Echer [7] in the sense that for intense storms the larger negative Bz gives the stronger negative Dst and the solar wind velocity possibly does not play a significant geo-effective role. Recently Echer et.al.[8] confirmed that peak Dst is correlated to the maximum negative Bz component of the IMF better than the maxima of solar wind number density D and solar wind speed V. Previous results on the correlation between Dst and V were also similar [9].

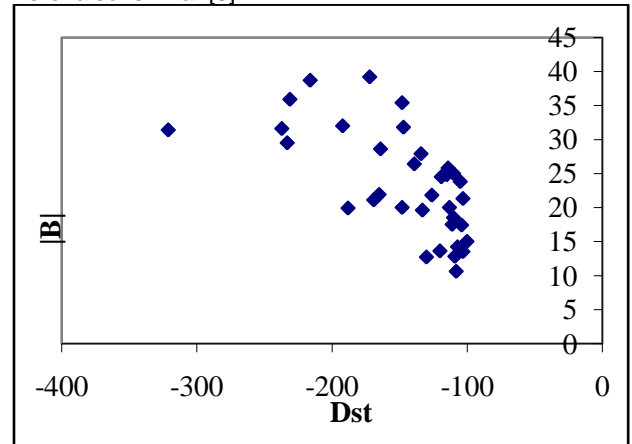


Figure 1. Graph between Dst and $|B|$ $r = -0.7$

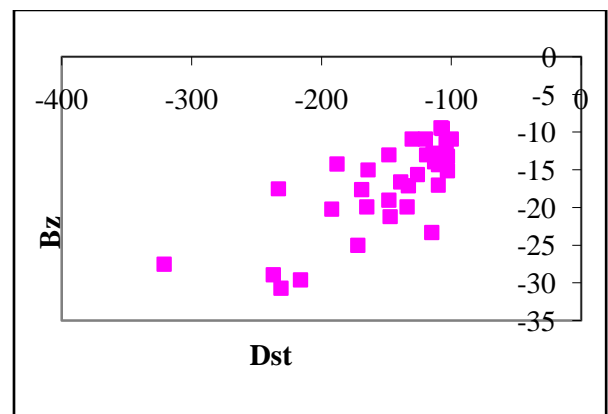


Figure 2. Graph between Dst and Bz $r = 0.8$

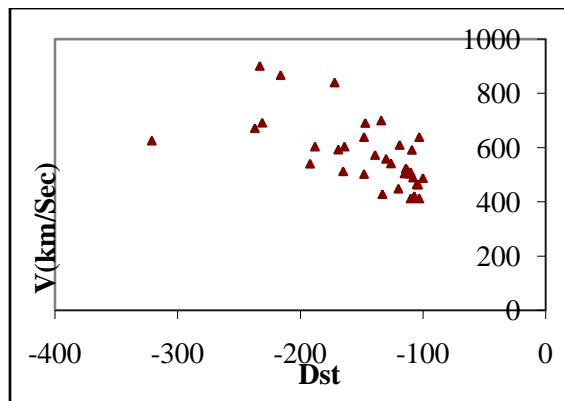


Figure 3. Graph between Dst and V . $r = -0.6$

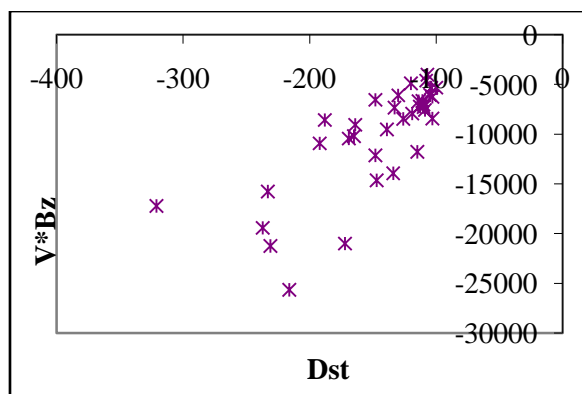


Figure 4. Graph between Dst and $V*Bz$. $r = 0.7$

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Periodic Research

Biological Activities of Zn(II)-Potassium Propylene Dixanthate Chelate

Abstract

The anti -microbial activities of Zn(II)-complex of potassium propylene dixanthate (PPDX) has been studied with the help of suitable techniques such as disc diffusion method. Zn(II)-PPDX complex was found toxic against common pathogenic fungi. The growth of pathogenic organisms were inhibited differently at different concentrations of Zn(II)-PPDX complex.

Such investigations show that the radial growth of *Escherichia coli*, *Klebsilla pnemoniae*, *Pseudomonas aeuginosa*, *Staphylococcus aureus* were not inhibited by Zn(II)-PPDX complex.

Keyword: Pathogenic Organism, Propylene dixanthane, Antibacterial Activity.

Introduction

Well known ordinary complexes and chelates formed by xanthates have shown remarkable anti-microbial activities during last few years, but nothing is done in a systematic way.

J. T. Matheickel¹ and et. al. investigated such activities in 3d-metal complexes. B. M. Atkinson² and coworkers proved that some metal chelates show remarkable anti-bacterial behaviour against some specific living micro-organism.

E. Guibal and et. al³. studied the role of uranium complexes against some bacteria. G. M. Gadd⁴ investigated the behaviour of some 3d-metal complexes against fungi and yeast. S. Dayal and et. al⁵. explain the effect of long term application of oil refinery waste water on soil health with special reference to microbial charaterstics. R. S. Bai⁶ studied the behaviour of Cr(III)-chelate against rhizopus migricone. R. Rao⁷ and coworker isolated Cd(II)-chelates formed in polluted effluents.

S. Ahmed⁸ and et. al. studied antifungal properties of Co(II)-chelates in broad spectrum. G. Yan and T. Viroraghvan⁹ found antimicrobial activities in certain 3d-metal complexes against *Escherichia coli*, *klebsiella pneumonia* and *Aspergillus flavus* etc.

Keeping in view, the above facts regarding the survey of literature, anti-fungal and anti-bacterial activities of metal chelates formed by potassium propylene dixanthate with Zn(II) are studied in detailed.

Experimental

Materials and Methods:

Culture Media:

Nutrient Broth (Himedia, M002), Nutrient Agar (Himedia, M001), Soyabean Casein Digest Agar (Himedia, M290), Soyabean Choramphenicol Agar (Himedia, M1067), Sobouaud Dextrose Broth (Himedia, M033), Yeast Malt Agar (Himedia, M424) and Yeast Malt Broth (Himedia, M426) were used throughout the study. The composition of media given below.

Nutrient Broth (Himedia, M002), Nutrient Agar (Himedia, M001) & Soyabean Casein Digest Agar (Himedia, M290)

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Peptic digest of animal tissue - 5.0gm.
Beef extract - 1.5 gm.
Yeast extract - 1.5 gm.
Sodium chloride - 5.0 gm.
D/w - 1 ltr.
Final pH (at 25°C) - 7.4 + 0.2

13 gram of Nutrient Broth (M002) 40.0 gram of Nutrient Agar (M001) and 40.0 gram of Soyabean Casein Digest Agar (M290) were suspended in 1000 ml. distilled water and sterilized at 15 lbs pressure (121°C) for 15 min. by autoclaving.

Soyabean Choramphenicol Agar (Himedia, M1067)

Casein enzymatic hydrolysate - 5.0gm.
Peptic digest of animal tissue - 5.0 gm.
Dextrose - 40.0gm.
Chloramphenicol - 0.05 gm.
Agar - 15 gm.
D/w - 1 ltr.
Final pH (at 25°C) - 5.6+ 0.2

Sabouraud Dextrose Broth (Himedia, M033)

Special peptone - 10.0 gm.
Dextrose - 20.0 gm.
D/w - 1 ltr.
Final pH (at 25°C) - 5.6+ 0.2

In both the above cases, 65.0 gram of medium (M 033) was suspended in 1000 ml. distilled water and autoclaved at 15 lbs pressure (121°C) for 15 min.

Yeast Malt Agar (Himedia, M424) & Yeast Malt Broth (Himedia, M426)

Peptic digest of animal tissue - 5.0 gm.
Yeast extract - 1.5 gm.
Malt extract - 1.5 gm.
Dextrose - 5.0 gm.
Agar - 15 gm.
D/w - 1 ltr.
Final pH (at 25°C) - 5.6+ 0.2

In the case of Yeast Malt Agar 41.0 gram of medium (M 424) but for Yeast Malt Broth 21.0 gram of medium were suspended in 1000 ml. distilled water and autoclaved at 15 lbs pressure (121°C) for 15 min.

Micro-organisms:

From IMTECH Chandigarh and maintained for a long time according to instruction of IMTECH Chandigarh.

Escherichia coli (MTCC No. 1687)
Klebsiella pneumonia (MTCC No. 109)
Staphylococcus aureus (MTCC No. 737)
Pseudomonas aeruginosa (MTCC No. 1680)
Aspergillus niger (MTCC No. 1344)
Aspergillus flavus (MTCC No. 871)
Candida albicans (MTCC No. 227)

Compound:

Zn(II)-Complex of Potassium Propylene Dixanthate (PPDX)

Disc - diffusion method:

This method was used by Vincent and Vincent¹⁰ in 1944. The organism (inoculum) were

- prepared by transferring a loop full of the corresponding organism from the stock culture into the sterile broth after incubating the organism (at related temperature, incubation period). The organisms were transferred by means of a loop of 5 ml. sterile broths. The microbial cultures were incubated as below.

Bacterial 37°C for 24 hours
Fungus 26°C for 24 hours
Yeast like C. albicans 26°C for 24 hours

20.0 ml. of sterilized base agar was transferred aseptically into sterile petridishes and allowed to set uniformly. Then 0.2 ml. of old broths (fresh 5 ml.) was added uniformly to each petridish. Sterile filter paper disc (whatman 44, dia. 6 mm) thoroughly moistened in the compound samples (different concentrations) were placed on the seeded agar plates.

The inhibitory effect of the compounds was noted against tested organisms after proper incubation period for each micro-organism.

Estimation of minimum inhibitory concentration (MIC) by tube dilution method.

Tube dilution method was adopted to estimate MIC of the compounds against the micro-organisms.

In Vitro Antibacterial Testing

The test bacteria E. coli, K. pneumonia, S. aureus, P. aeruginosa were maintained on nutrient agar slant (Himedia M001).

Nutrient broth (M002, Himedia) was used to test anti-microbial activity of compound after incubation with a loop full culture from the slants, the broths were incubated at 37°C + 1°C for 24 hours. Fresh 20 ml. medium was seeded with 0.25 ml. of 24 hours broth culture. Compound was dissolved in dimethyl sulphoxide (DMSO) to obtained 200 mg/ml. stock solution. 0.2 ml. solution of the test material was added to 1.8 ml. of the seeded broth and this formed the first dilution 1 ml. of this diluted with a further 1 ml. of seeded broth to get the second dilution and so on till eight such dilutions are obtained. A set of tubes containing only seeded broths was kept as a control and suitable solvent (DMSO).

Table No. - 1

Effect of Zn(II)-PPDX complex on radial growth of different bacteria done by disc - diffusion method.

Zn (II)-PPDX complex	zone of inhibition (mm)			
	Concentration (ppm)	E. coli	Kb. pneumoniae	P. aeruginosa
600	8.0	7.6	7.0	8.0
700	8.2	8.0	7.5	8.5
800	8.6	8.1	7.7	8.5
900	9.0	9.0	8.0	9.0
1000	9.1	9.0	8.5	9.5

Table No. - 2

Effect of Zn(II)-PPDX complex on radial growth of different fungi done by disc diffusion method.

Zn (II) -PPDX complex	zone of inhibition (mm)		
	Aspergillus - niger	Aspergillus -flavus	Candida - albicans
Concentration (ppm)			
500	15.2	12.0	15.0
800	18.0	15.0	17.0
1000	20.0	20.0	22.0

Disc dia = 6 mm.

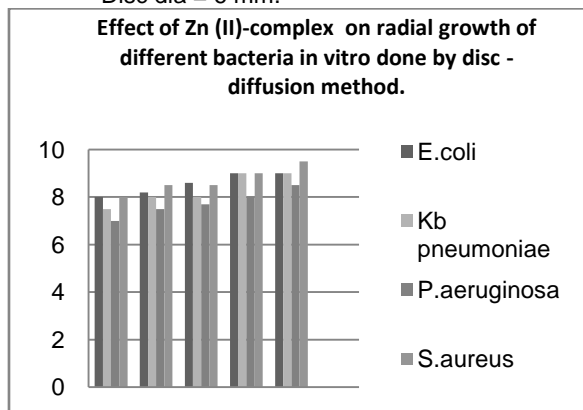


Figure-1

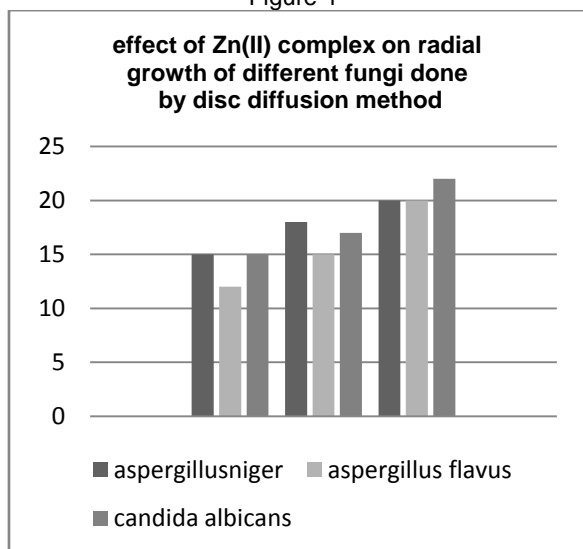


Figure - 2

Table No. - 3

Minimum inhibitory concentration of compounds of Zn(II), complex on growth of some bacteria and fungi by Tube dilution method.

Organisms	Escherichia coli	Klebsiella pneumoniae	Pseudomonas aeruginosa	Staphylococcus aureus	Aspergillus niger	Aspergillus flavus	Candida albicans
MIC (mg/ml.)	20.0	10.0	20.0	20.0	1.25	1.25	1.25

Results and Discussion

Anti Microbial Activity of Zn(II)-PPDX Complex:

Zn(II)-PPDX complex was found to be toxic against common pathogenic fungi such as *Aspergillus niger*, *Aspergillus flavus* and *Candida albicans*. Zn(II)-complex at 500 ppm showed effect against fungi such as *Aspergillus niger* (15.0 mm), *Aspergillus flavus* (12.0 mm) and *Candida albicans* (15.0 mm). At higher concentration (1000 ppm) all fungi showed more inhibition. The growth of pathogenic organism were inhibited differently at different concentrations of Zn(II)-PPDX complex.

It has been observed that the radial growth of *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* were not much inhibited by the Zn(II)-PPDX complex at different concentration. At 600 ppm Zn(II)-PPDX complex showed the zone of inhibition *E. coli* (8.0 mm), *K. pneumoniae* (7.5 mm), *P. aeruginosa* (7.0 mm) and *S. aureus* (8.0 mm). But in higher concentration 1000 ppm Zn(II)-PPDX complex was also showed not good effect on different pathogenic bacteria i.e. *E. coli*, *K. pneumoniae*, *P. aeruginosa* and *S. aureus*.

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Periodic Research

Effect of Madhumehant Churna on Madhumeha

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Abstract

Madhumeha is one of the major killers of the modern world. The descriptions about Madhumeha have been discussed in different classics of Ayurveda but here importance has been given to Brihatrayee. According to modern concept Madhumeha may compare with syndrome of diabetes mellitus. Charak have explained Madhumeha under a broad topic PRAMEHA, also consisting of many other urinary disorders. Mortality associated with this disease is very high, so it is still a challenge for today's health care system. The present study is an attempt to look into the magnitude of this major problem in our societies where irregular food habits, lack of exercise, stress and strains are some causative factors that make an individual more prone to develop diabetes. The W.H.O. has projected India as the country with fastest growing population of diabetics. A subtotal 60 patients were studied. Out of 60 patients, 20 patients were treated with GLICLAZIDE 80 mg in single dose in Group-A, 20 patients were treated with GLICLAZIDE and Madhumehant Churna in Group-B and the rest 20 were treated with Madhumehant Churna in dose of 4 gm B.D. with Luke warm water before 15 minutes of meal for one month in Group-C. It was observed that the best hypoglycemic results have seen in patients of Group-C.

Keyword: Madhumeha, Madhumehant Churna, GLICLAZIDE

Introduction

Medhumeha is one of the major killers of the modern world. Irregular food habits, lack of exercise, stress and strains are some causative factors that make an individual more prone to develop diabetes at an early age. The W.H.O. as the country has projected india, with fastest growing population of diabetes. This disease is a leading cause of blindness, renal failure etc. Descriptions of the disease are scattered in classics of Ayurveda. Charak has explained Madhumeha¹ under a broad topic Prameha, also consisting of many other urinary disorders. Sushrut has explained this disease in an isolated chapter in Chikitsasthan. Charak and Susruta explained so many dietary and medicinal management of disease with its prognosis according to dosh-dushya involvement. As far as nidana² of madhumeha is concerned, according to charak all those activities and diet which increases kapha, vata and meda are etiological factors of Madhumeha. Medhumeha is one of the type of vatic Prameha, Kam and due to different manas rog like kam krodh, lobh, moh, shock, chinta and bhaya. According to Modern Science, the sign & symptoms of Madhumeha may compare with syndrome of diabetes mellitus^{3 & 4}.

Etiological classification.

1. Sahaj Prameha (congenital)
2. Apathy Nimittaj Prameha (due to over eating and wrong food habits)

According to Dosh Prameha is three types.

1. Kaphaj- 10 subtypes
2. Pittaj- 6 subtypes
3. Vataj-4 subtypes

Charak and Sushrut both described that Beej Dosha⁵ (defect in genes) is the cause of congenital Prameha.

According to constitution classification, Prameha is divided in two categories.

1. Krish Prameha (lean)
2. Sthool Prameha (obese)

According to Susruta, Sahaj Prameha is of krish constitution and nimittaj Prameha is of sthool constitution. These two types can again be compared with type1 and type 2 respectively. Prognostic classification has been given by charak⁶ having three group of Prameha.

1. Saadhya (curable) - Kaphaj, Sthoola, Apathyaja, new cases.
2. Yappa (pallitable) - Pittaj and Borderline cases.
3. Asadhya (incurable) - Vataj, Krish, Sahaj and Advanced cases.

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Nidan of Prameha (Aetiology of Diabetes)

Though Prameha is a Tridosha but the relative predominance of any one Dosha enables it to classify into Vataj, Pittaj and Kaphaj. The etiological factors differ for different type of Doshik Prameha regarding to dushya as meda, maansa, kleda, shukra, shonita, vasa, majja, lasika, rasa and oja. All these are of great importance in the disease pathogenesis of a particular type.

Vishesha Nidan (Aetiology of Diabetes)

Above Nidan can be categorized as follows

- Apathya- apathyakar Ahar, Dadhi, Meat, Payansi, Navannam, Navapanam, Yudavikrati.
- Apathy Vihara- Ashyasukham, Swapnasukham.

While visualizing the disease with modern counterpart it is common disease in India. Stress, disturb food habits, disturb daily routine, lack of exercise are the root factors for acquiring the disease Madhumeha. This is the small attempt to understand the efficacy of Madhumehant Churna in some patients. More researches are required in this direction to facilitate the patients of Madhumeha.

Material and methods

The study was carried out on 60 patients. Maximum number of patient were in vridhavastha (56-65 yr). Maximum patients were female that is 34 in number. Majority of patients were hindu that is 58 in no. Out of 60, 54 were married. And it was also observed that out of 60, most of patients were 10th pass. According to socio-economic status majority of patients belongs to super middle class that is 38 in no. According to diet pattern 38 patients were vegetarian and 22 were mixed. After conducting primary investigations, patients were grouped according to age, sex, religion, marriage, education, wealth and diet patterns.

Group-A: 20 patients were treated with GLICLAZIDE⁷ 80 mg in single dose.

Group-B: 20 patients were treated with GLICLAZIDE and Madhumehant Churna

Group-B: 20 were treated with Madhumehant Churna in dose of 4 gm B.D. with Luke warm water before 15 minutes of meal for one month.

Drug review

For present study selection of drug combination Madhumehant Churna was used to treat Madhumeha. This kalpit yoga Madhumehant Churna is having 16 ingredients which are as follows.

Drug	Botanical name
Methika	Trigonella foenum
Nimbika	Azadirachta indica
Karvellak	Momordica charantia
Bilwa	Aegle marmelos
Daruharidra	Berberin aristata
Khadirsar	Acacia catechu
Shunthi	Zingiber officinale
Bhumi amalki	Phyllanthus urinary

Jambu seed	Syzygium cumini
Meshringe	Gymnema sylvestre
Babool	Acacia Arabica
Aamrathi	Mangifera indica
Shinshapa	Dalbergia sisoo
Vijaya sar	Pterocarpus marsupium
Shaal sar	Shorea robusta
Shaak sar	Tectona grandis

Mixed drug powder of all dravyas was given 4 gm twice a day with 50-100 ml of Luke warm water for one month.

Laboratory investigations

TLC, DLC, ESR, HB%.

Biochemistry- F.B.S., P.P.B.S., Lipid Profile, GHB%.

Urine Examination- F.U.S., P.M.U.S.

Observations and results

Out of 60 patients the highest percentage of symptoms found in patients of all three group were given below-

Cold	-100%
Constipation	- 100%
Polydipsia	-100%
Hyperglycemia-	90%
Nocturia	- 90%
Sweating	- 86.67%
Sweetening of mouth-	83.33%
Lassitude	- 83.33%
Dryness of mouth and throat	-73-33%
Weakness	- 73.33%
Burning sensation of hand and feet-	7%
Polyuria	- 60%
Polyphagia-	66%

Table showing pattern of symptomatic improvement percentage in Group A, B & C.

Sl no	Symptoms	% age of recovery in Group A	% age of recovery in Group B	% age of recovery in Group C
1	Hyperglycemia	40%	60%	60%
2	Polyurea	80%	80%	50%
3	Polydipsia	60%	100%	60%
4	Burning in hand and feet	60%	80%	30%
5	Lassitude	60%	80%	30%
6	Sweating	90%	100%	60%
7	Polyphagia	60%	80%	30%
8	Nocturia	80%	100%	50%
9	Weakness	40%	80%	50%
10	Constipation	40%	75%	30%
11	Overweight	40%	100%	20%
12	Sweetening of mouth	40%	80%	20%
13	Liking for cold	40%	100%	30%
14	Dryness of mouth and throat	40%	100%	40%

The above sign and symptoms were observed in different groups and percentage of recovery in each sign and symptoms were also observed. Results were incorporated in above table.

Table showing the pattern of Hematological, Biochemical & Urine Sugar changes in Group A

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Investigation	Mean B.T.	Mean A.T	Mean Diff.	%	S.D	S.E	't' Value	'p' Value
Hb%	12.63	12.77	0.14	1.108	0.171	0.054	2.585	<0.05
Total Leucocytes Count	7041	7108	67	0.95	266.37	84.23	0.80	<0.5
Polymorph Lymphocyte	57.8 39.4	59 38.2	1.2 1.2	2.08 3.05	2.82 3.36	0.89 1.06	1.35 1.13	<0.3 <0.3
Erythrocyte Sedimentation Rate	12.2	10.3	1.9	15.57	4.04	1.278	1.487	<0.2
Fasting Blood Sugar	166.0	125.0	41	24.7	17.6446	5.5798	7.3478	<0.001
Post Prandial Blood Sugar	211.9	158.5	53.4	25.2	25.0317	7.9159	6.7459	<0.001
GHb%	11.31	9.89	1.42	12.5	1.0482	0.3315	4.2835	<0.01
S.Cholesterol	187.22	153.05	34.17	18.2	12.5273	3.9615	8.6253	<0.001
S.Triglycerides	126.64	93.23	33.41	26.3	17.7990	5.6286	5.9356	<0.001
High Density Lipoprotein	57.69	72.43	14.74	25.5	31.1538	9.8519	1.4961	<0.2
Low Density Lipoprotein	104.30	69.29	35.01	33.5	12.8745	4.0713	8.5992	<0.001
Very Low Density Lipoprotein	25.23	18.60	6.63	26.2	3.8381	1.2137	5.4626	<0.001
Fasting Urine Sugar	1.8	.16	1.64	91.1	1.0853	.4431	3.7011	<0.02
Post Prandial Urine Sugar	2.2	0.6	1.6	72.7	.6009	.1900	8.4210	<0.001

Table showing the pattern of Hematological, Biochemical & Urine Sugar changes in Group B

Investigation	Mean B.T.	Mean A.T	Mean Diff.	%	S.D	S.E	't' Value	'p' Value
Hb%	11.92	12.93	1.01	8.47	1.0	0.31	3.21	<0.02
Total Leucocytes Count	5810	5980	170	2.93	275.08	86.99	1.95	<0.1
Polymorph Lymphocyte	58.5 38.6	60.3 37	1.8 1.6	3.08 4.15	5.12 4.50	1.62 1.42	1.11 1.12	<0.3 <0.3
Erythrocyte Sedimentation Rate	33.90	31.20	2.7	7.96	4.22	1.33	2.02	<0.1
Fasting Blood Sugar	162.0	134.5	27.5	16.9	16.372	5.177	5.3114	<0.001
Post Prandial Blood Sugar	202.9	172.5	30.4	14.9	19.534	6.177	4.9210	<0.001
GHb%	11.61	10.66	0.95	8.18	0.63	0.201	4.7075	<0.01
S.Cholesterol	202.49	171.37	31.12	15.3	11.016	3.483	8.9326	<0.001
S.Triglycerides	131.65	103.57	28.08	21.3	19.858	6.2801	4.4712	<0.01
High Density Lipoprotein	64.09	74.86	10.77	16.8	22.879	7.2352	1.4885	<0.2
Low Density Lipoprotein	112.13	75.79	36.34	32.4	10.585	3.3474	10.856	<0.001
Very Low Density Lipoprotein	26.31	20.70	5.61	21.3	3.9384	1.2454	4.5045	<0.01
Fasting Urine Sugar	1.7	0.8	0.9	52.9	.7094	.2681	3.3569	<0.02
Post Prandial Urine Sugar	2.5	1.3	1.2	48	.7888	.2494	4.8115	<0.001

Table showing the pattern of Hematological, Biochemical Urine Sugar changes in Group C

Investigation	Mean B.T.	Mean A.T	Mean Diff.	%	S.D	S.E	't' Value	'p' Value
Hb%	12.12	12.41	0.29	2.39	0.70	0.22	1.32	<0.3
Total Leucocytes Count	6270	6450	180	2.871	1169.805	369.925	0.487	<0.7
Polymorph Lymphocyte	58.40 37.20	58.60 36.60	0.20 0.61	.30 1.61	4.10 5.34	1.30 1.69	0.15 0.36	<0.9 <0.8
Erythrocyte Sedimentation Rate	12.2	10.5	1.7	13.93	1.889	0.597	2.847	<0.2
Fasting Blood Sugar	164.34	140.79	23.55	14.3	19.0522	6.0250	3.9087	<0.01
Post Prandial Blood Sugar	225.4	182.01	43.39	19.2	36.7229	11.6131	3.7362	<0.01
GHb%	11.78	10.77	1.01	8.57	0.7318	0.2314	4.3642	<0.01
S.Cholesterol	194.41	176.46	17.95	9.2	12.6233	3.9919	4.4965	<0.01
S.Triglycerides	124.16	102.29	21.87	17.6	13.2272	4.1829	5.2283	<0.001
High Density Lipoprotein	60.03	66.42	6.39	10.6	15.3214	4.8451	1.3188	<0.3
Low Density Lipoprotein	108.91	90.27	18.64	17.1	10.8168	3.4206	5.4493	<0.001
Very Low Density Lipoprotein	24.82	20.45	4.37	17.6	2.6404	0.8350	5.2335	<0.001
Fasting Urine Sugar	1.6	0.6	1.0	62.5	.5477	.2236	4.4722	<0.01
Post Prandial Urine Sugar	2.3	1.1	1.2	52.1	.7527	.2380	5.042	<0.001

Table showing pattern of Laboratory Improvement

	Group A	Group B	Group C
Reduction in mean F.B.S	24.7%	16.9%	14.3%
Reduction in mean P.P.B.S	25.2%	14.9%	19.2%
Reduction in mean fasting urine sugar (F.U.S)	91.1%	52.9%	62.5%
Reduction in post meal urine sugar (P.M.U.S)	72.7%	48%	52.1%

It showed that Group B with symptomatic improvement is 59.54% and laboratory improvement is 25.93% had better results in comparison to Group A with symptomatic improvement (44.39%) and laboratory improvement (17.03%) and Group C with symptomatic improvement (49.69%) and laboratory improvement (18.64%).

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Discussion

In Ayurveda literature madhumeha is described as follows

Prameha → Type Vataj Prameha - Subtype Madhumeha Charak described kapha, mutra and meda are etiological factors of Prameha. Charak has also described that those condition which aggravate vata in patient of Prameha causes madhumeha. Charak has also described that it is a genetic disorder in which beeja dosha (gene) is responsible for it. According to modern concept primary diabetes mellitus is a heterogenous disorder and caused by dysfunction of beta cells of islets of langerhans of pancreas.

The present study is a limited research work which scientifically evaluates the efficacy of Madhumechant Churna in patients of Madhumeha. A large scale work on large no of patient under better supervision with all scientific parameters is a need for controlling this major problem of our society.

Conclusion

On the basis of present study it is observed that the disease Madhumeha is well described in ayurveda. There is a striking similarity in Madhumeha and diabetes mellitus. It is observed that most common age group of sufferers between 46-55 yr of age. And predominance is of female that in 60% in this present study. The prevalence is more in housewife about 50% and it is highest in married 90% as compare to unmarried. The incidence is high in vata- kaphaja dehik prakriti than the pitta-kaphaja prakriti. Madhumechant Churna was very effective in reducing physical parameters and blood suger levels and no side effects or toxic effect was observed. Patients who were dependent on ayurvedic drugs (Madhumechant churna) had better improvement than an allopathic drug. Group B which were treated by allopathic + Madhumechant Churna showed better results of improvement than Group A who were treated only by allopathic drug and Group C who were treated by only ayurveda that in with Madhumechant churna. The best hypoglycemic result was found in Group C.

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Periodic Research

Stability analysis in upland rice

Abstract

The genotype x environment interaction was studied in 10 rice varieties for yield and yield contributing characters. Highly significant differences among genotypes, environments and G x E interaction for all the characters were observed except days to maturity and length : Breadth ratio. Linear and non-linear components of G x E interaction were highly significant for all the characters. None of the genotype was found to be average stable for all the characters. Thus from this investigation it was concluded that the genotypes Jaya, Pusa basmati,-1, Bhogavati, Ratna and Phule Radha were found to be promising for seed yield and yield contributing characters which can be used for commercial cultivation between 30th May to 15th June.

Keyword: Genotype, Genetic Variability, Spikelet Sterility.

Introduction

The interaction of genes and environments is of vital significance in the expression of trait. The sensitivity to environmental variations points to the need of using multiple environments instead of single environment to study the nature of genetic variability controlling the transmission of components of adaptation. With this objective 10 rice varieties were studied for yield and yield contributing characters over 6 varying environments.

Material and methods

The experiment comprised of 10 varieties of rice laid out in randomized block design with three replications over six environments (Table-1) in the field. Each variety was planted in six rows with 22.5 x 22.5 cm spacing accommodating of 16 plants in each row. All recommended practices were carried out as and when required to maintain good stand of the crop. The data were analysed statistically for stability parameters (1)

Results and discussion

The analysis of variance for stability parameters (Table-2) revealed the presence of significant variation due to environment (E) for all the characters, indicating considerable additive environmental variance. Genotypic variances (G) were significant for all the traits, which indicated prevalence of lot of genetic variability among the rice genotypes under study. These results are in agreement with the results reported by (2) The G x E interaction when tested against pooled deviation and pooled error was found to be significant for all the traits, explaining that the major portion of interaction was linear in nature and prediction over environments was possible. The similar results were reported by (3)

Further partitioning of $E + (G \times E)$ into $E(\text{linear})$ was found to be significant for all the traits, indicating differences between environments and their influence on genotypes for expression of these traits. This is in accordance with previous reports made by (4). The G x E (linear) component showed significance for all the characters. This revealed the linear relationship for expression of these traits with different environments. The similar trend was observed by (5).

Pooled deviation tested against pooled error found to be significant for all the traits, indicating presence of non predictable components for grain yield and yield related traits. These results are in agreement with the previous findings reported by (6)

Thus in present study, both linear and non-linear components were significant for yield and yield contributing characters. Similar findings were reported by (7). The environment E2 (30th May) followed by E3 (15th June) found to be most suitable for better expression of yield and yield contributing characters.

The observed magnitude of genotype x environment (linear) component could lead to the identification of genotypes deviating from the regression line of unit slope. Accordingly, three kinds of linear responses



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(Table 3) viz $b_i=1$, $b_i>1$ and $b_i<1$ have been observed for days to 50% flowering while for rest of the characters all the genotypes were classified as average stable ($b_i=1$ and non significant) and below average stable ($b_i>1$) except for length of panicle (cm.) and panicles per square meter. Such type of linear response could be attributed to inadequacy of the scale used for the analysis or inherent behavior of the genotypes under study (8).

In the present investigation genotype Bhogawati was appeared to be average stable (suitable for all environments) for major yield contributing characters viz. number of tillers per plant, length of panicle (cm) spikelet sterility (%) panicles per square meter and 1000 grain weight followed by Jaya for number of tillers per plant, panicles per square meter, 1000 grain weight (g), yield per plant (g) and yield per plot (kg). While Pusa basumati – 1 had exhibited stable performance for length of panicle (cm) panicle per square meter, yield per plant (g) and yield per plot kg. It is also observed that there is lack of general association between mean performance (\bar{x}) and stability (S^2_{di}) and regression co-efficient (b_i) and

S^2_{di} . From this it is appeared that separate genetic mechanism is involved in control of these parameters. Therefore consideration of only mean performance to decide the stability of genotypes may not be sufficient unless it is correlated with other parameters (b_i and S^2_{di}) to decide the breeding strategies in Rice.

Table – 1

Different Environments and sowing dates

Environment	Date of sowing
E ₁	15 th May 2010
E ₂	30 th May 2010
E ₃	15 th June 2010
E ₄	30 th June 2010
E ₅	15 th July 2010
E ₆	30 th July 2010

Table-2 : Anova for stability as per Eberhart and Rusell model (1966) in Rice:

Sr .N o.	Sources	G	E	G x E	E + G x E	E (Li)	G x E(Li)	Pooled deviation	Pooled error
1	Days to 50 % flowering	262.74 ++, **, ##	122.58 ++, **, ##	3.63 *, ##	15.52	612.92 **, ##	1.52 *, #	3.74 ##	3.26
2	Number of tillers per plant	3.87 *, #	72.14 ++, **, ##	3.18 *, ##	10.07	360.72 **, ##	2.14 *, #	3.09 ##	1.57
3	Length of panicle (cm)	7.11 ++, **, ##	16.27 ++, **, ##	1.88 *, #	3.32	81.39 **, ##	1.48 *, #	1.78 ##	1.57
4	Number of spikelets per panicle	7752.22 ++, **, ##	487.91 ++, **, ##	47.14 *, #	91.21	2439.56 **, ##	70.76 *, #	37.11 ##	29.06
5	Spikelet sterility (%)	43.47 ++, **, ##	51.35 ++, **, ##	2.08 *, ##	7.01	256.79 **, ##	1.25 *, #	2.06 ##	0.86
6	Panicles per meter square	2841.66 ++, **, ##	323.16 ++, **, ##	18.55 *, #	49.01	1615.81 **, ##	4.42 *, #	19.87 ##	28.95
7	1000 grain weight (g)	97.37 ++, **, ##	9.89 ++, **, ##	0.94 *, #	1.83	49.49 **, ##	1.49 *, #	0.72 #	1.57
8	Yield per plant (g)	108.19 ++, **, ##	393.44 ++, **, ##	12.12 *, #	50.25	1967.23 **, ##	7.31 *, #	11.99 ##	7.40
9	Yield per plot (Kg)	0.46 *, #	2.25 *, #	7.98 *, #	0.29	11.28 *, #	0.04 *, #	7.95 ##	6.49

+, ++ = Significant at 5% and 1% level of significance, respectively against G x E

*, ** = Significant at 5% and 1% level of significance, respectively against the pooled deviation (P.D.)

#, ## = Significant at 5% and 1% level of significance, respectively against the pooled error (P.E.)

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Table-3:
Nature of stability of rice genotypes under different environments

Sr. No.	Character	Genotypes showing stability		
		Average wider stability (bi=1) (suitable for all environments)	Above average (bi<1) (suitable for stress environment)	Below average (bi>1) (suitable for favourable environment)
1	Days to 50 % flowering	Ratna , Karjat-184	Ratnagiri-24	Ratnagiri-73 , Phule radha
2	Number of tillers per plant (hill)	Ratnagiri-73, Jaya, Bhogawati	---	Ratna, Phule radha, Pusa basmati-I
3	Length of panicle (cm)	Karjat-184, Bhogawati, Pusa basmati-I	---	---
4	Number of spikelets per panicle	Phule radha	---	Ratna
5	Spikelet sterility (%)	Ratna, Ratnagiri-73, Karjat-184, Phule Samruddhi, Pusa basmati-I	---	Jaya
6	Panicles per square meter	Ratna, Ratnagiri-73, Phule-radha, Jaya, Indrayani, Bhogawati, Pusa basmati-I	---	---
7	1000 grain weight (g)	Karjat-184, Ratnagiri-73, Jaya, Indrayani, Bhogawati	---	Phule samruddhi
8	Yield per plant (g)	Jaya, Pusa basmati-1	---	Ratna, Phule radha, Bhogawati
9	Yield per plot (Kg)	Jaya, Pusa basmati-I	---	Ratna, Bhogawati

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Periodic Research

Estimation of poly-methyl-galacturonase enzyme activity of *Fusarium* species in North Bihar



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Abstract

Fusarium is very important phytopathogenic fungi. It causes various diseases in plants and result in heavy yield losses of crop. Pectinase are a big group of enzymes that breakdown pectic polysaccharides of plant tissue into simpler molecules like galacturonic acids. The enzyme makes plant cell wall more susceptible to infectious by various fungi and bacteria. To identify the role of pectolytic enzyme in pathogenesis, polymethylgalacturonase (PMG) activity of 6 (six) *Fusarium* species were evaluated using Viscometric assay. In the culture filtrate of 14 days old culture enzyme activity was found to be high. Enzyme production was correlated with the growth of mycelium. Maximum enzyme activity was detected in *Fusarium oxysporum* f.sp. *lentis*, followed by *Fusarium udum*, *Fusarium solani*, and *Fusarium oxysporum* f.sp. *lini*.

Keyword: *Fusarium*, Pectinase, Polymethylgalacturonase, polygalacturonase, pectolytic enzyme

Introduction

The genus *Fusarium* was first introduced by link (1809) as *Fusisporium*. *Fusarium* is a large genus of group ascomycetes fungi. It can be recovered from plants and soil worldwide as pathogens, endophytes and saprophytes (Booth, 1971; Burgess et al., 1994; Nelson et al., 1994; Summerell et al., 2003; Salleh, 2007). Phytopathogenic fungi can produce highly specific enzymes utilized for degrading the cell walls either in the plant infected tissue (in-vivo) or under culture conditions (in-vitro).

Pectinase produced by *Fusarium* render plant cell walls more susceptible to attack by other cell wall degrading enzyme (Bateman and Basham, (1976), Collmer and Keen (1986), Garibaldi and Bateman (1971), Liao and Chatterjee (1988)). Pectic enzymes have been grouped according to the following criteria: (i) The mechanism by which α -1,4 glycosidic bond is split (i.e. hydrolytic or lytic) enzyme specific for a substrat (pectin or pectic acid) and (3) position at the pectic chains at which cleavage occurs (Bateman and Miller (1966), Rombouts and Pilink (1972). Additional specificity of pectin-degrading enzyme is determined by the degree of methylation of the chains, hence polymethylgalacturonase (PMG) for Pectins and less methylated pectinic acid and polygalacturonase for pectic acid.

The major components of the cell wall are Cellulose, Hemicelluloses, Pectic substances and Lignin. Whereas Pectic compounds form the middle lamella of plants cell wall. They have gelatinous consistency and act as cement like substances to bind the cells together. Polygalacturonic acid (homopolymer of 1,4- α -D-galactosyluronic acid) and rhamnogalacturonan (heteropolymer of repeating 1,2- α -L-rhamnosyl-1,4- α -D-galactosyluronic acid disaccharide units) are the two fundamental constituents of pectin. The Pectic substances are also characterized by the degree to which their free carboxyls are esterified with methyl group. The esterification varies with the age of the species of the plants concerned. The polymers of galacturonic acid residues are linked in 1-4 fashion. The galacturonic acid polymers have been subdivided into three general groups according to their chain length and degree of methyl esterification as suggested by Kertesz (1951). Pectins are complex polysaccharides consisting of partially methylesterified α - (1,4) linked homogalacturonic acid backbone and branched neutral sugar side chains. They are important components of cellwall and middle lamella, and can be found in fruits and vegetables. Enzymes cleaving pectic substances are called as pectinolytic enzymes or pectinases Such as Polymethylgalacturonase (PMG) and Polygalacturonase (PG) (Saad et al 2007).

The role of these enzymes in pathogenesis is uncertain and still a matter of debate. However from the works of pathologists and biochemists,

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the exact role of this enzyme in pathogenesis have become clear to some extent {(Bosham and Batman, 1975), Diamond (1967), Hall and wood (1973), Wood (1960) and Waggnor and Diamond (1955)}. In the present investigation it was decided to study the role of pectolytic enzymes in the wilt pathogen of *Fusarium* species.

Materials and Methods

Isolation of Pathogens

Diseased samples of roots, stems, leaves, cobs and seeds were used for isolation of pathogens. For the study of mycoflora associated with the different disease samples, agar plate method and standard blotter test method were followed (Musket 1948; de Tampe 1963). In agar plate method 100 samples were placed at equal distance in petriplates of 6 inches diameter containing Potato Dextrose Agar (PDA) medium. For blotter method, 25 samples were placed at equal distance in the same size petriplates on moistened blotting paper. The petriplates were incubated at room temperature ($28 \pm 1^\circ\text{C}$) under the 12 hour light and dark cycle which has been recommended as general procedures for testing samples for fungal pathogens (Anonymous 1976). The mycoflora that appeared were isolated separately by single hyphal techniques and identified.

Preparation of Extracellular Pectic Enzyme

The Richard's medium was selected as the best medium for growth and sporulation of the *Fusarium*. It was used in exocellular pectolytic enzymatic studies. Sucrose was the carbon source in the medium was established by apple pectin. 100 ml of medium was placed in 250 ml Erlenmeyer flask. The pH of medium was adjusted to 6.0 before autoclaving at 15 psi (pound per square inch) for 15 to 20 minutes. The flasks were incubated with 2 ml spore mycelial disc of 7 days old culture and incubated at room temperature ($27 \pm 1^\circ\text{C}$). The fungal mats were removed by filtration. The remaining culture filtrate was made by cell free centrifuging at 600 rpm for 30 minutes. The supernatant fraction was used immediately for estimation of pectinase enzyme. In all the experiments following series were maintained.

Series I : Reaction mixture.

Series II : Inactive enzyme.

Series III : Enzyme blank.

Series IV: Substrate blank.

Triplicates were maintained for each of the series. Estimation was also carried out in the triplicate series and the mean values were presented in the table. Inactivation of enzyme was carried out by keeping it in boiling water (Water Bath) for half an hour and cooling it rapidly in running tap water.

Estimation of polymethylgalacturonase (PMG) activity

Polymethylgalacturonase (PMG) hydrolyses esterified pectic substances more rapidly than pectic acid. This results in loss of viscosity of the pectic substances. The enzyme activity was assayed viscometrically of the apple pectin (Fluka, A.G.) at 1 percent level Hancock (1964). Viscometer (Corning India Limited) was used throughout the experiment. The reaction mixture was composed of 8 ml of 1 percent Pectin solution substrate + 2ml of Acetate buffer at pH 6.0 and 4 ml of culture filtrate (enzyme source). It was thoroughly mixed and placed in a water bath maintained

at $27 \pm 1^\circ\text{C}$. Reaction mixture with heat inactivated culture filtrate and active culture filtrate was served as control. The percentage loss in viscosity was calculated from the following formula:

$$V = \frac{T_0 - T}{T_0 - \text{TH}_2\text{O}} \times 100$$

Where V = Percent loss in viscosity.

T₀ = Flow time in seconds at zero

TH₂O = Flow time of Distilled water.

The enzymatic activity is expressed as 100/time taken for the enzyme to produce 25 percent of total possible loss of viscosity.

Enzyme activity = $100/t$ (time for 25% loss of viscosity).

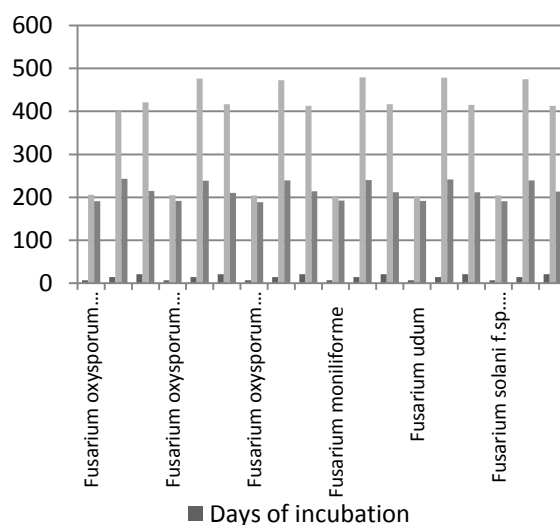
Results were obtained and presented in the table.

Table (7):- Polymethylgalacturonase (PMG) activity of *Fusarium* species.

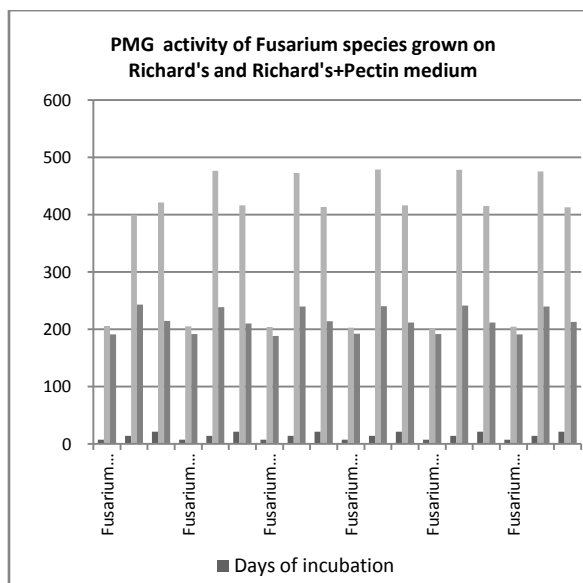
• Average of three replicates

S N o	Fusarium spp.	Days of incubation	Mycelial dry weight in mg		*Enzyme activity in μg	
			Richard's Medium	Richard's + Pectin Medium	Richard's Medium	Richard's+ Pectin Medium
1	<i>Fusarium oxysporum f.sp. lentis</i>	7	205.65	190.82	-	4.08
		14	400	243	-	9.62
		21	421.3	214.33	-	6.05
2	<i>Fusarium oxysporum f.sp. lycopersici</i>	7	204.86	191.36	-	4.37
		14	476.5	238.5	-	8.86
		21	416.3	210	-	5.95
3	<i>Fusarium oxysporum f.sp. lini</i>	7	203.95	188.5	-	4.43
		14	472.66	239.4	-	9.21
		21	413.2	213.8	-	5.92
4	<i>Fusarium moniliforme</i>	7	202.87	192.1	-	4.38
		14	479	240.35	-	9.16
		21	416.3	211.8	-	5.86
5	<i>Fusarium udum</i>	7	201.65	191.76	-	4.3
		14	478.33	241.2	-	9.35
		21	414.85	211.65	-	5.92
6	<i>Fusarium solani f.sp. lentis</i>	7	204.3	190.81	-	4.23
		14	475.14	239.6	-	9.45
		21	412.86	213	-	5.98

Dry mycelial weight of *Fusarium* species on Richard's and Richard's+Pectin medium



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Result and Discussion

After perusal of the table it was concluded that the enzyme production was adaptive in nature, that is, production of enzyme increased remarkably in the presence of substrate pectin. This adaptive nature of enzyme was also confirmed by Mukherji and Mazumdar (1974) and Vidyashekrana et al. (1973).

Maximum enzyme activity was observed in culture filtrate of 14 days incubation, similarly maximum mycelial weight was also observed on 14 days incubation. Enzyme production was correlated with the growth of mycelium. Maximum enzyme activity was detected in *Fusarium oxysporum f.sp. lentis* followed by *Fusarium udum*, *Fusarium solani* and *Fusarium oxysporum f.sp. lini*.

Minimum enzyme activity was observed in *Fusarium oxysporum f.sp. lini*. More or less similar activity was observed in *Fusarium oxysporum f.sp. lycopersici* and *Fusarium moniliforme*. Similar enzyme activity was also detected by Dees and Sthanana (1962).

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Periodic Research

Age determination and growth rate of fresh water fish *Puntius conchonius* (Ham.-Buch.) by a use of trunk vertebrae



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Abstract

Paper deals with the validation method of ageing by using trunk vertebrae as an instrument. The section of trunk vertebrae shows that the life span of *Puntius conchonius* in maximum three years and average age is about two years. The cause of ring formation is probably spawning stress. In the present investigation with the help of back calculation method it was calculated that the first, second and third ring was formed at an average fish length of 49.49 ± 5.37 , 62.38 ± 0.84 and 68.11 ± 3.28 mm respectively. Age determination based on the length frequency distribution was noticed, fish is attained a length of 50 mm, 60 mm and 70 mm after first, second and third year of age. The growth parameters of *P. conchonius* indicated that the specific rate of linear growth (C_i) is 26.045 between first and second year and 9.196 between second and third year. The index of species average size (ϕ_h) was 22.703. The values of growth constant (C_{it}) were 0.348 between first and second year and 0.131 between second and third year with an average value of 0.239. The values of growth characteristics were 11.509 between first and second year and 5.458 between second and third year with an average of 8.483.

Keyword: *Puntius conchonius*, Trunk vertebrae, Age determination and growth rate, Length frequency distribution, Growth Parameters.

Introduction

Puntius conchonius (Ham.-Buch.) is a fresh water fish and is commonly known as minor carp fish. It is locally called as "Damra" in Uttarakhand region, India. This fresh water species abundantly found in Mandal River (Bahuguna, 2007). Age and growth studies are important for the problems associated with management of fisheries. Age determination of fish from scales, otoliths, vertebrae, fins, spines, fin rays and other a structure is a matter of routine with most exploited fish stocks. Monitoring of a population of known age require long time and is quite expensive method. Hence, the best validation method for age determination is to study of annulus formation of fish seems to be marginal growth analysis. A great deal of work has been done on age determination and growth estimation in fishes but main contributors are Lee, 1920; Dobriyal and Singh 1990; Tandon et.al., 1993; Johal et.al., 2000; Gursay et.al., 2005; Tsikliras et.al., 2005; Pathani and Joshi, 2006 etc.

Little information is available on the biology of this species. A few studies are available to sexual dimorphism in *P. conchonius* (Dobriyal et. al., 2007) and length-weight relationship between body and brain in *P. conchonius* reported by Bahuguna et.al., (2007). At present no published information is available on age and growth of *P. conchonius* from this sub-continent. The result of the age and growth study would be useful in future for the artificial propagation and stocking of this species in ponds.

Material and Methods

Fish samples were collected month wise during July 2003 to June 2005 in Mandal River (Map.1 and Photo 1.1). A total of 450 specimens of *P. conchonius* ranging size from 36-85 mm in total length and 1920-9875 mg in weight were used for the analyses. Length of fishes was measured on the fish measuring board to the nearest mm and weight up to gm by using a digital electronic balance. Age determination and growth rate mechanism of *P. conchonius* was studied by the vertebrae method and was also confirmed by the length frequency distribution method (450 specimens). The trunk vertebrae from 120 specimens were observed in the present study. Specimens were dissected (open) and transverse section of its centrum was cut with the help of a clean sharp razor. It was then kept in clove oil to impart transparency. Finally the cleared trunk vertebrae were

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kept in an envelope for further examination. The fish length and vertebrae radius relationship was examined with the help of standard regression analysis. Viz., $Y = a + bx$

Where:

X = fish length (an independent variable).

Y = vertebrae radius (a dependent variable).

a & b = constant.

Vertebrae were subjected for further examination, which includes the identification of annuli and its measurements focus. Besides, minimum width in terminal zone (i.e. the distance from last annuli to margin) was also noticed of each vertebra in each month round the year. The data was further analyzed to find out the month and probable cause of annuli formation.

Back Calculation for vertebrae:

The growth rate of fish was calculated by back calculation method as suggested by Lea (1910). The formula read as: $I_n = V_n / V \cdot I$

Where:

I_n = Length of fish when annulus "n" was formed,

I = Length of fish when vertebrae sample was obtained,

V_n = Vertebrae radius of annulus "n" at I_n ,

V = Vertebrae radius.

Growth Parameters:

The growth parameters were calculated as suggested by Tandon and Johal (1996). These were including specific rate of linear growth, Index of species average size, Growth characteristics, Growth Constant and the age at first Maturity.

Specific rate of linear growth: $C_l = (I_n - I_{n-1}) / I_{n-1} \times 100$

Index of species average size: $\phi h = \sum^{n_{j+a}} h; h = I / n_{j+a}$

Growth characteristics: $C_{th} = \log I_n - \log I_{n-1} / 0.4343 \times I_{n-1}$

Growth Constant: $C_{lt} = \log I_n - \log I_{n-1} / 0.4343 \times t_2 + t_1/2$

Where:

I_n and I_{n-1} are mean computed total length of fish at ultimate and penultimate year of life.

J = Juvenile,

a = adults,

n = number,

h = absolute increment in length,

$t_2 + t_1$ are the time intervals between ultimate and penultimate age classes and the value of $t_2 + t_1/2$ is equal to 1.5.

Results and Discussion

It is observed that the vertebrae structures of *P. conchoni* were found very suitable for age determination. Vertebrae are found circular in most of the cases (Plate 1.1, 1.2 and 1.3). The opaque and hyaline zones were clearly distinct, hence the ring, which is all around the diameters, was considered as annuli. Each annulus comprised of two growth rings. Data on the age and growth in *P. conchoni* based on the various length groups is given in Table 1.1. The relationship between fish length and vertebrae radius is shown in Figure 1.1. It was calculated as:

$$VR = -20.0010 + 0.87123 FL, r = 0.72983.$$

Where:

VR = vertebrae radius,

FL = fish length,

r = Coefficient of correlation.

Time of annulus formation:

In the present investigation maximum three age rings were counted (Plate 1.1, 1.2 and 1.3). Minimum width in terminal zone for vertebrae was also observed during July-August (Fig. 1.2).

Growth rate of fish by back calculation method:

The growth rate of *P. conchoni* was also determined by the back calculation method based on trunk vertebrae. It was observed that the first ring was formed at an average length of 49.49 mm. The second and third rings were appeared at an average length of 62.38mm and 68.11mm respectively. The annual increment (h) of 49.49mm, 12.89mm and 5.73mm were observed from first to third year (Table-1.2).

Growth parameters:

Summary of the growth parameters of *P. conchoni* (Table 1.3) indicated that the specific rate of linear growth (C_l) is 26.045 between first and second year and 9.196 between second and third year. The index of species average size (ϕh) was 22.703. The values of growth constant (C_{lt}) were 0.348 between first and second year and 0.131 between second and third year with an average value of 0.239. The values of growth characteristics were 11.509 between first and second year and 5.458 between second and third year with an average of 8.483.

Conformation of result by length frequency distribution (Peterson's methods):

Examinations of the length frequency distribution were presented in Fig 1.3. For this purpose about 450 fishes were collected round the year (July-2003 to June 2005). After micro-level examination, it was observed that the fish attends a length of 50mm, 60mm and 70mm during first, second and third year respectively.

The study of age determination in fish depends on annual growth marks in certain skeletal part of fish, which are formed as a result of irregular growth and metabolism. Temperature and spawning are the important causative factors responsible for annulus formation (Holcik, 1967; Natrajan and Jhingran 1963; Linfield, 1979). On the basis of regression analysis we could obtain straight-line relationships between fish length and vertebrae radius. Age rings, which were maximum three, were studied by vertebrae and were confirmed by the length-frequency distribution method. On the basis of minimum width in terminal zone of vertebrae, it is concluded that the months of ring formation were July-August when natural environment was disturbed due to monsoon. Another cause of ring formation may be spawning stress as the fishes perform heavy spawning during May-July which might have disturb the growth rate.

According to Qasim (1973) in general, all fishes have annual cycles of maximum growth corresponding to summer and autumn when

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temperature and food supply are moderate and suitable ambient conditions. Lea (1910) observed in the young herrings that the rate of increase in length, deducted from the scales was greater when there was a rise of temperature in springs but it decreased before the temperature attained its maximum. Dobriyal and Singh (1990) in *Barilius bendelisis* also identified the growth rings as spawning marks. According to Kohli and Goswami (1989) who worked on the pectoral spine of *H. fossilis*, the annual rings were formed in May-June, which is the spawning period of fish in Assam. It was observed that the feeding intensity was low during this period. Hence, the formation of growth rings can be attributed to the cumulative effect of "nutrition and spawning".

Correction factor is also considered for age determination of fish, Tandon and Oliva (1977) used it for fish vertebrae relationship in *Silurus glanis*, a sheat sish in Czechoslovakia. In the present study we used back calculation for vertebrae study instead correction factor. In the present investigation maximum 3 age rings were noted in vertebrae structure. The maximum width in terminal zone was observed during April to June in vertebrae (15-18 omd), thus indicating these months are most distant months of age ring formation. The probable months of age ring formation were observed July-August, and the least minimum width in terminal zone was observed in these months too. It can be easily concluded that vertebrae tool of age determination confirm only one frequency of ring formation in *P. conchoni*. During the month of May and June highly mature eggs occurs in the abdominal cavity, so it affects the feeding intensity of fish therefore low feeding factor was noticed during these months. We may say that like a spawning stress, low feeding was also a causative factor for ageing in *P. conchoni*.

In the present investigation with the help of back calculation method it was noticed that the first, second and third ring was formed at an average fish length of 49.49 ± 5.37 , 62.38 ± 0.84 and 68.11 ± 3.28 mm respectively. Lagler (1977), who worked on the length frequency method, is based on the expectancy that the frequency analysis of a species of any one age group collected on the same data will show variations around the mean length according to normal distribution. Thus, there will be clumping of fish of successive ages at successive length when sampled at randomly. Age determination based on the length frequency distribution was recorded, fish is attained a length of 50mm, 60mm and 70mm after first, second and third year of age.

The growth annual increment (h) of *P. conchoni* shows that the length increment (h) was 49.49mm, 12.89mm and 5.73mm first, second and third year of life respectively. The specific rate of linear growth (C_l), between first and second year was found 26.045 and between second and third year age was recorded 9.196. The species average size (ϕh) was noted to be 22.70. The value of growth

characteristics of vertebrae was (C_{th}) observed for *P. conchoni* in the present investigation showed normal growth 11.509 during first and second year. But very slow growth occurred between second and third year age of *P. conchoni* (8.483). The average growth of *P. conchoni* was noticed 8.483 for vertebrae respectively. On the basis of above observation it may concluded that the life span of the *P. conchoni* is maximum three years. The fish were matured at a size of 52mm (male) and 54mm (Female).

Table1.1: Data on the Age and Growth of *Puntius conchoni* based on various length groups.

Fish length (mm)	V.R. (Ocular Micrometer division) 1 Omd = 0.016mm	VR _{n1} (OMD)	VR _{n2} (OMD)	VR _{n3} (OMD)	Ln ₁ (mm)	Ln ₂ (mm)	Ln ₃ (mm)
36 – 45	-	-	-	-	-	-	-
46 – 55	20 - 40* 30.80 ± 8.67	16 - 22 18 ± 7.61	-	-	35.40 - 40.26 38.28 ± 2.59	-	-
56 – 65	26 - 45 35.60 ± 5.86	14 - 23 20.12 ± 4.52	-	-	39.86 - 48.60 46.77 ± 3.68	-	-
66 – 75	30 - 53 43.23 ± 7.81	17 - 25 22.85 ± 1.95	26 - 35 29.97 ± 3.70	34 - 49 43.27 ± 5.14	40.73 - 53.75 51.15 ± 6.61	55.40 - 63.90 61.23 ± 5.23	64.75 - 67.51 65.13 ± 2.79
76 – 85	50 - 61 56.28 ± 3.98	20 - 32 25.12 ± 7.61	34 - 41 35.57 ± 2.07	43 - 56 49.28 ± 4.11	48.80 - 59.19 56.24 ± 1.49	58.81 - 65.33 63.79 ± 1.04	66.44 - 74.36 68.68 ± 3.20

VR = Vertebrae radius, VR_{n1} = Vertebrae radius at annulus n₁, Ln₁ = Length of fish at the time of annulus n₁ formation.

* = Min-Max

Average ± SD

Table 1.2: Back calculated length of *P. conchoni* based on age class collected from river Mandal during July 2003 to June 2005.

Age class	No of fish studied	Average fish length at the time of capture (mm)	Ln ₁ (mm)	Ln ₂ (mm)	Ln ₃ (mm)
I	19	(55.85 ± 2.68)	(49.82 ± 4.02)	-	-
II	21	(69.75 ± 4.85)	(43.96 ± 3.10)	(62.98 ± 5.33)	-
III	10	(79.95 ± 2.87)	(54.69 ± 3.60)	(61.79 ± 1.11)	(68.117 ± 3.28)
Average values		(68.516 ± 12.10)	(49.49 ± 5.37)	(62.38 ± 0.84)	(68.117 ± 3.28)
h (annual increment)			49.49	12.89	5.73

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L_{n1} = Fish length at the time of annulus formation. n_1 .
Table 1.3: Summary of growth parameters of *P.conchoni*us.

Parameters	Year of life (Age classes)				
L.(mm)	49.490		62.380		68.117
h (mm)	49.490		12.890		5.730
Φ h (mm)			22.70		
C_l		26.045		9.196	
C_{lt}		0.348		0.131	
			0.239		
C_{th}		11.509		5.458	
			8.483		

L = Average length at the time of annulus formation,
h= annual growth increment, Φ h= index of species
average size, C_l = Specific rate of linear growth, C_{lt} =
growth constant, C_{th} = growth characteristics, * =
average value.

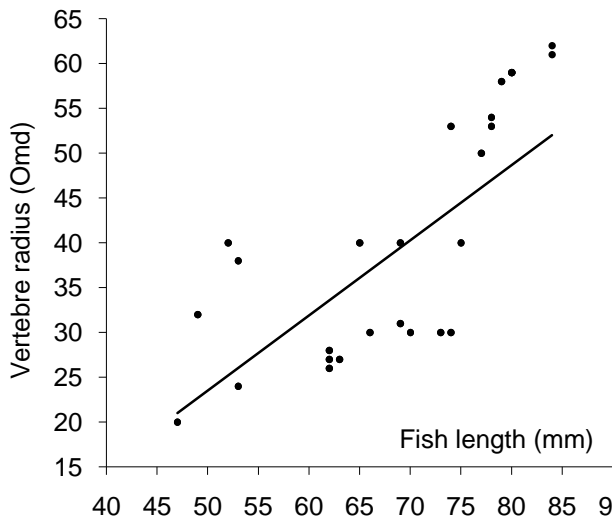


Fig.1.1: Regression between fish leng and vertebr e radius in *P. conchoni* (Ham.Buch.)

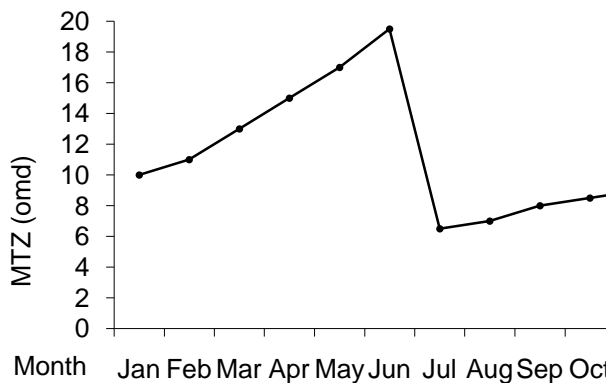


Fig.1.2: Minimum width in terminal zone of age the vertebrae of *P. conchoni*us.

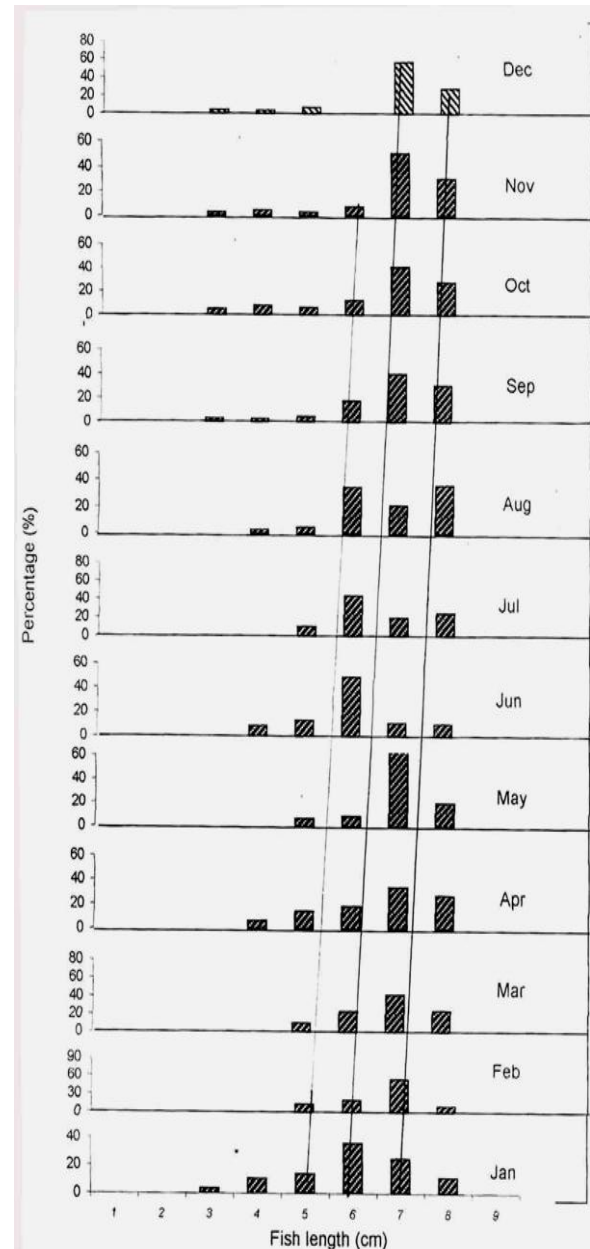


Fig.1.3: Length frequency distribution of *P.conchoni*us.



Photo 1.1: Female and male fish *Puntius conchoni*us.



Plate 1.1: One year ageing trunk vertebrae



Plate 1.2: Two year ageing trunk vertebrae

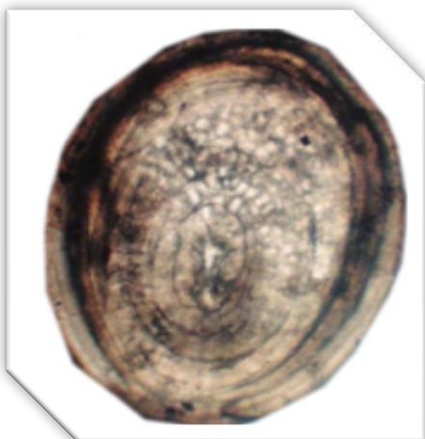


Plate 1.3: Three year ageing trunk vertebrae



Map.1: Sampling sites of Mandal River.

Conclusion

Puntius conchonius is the most important ornamental cyprinid fish of Garhwal region. This paper deals with the age and growth determination in *Puntius conchonius* by reading of trunk vertebrae that allowed the identification of 3 age groups. The width of the growth rings diminishes as the age increases. The growths of the trunk vertebrae are proportional to the fish growth. The period of highest growth rate happens during the first year of life. During the first year *P. conchonius* grows 49.49 cm, the second year 62.38 cm and the third, 68.11 cm. The strategy of the quick growth during the first year of life allows *P. conchonius* to diminish the natural mortality. Age determination based on the length frequency distribution was recorded, fish is attained a length of 50mm, 60mm and 70mm after first, second and third year of age. On the basis of minimum width in terminal zone of ring formation in vertebrae, it was concluded that the months of ring formation were July-August when natural environment was disturbed due to monsoon. Another cause of ring formation may be spawning stress as the fish perform heavy spawning during May-July which might have disturb the growth rate.

Suggestions

Puntius conchonius species is available only in the river Mandal of Garhwal in abundance. It is of rare occurrence in other streams. *P. conchonius*, the fish under study, shows clear-cut sexual dimorphism. Age rings, which were maximum three, were studied by vertebrae and were confirmed by the length-frequency distribution method. I recommend that in studies involving the rate of survival and growth, age composition of this species, the vertebrae may be used as the most reliable structure for the age determination of *P. conchonius*.

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Periodic Research

Effect of insecticide Malathion on cocoon production in earthworm *Eisenia foetida*

Malathion is an organophosphate pesticide. *Eisenia foetida* were treated with Sub-lethal doses of 0,50,150,250 ml/kg soil were used. Control groups were added only tap water. Each group was analyzed after 15 days and 30 days post treatment. After copulation the number of cocoons formation and cocoon viability were recorded. Numbers of cocoons were decreased on exposure to high doses 250ml/kg soil of Malathion. Viability percentage was also calculated.

Keyword: Pesticide Malathion, *Eisenia foetida*, Cocoons production and viability.

Introduction

A great proportion of biomass of terrestrial invertebrates is represented by earthworms which play an important role in increasing the nutrient content of the soil. *Eisenia foetida* is the standard test organism used in terrestrial ecotoxicology, because it can be easily bred on a variety of organic wastes within short generation times. Earthworms play a vital role in the maintenance of soil structure, functions, and fertility. Their activities modify soil aeration, drainage, and availability of nutrients for plants generally integrate soil organic and mineral elements to improve soil structure. Earthworms have been selected as a suitable representative of soil organism as they are key components of soil biota and contribute to the overall productivity of agricultural soils through their feeding, casting and burrowing activities (Culy and Berry 1995). Choo and Baker (1998) found that cocoon production in *Aporrectodea trapezoids* was inhibited by endosulfan and fenamiphos. Bustos-obreg and Goicochea(2002) studied the effect of exposure to commercial parathion on reproductive parameters such as sperm and cocoon production and genotoxicity of male germ cells of *Eisenia foetida*. Earthworms are hunted as food by some birds like Robins and Chickens. Earthworms are good friends to the gardner and farmer as they are continually ploughing and manuring the soil.

Biomarkers are biological response that can be related to exposure to toxic effect of environmental chemicals(Peakall 1994). Evaluation of the effects of the pesticides on maturation and fecundity can be related to disturbances of earthworm population densities. Fecundity in earthworms is sensitive to pesticides (Brunninger *et al.* 1994). Population densities of earthworms may not be immediately affected, there can be reproductive changes, which may reduce populations in the longer term. The aim of this study was to determine the effects of organophosphates Malathion on fecundity of the common earthworm *Eisenia foetida*. Addison and Holmes (1995) made acute toxicity studies for determining effect of fenitrothion on earthworm.

Material and Methods

Eisenia foetida were selected for study because it is a readily available, easily maintainable and is cheap test species. Aim was to study the effect of exposure to commercial organophosphate on cocoons production in *Eisenia foetida*. Healthy, sexually matured Earthworms (*Eisenia foetida*) approximately weighing 1 to1.3 gm and length 3 to 12 cm were collected from the **Rau** (M.P), India. They mature within 50-55 days and incubation period of cocoon is 20-23 days. Earthworms were acclimated in the laboratory in culture pots with moistened soil, before the commencement of the experiment. 30 earthworms were kept in each pot which were filled with 1 Kg soil. The earthworms were fed with organic matter, such as decaying leaves, compost manure etc.

Eisenia foetida were exposed to Malathion via the soil. Malathion concentration series were prepared by diluting the stock solution. Series of different concentration of Malathion (50,150,250 ml/kg) were prepared. The concentration series were subsequently mixed with soil. In the control group tap water was used. 4 pots were prepared for experiment.

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In each pot 30 worms were added. Worms were exposed to different concentration of Malathion for 15 days and 30 days. Cocoon production of *E. foetida* was observed.

Malathion is an organophosphate which binds irreversibly to cholinesterase. Malathion is an insecticide of relatively low human toxicity. IUPAC name of malathion is **Diethyl 2-[(dimethoxyphosphorothioyl) sulfanyl] butanedioate**. Malathion is a pesticide that is widely used in agriculture, residential landscaping. It is the most commonly used organophosphate insecticide. Bonner et al. (2007). It is capable of inhibiting carboxyesterase enzymes activity in those exposed to it.

Results & Discussion

Cocoon production was affected by pesticide exposure (Table 1). Earthworms exposed to the high concentration of malathion produced fewer cocoons per adult. The effects were observed in the group of earthworms that had been exposed to the high concentration of malathion. These earthworms matured slowly. Furthermore, cocoon production in the resulting adults was reduced to 55.55% and 43.75% compared to controls exposed for 15 days and 30 days respectively. These results indicate effects on cocoon production. A decline in cocoon production was observed between 15 days and 30 days in all groups.

Cocoons productions after 15 days were observed and compared with control group. 39 cocoons were observed in control group. *Eisenia foetida* were exposed to malathion. *Eisenia foetida* treated with 50 mg/kg produced 36 cocoons. Further earthworms treated with 150 mg/kg produced 29 cocoons and higher concentration 250 mg/kg produced 18 cocoons.

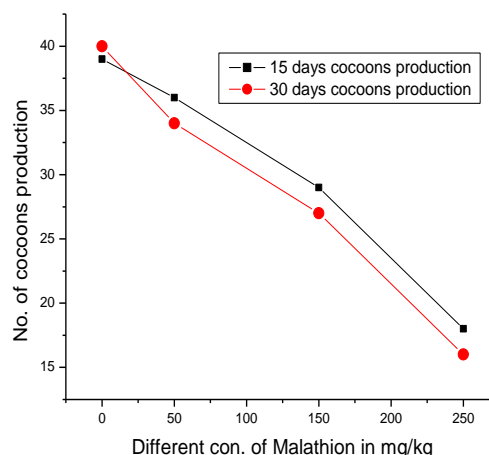
After 30 days of exposure to different doses (50,150,250mg/kg) of malathion cocoons production were observed and compared with control group. 40 cocoons were produced in control group. *Eisenia foetida* treated with 50 mg/kg produced 34 cocoons. Further earthworms treated with 150 mg/kg of malathion produced 27 cocoons. At higher concentration 250 mg/kg 16 cocoons were produced.

In fig. 1 the mean value of cocoon production rate was calculated for the 15 days and 30 days of exposure to various concentrations of malathion and in control condition too. It was observed in most of cases that the mean cocoon production rate is decreasing as increasing the number of exposure days and concentration.

Table 1
Number of cocoon production after exposure of *Eisenia foetida* to different concentration of Malathion for 15 days and 30 days (Mean \pm S.D.)

S. No.	No. of earthworms	Different con. of Malathion in (ml/kg)	Number of cocoon production after Exposure period 15 days 30 days	
1.	30	Control	3.9 \pm 0.56	4.0 \pm 0.70
2.	30	50	3.6 \pm 0.60	3.4 \pm 0.50
3.	30	150	2.9 \pm 0.90	2.7 \pm 0.55
4.	30	250	1.8 \pm 1.29	1.6 \pm 0.66

Fig. 1 Changes in number of cocoon production after exposure to Malathion



Cocoon viability

In different groups cocoons viability was recorded. Cocoon of experimental worms were compared with cocoons of control group. Cocoon viability was calculated using Van Gestel's (1992) method. The viable percentage of cocoons was 84.61% of control group. On exposure to 50,150 mg/kg of malathion for 15 days Viable percentage was 80.55%, 58.62% respectively. Thus we see after exposure to high dose 250mg/kg of malathion numbers of cocoons decreased and viability percentage was also decreased (Table 2) compared to the control group.

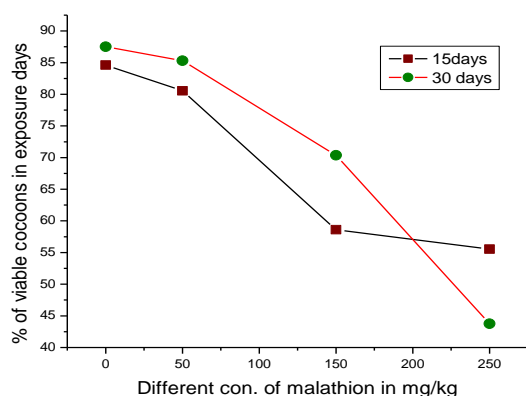
Worms exposed to low doses 50,150 mg/kg of malathion for 30 days viability was 85.29% and 70.37% respectively. After treatment to high doses 250mg/kg of insecticide number of cocoons was 16 and viability of cocoons was 43.75% on 30 days exposure. Thus there is decrease compared to the control group (Table 3). Yasmin and Dsouza (2007) studied effect of pesticides on reproductive organs of *Eisenia foetida*. Farrukh and Ali (2011) studied effect of dichlorovos organophosphate on growth, reproduction and avoidance behavior of earthworm *Eisenia foetida*. Espinoza-Novarro et al (2004) studied sub lethal doses of malathion alter male reproductive parameters of *Eisenia foetida*. Bansiwal and Rai (2010) studied malathion toxicity on certain organs of earthworm *Eisenia foetida*.

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Table 2: The percentage of viable cocoons of *Eisenia foetida* exposed to Malathion for 15 days and control worms

S. No	No. of earthworms	Malathion con. in (mg/kg)	No. of cocoons produced	No. of Viable cocoons	No. of non viable cocoons	% of Viable cocoons
1.	30	Control	39	33	06	84.61
2.	30	50	36	29	07	80.55
3.	30	150	29	17	12	58.62
4.	30	250	18	10	08	55.55

Fig. 2 The percentage of viable cocoons of *Eisenia foetida* after exposure to Malathion



**Table 3
The percentage of viable cocoons of *Eisenia foetida* exposed to Malathion for 30 days and control group worms.**

S. No	No. of earthworms	Different con. in (mg/kg)	No. of cocoons	No. of viable cocoons	No. of non viable cocoons	% of viable cocoons
1.	10	0	40	35	05	87.5
2.	10	50	34	29	05	85.29
3.	10	150	27	19	08	70.37
4.	10	250	16	07	09	43.75

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Periodic Research

Role of Natrolite in remediation of acute lead toxicity in fish

Abstract

Fish constitute an economically important group of chordates and these are an excellent source of proteins. Fish form a good energy food which is rich in minerals and vitamins. It has been an important food item of man from prehistoric period. Exposure of fish to lead and other metals and accumulation of lead in their tissues cause pathological changes in kidney, gill brain and muscles as observed by many scientist. The most effective method of removing metal toxicity seems to be the application of natural zeolites which are cheaper and found abundantly in nature. Natrolite is a microporus, crystalline solid with well defined structure. Due to lead toxicity the cholesterol contents in kidney and gills of fish is affected. Use of Natural zeolite natrolite reduce the toxicity in fish.

Keyword: Natrolite, Lead nitrate, Zeolites, Heteropneustes.

Introduction

Fish is a good source of readily digested high quality animal protein. It contains lysine and other amino acids which make it suitable for complementing the high carbohydrate diets prevailing in many under developed countries and it also provides preformed vitamin A and D. It is also a good source of minerals. Fisheries are endangered by pollution, especially by metal pollution. Natural water bodies are often contaminated by various kinds of waste released by industries and agriculture land. These waste include heavy toxic metals also. Heavy toxic metals can accumulate in aquatic organisms via their diet and become concentrated at levels that are much higher than in the water itself. Lead and cadmium are classified as prevalent toxic metals which tend to be concentrated in environmental systems and humans. Lead is emitted into the biosphere in considerable amounts, owing to its increased industrial use and its applications as a fuel additives. Zeolites are three dimensional, crystalline microporus solids that contain aluminium, silicon and oxygen in their regular framework, cations and water are located in the pores. In the classification of natural zeolites, natrolite is the representative zeolite of the first group, in which the linkage are more numerous in one crystallographic direction than in a plane at right angle to it. It is usually white or colorless but sometimes reddish or yellowish.

Material and methods

For the present study *Heteropneustes fossilis* locally known as singhan, were collected from local nursery. The average length and weight of experimental fish was 12.5 ± 1 cm and 11.2 ± 1 gm respectively. Prior to experimentation fish were acclimatized for 21 days. Fish were fed with commercially available fish food regularly. Acute toxic effect of lead on cholesterol contents in gills and kidney of fish were studied for 7 to 35 days. For cholesterol estimation in the tissue Liebermann-Burchard method (Plummer 1985) was applied. In the present investigation, 96 hrs LC 50 for lead nitrate has been estimated as 105 mg L⁻¹ day⁻¹.



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Observation

Table No. 1

Protective action of natural zeolite-natrolite on acute lead toxicity in the kidney of fish *Heteropneustes fossilis* with reference to cholesterol contents (mg/g)

Day of Exposure	Control	Treatment Groups		
		Pb (NO ₃) ₂	2 Pb(NO ₃) ₂ + Natrolite	Only Natrolite
7	5.97±0.31	6.40±0.36 7.20%	6.21±0.33 -2.96%	5.98±0.31 0.17%
14	5.98±0.31	6.42±0.36 7.35%	6.24±0.33 -2.80%	5.98±0.31 0.00%
21	6.00±0.31	6.44±0.36 7.33%	6.27±0.33 -2.64%	6.01±0.31 0.17%
28	6.03±0.31	6.46±0.36 7.13%	6.30±0.33 -2.47%	6.04±0.31 0.16%
35	6.03±0.31	6.50±0.36 7.79 %	6.32±0.33 -2.77%	6.05±0.31 0.33%

Values are mean SE and % Change.

Table No. 2 : Protective action of natural zeolite-natrolite on acute lead toxicity in the gill of fish *Heteropneustes fossilis* with reference to cholesterol contents (mg/g)

Day of Exposure	Control	Treatment Groups		
		Pb (NO ₃) ₂	2 Pb(NO ₃) ₂ + Natrolite	Only Natrolite
7	5.40±0.30	5.76±0.35 +6.66%	5.52±0.33 -4.16%	5.41±0.30 +0.18%
14	5.42±0.30	5.79±0.35 +6.82%	5.54±0.33 -4.31%	5.42±0.30 0.00%
21	5.42±0.30	5.80±0.35 +7.01%	5.55±0.33 -6.03%	5.43±0.30 +0.18%
28	5.41±0.30	5.82±0.35 +7.57%	5.57±0.33 -4.29%	5.42±0.30 +0.18%
35	5.42±0.30	5.84±0.35 +7.74%	5.58±0.33 -4.45%	5.42±0.30 0.00%

Values are mean SE and % Change.

Result and Discussion

The present study deals with the biochemical changes in vital organs viz kidney and gills of the teleost fish *Heteropneustes fossilis* under the influence of acute exposure of lead nitrate, lead nitrate + natrolite and natrolite only. Acute changes were observed in these organs for 35 (at the interval of 7 days) days. After 7 days interval in acute study, fish sacrificed, their tissues were removed and processed for biochemical estimation of cholesterol in kidney and gills. For the study of remediation of lead toxicity natural zeolite natrolite was used and it has been observed that natrolite decreases lead toxicity in the fish *H. fossilis*. The observation thus obtained have been summarised in the form of table no. 1 and 2.

The cholesterol contents in kidney and gills of experimental fish of control groups observed almost similar during all the exposure periods. When fish of group II exposed to sublethal concentration of lead nitrate, the cholesterol contents in both experimental tissues found to be increased in comparison to their respective control. The maximum increase in these tissues reported 7.79 and 7.74 respectively up to 35 days of exposure while the minimum increase observed after 7 days of exposure 7.20 and 6.66 in kidney and gills. When fish of group III exposed to lead nitrate + natrolite, an increase in cholesterol contents has been observed. In the fish of group IV exposed to only natrolite, again increase was observed.

Jia Xiuning et al; 2001 studied the effect of heavy metals on the respiration intensity of juvenile *Misgurnus anguillicandidatus*. They found respiration intensity decreased in them. Revis et al; 1980; Tarugi et al; 1982; Iddo et al; 1987, Yogminas et al; 1990 also reported high level of cholesterol due to lead toxicity in animals.

Kargin 1998 studied the concentration of heavy metals in tissues of the fresh water fish *Copoea barroisi* and found the highest concentration in liver and gills. Dhanapakiam et al; 1998 studied the gills of adult *Channa punctatus* to effluents of industrial wastes in the Couvery river water, revealed deformities and reported that the industrial and sewage carried by river Cauvery induce considerable chemical stress on fish population. Reduction of food consumption in the presence of heavy metals has been reported by Mckim and Benoit (1971). Deleterious biochemical effects due to lead in fish have also been reported by Spry et al; (1981) and Hodson et al; (1982).

Application of natural zeolites in removal of heavy metals toxicity has been reported by Faghihean et al; 1999. According to Dixon and Web (1964) heavy metal inhibit the activity of a wide range of enzymes of biological system. Brown and Howell (1972) working with zinc and copper, reported that copper exert an inhibitory effect on the oxygen consumption of the whole animal *Mutilus efulis*. According to Wong et al (1975) complexation of metals by co-ionic linkage with appropriate organic molecules in biological tissues is an important process involved in metal accumulation

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by aquatic organism. Respiratory system of fish differ from all other system because damage to gill has immediate impact on the rest of the fish body. Radhakrishnan (1988) observed accumulation of metals in gills of *Channa punctatus*, *Labeo rohita* and *H. fossilis* respectively.

Role of zeolite has been studied by Jain et al; (1996). Natrolite is a naturally occurring hydrated aluminosilicate minerals and is composed of symmetrically stocked aluminium and silica tetrahedron (Kesraoni – ouki et al; 1994). The negative charge allows for the absorption of certain positively charge ions. In aqueous solution, the negative charge is generally neutralized by Na +. However Pb is preferentially absorbed to the natrolite matrix. Out of the results obtained in the present study, it can be concluded that application of natural zeolite - natrolite can reduce the lead toxicity in fish.

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Periodic Research

Study of Mastitis in Cattle of Dairy Farms

Abstract

Present study deals to determine the effect of mastitis during early lactation in dairy cows. Mastitis is the most costly disease of dairy animals. Clinical mastitis is known by sudden onset, swelling in udder, pain and reduction in size. This condition alters the milk secretion from the affected udder. The constitution of milk may flake. Or watery in consistency. Mastitis caused by pathogenic agent like bacterial species and viruses and stain. It is decreased lactation of host factor (cow) and also decline image and immune status of the animal. While somatic cell count increased in affected animal.

Keyword : Cattle, Mastitis, Lactation, Pathogenic factors.

Introduction

Mastitis is the inflammation of the udder, that affects a large numbers of dairy cattle. Graves and Fetrow(1993) stated Mastitis has been described as most economically imposing disease facing by dairy producers. Cady et. al.(1983) reported that mastitis significantly decrease production of milk and alters its composition. It also shortens lactation period of animals by days on an average. In this disease udder became inflamed and several bacteria are able to invade the mammary gland and teat canal and multiply to produce harmful substances that results to cause injury of milk secreting tissues. Moore (1993) studied that mastitis caused by gram negative pathogens. Mastitis greek, Mastos = breast, it is = inflammation) is a multiethiological complex disease, which defined as inflammation of mammary gland and is characterized by physical, chemical, and pathological changes in glandular tissues, Radostitis et al. (2000). Mastitis caused considerable changes in milk composition (Table - 1). it alters milk composition and appearance, decrease milk production, elevated body temperature, swelling, redness or heat in infected quarters.

Materials and Methods

Samples of milk collected from dairy farms of Jabalpur district. The samples of milk collected from dairies in morning at the time of milking. Total 15 samples of raw milk collected and were analyzed for California mastitis test (CMT).

California mastitis test estimating somatic cell count using CMT. It is simple, economical, less time consuming and easy to use at the spot. It provide no indication of bacteria type but the score can be use to determine infection status of quarters.

The B.V. Biological India launched a CMT reagent along with plastic paddle by the name of CMT kit. The accuracy of this method is found to be 88.60%, Sharma (2003). Fresh milk can also be tested using CMT. The procedure is as per Sharma et al. (2009). A plastic paddle with four chambers or shallow cups used to test. About 2 ml of milk directly striped into the cups, LF, RF, LH, RH of the quarters. Then approximately equal quantity of the reagent add to each quarters. The milk and reagent mix gently and result will be noted.

Results and Discussion

During the testing of raw milk samples the different types of mastitis were identified-- clinical, sub-clinical, latent and aseptic. Table -2 shows the presence of healthy udder and incidence of mastitis in dairy cattle. The samples yielded by cows with clinical mastitis types was estimated to be 50% and the remaining 50% were classified as healthy cows. Allore (1993), Kapur et.al. (1992) stated that the sub-clinical mastitis caused by deferent bacterial species i.e. Staphylococcus aureus, Streptococcus dysgalactiae, E.coli, Mycobacterium tuberculosis, Corynebacterium, Pseudomonas species.



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Image-1- Shows the mastitis udder

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Image-2- Shows the Gram positive bacteria (Streptococcus aureus, Staphylococcus agalactiae)

Image-1- Shows the mastitis udder of an animal.
Image-2- Shows the Gram positive bacteria (S. aureus, S. agalactiae)

In diseased cattle the percentage of fat, lactose, protein and casein is lower than the healthy cows. As in normal milk it is 3.5, 4.9, 3.6, 2.8 percent and in mastitis milk 2.6, 3.8, 3.45, 2.2 percent, which is lower than normal milk and the concentration of sodium and chlorides were significantly higher (sodium- 0.057, chloride- 0.091) in the milk of inflamed quarters than those in normal once (sodium- 0.105, chloride- 0.137) (Table – 1). Total 15 milk samples tested for mastitis and 8 samples were affected with this disease. Table – 2 shows the infectious udder (LF, RF, LH, RH) in which mastitis causing bacteria grows and damage the mammary gland, these cause increase in the number of Leucocytes and reducing milk quantity and adversely affected its quality. It is largest problem for dairies. It may be suggested that proper hygienic condition should be maintained by the milk man and other workers. Environment should be clean and healthy for cow as well as human beings

Table- 1- Comparison of values percentage of normal milk with mastitis milk.

Constituent	Normal milk	Mastitis milk
Fat	3.5	2.6
Lactose	4.9	3.8
Total protein	3.61	3.45
Total casein	2.8	2.2
Sodium	0.057	0.105
Chloride	0.091	0.137

Table- 2- Test of mastitis in raw milk samples

No. of cows	Test of mastitis present in Quarters			
	FR	FL	HR	HL
1	+	+	-	-
2	+	-	+	+
3	-	-	-	-
4	+	+	+	-
5	+	-	+	-
6	+	-	-	+
7	-	-	+	+
8	-	-	-	-
9	-	-	-	-

10	-	-	+	+
11	-	-	-	-
12	-	-	-	-
13	+	+	-	+
14	-	-	-	-
15	-	-	-	-

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Standardization and Optimization of the basic formulation and processing conditions for the preparation of chevon, mutton & chicken patties substituted with rabbit meat

Abstract

The present study was undertaken to utilize and popularize the rabbit meat quality nutritionally by substituting it in other popular products e.g. chevon, mutton and chicken patties. Different patties were optimized based on sensory evaluation for using 9 % vegetable oil and 4% refined wheat flour. The chicken patties were optimized to be cooked at internal temperature of $78 \pm 2^{\circ}\text{C}$ whereas chevon and mutton patties at $80 \pm 2^{\circ}\text{C}$.

Keyword: Chevron, Chicken, Mutton, Patties, Rabbit meat, Quality attributes.

Introduction

The nutritive value of Rabbit meat has an increasing importance among the factors determining meat quality and consumer acceptability. Indeed, meat is a major source of proteins and essential amino-acids; it is a source of group B vitamins, minerals, and other bioactive compounds. However, meat is also a major source of saturated fatty acids and cholesterol and its consumption could be related to cardiovascular diseases, hypertension, obesity and diabetes (Valsta *et al.*, 2005). Therefore, different strategies can be effectively used to increase or reduce bioactive compounds in order to produce functional meat and meat products (Jiménez-Colmenero *et al.*, 2006). Rabbit meat, as it has been previously discussed, is a lean meat rich in proteins of high biological values, with highly unsaturated lipids, low cholesterol content, and noticeable quantities of linolenic fatty acid (C18:3 ω 3). Also, it displays a low content of sodium and a high content of phosphorus, and can be a good source of B vitamins (Hernandez and Gondret, 2006). Most research conducted in recent years on rabbit meat quality has focused on incorporating bioactive compounds in meat for the benefit of human health. Moreover, rabbit meat consumption could become a good way to provide these bioactive compounds to human consumers, since manipulation of rabbit's diet is very effective in increasing the levels of ω 3 PUFA (Hernández *et al.*, 2007; Nuchi *et al.*, 2007), CLA (Corino *et al.* 2002 and 2003), or Vitamin E (Castellini *et al.*, 1999). In addition, both selenium and iron are also responsive to dietary supplementation (Lynch and Kerry, 2000). Incorporation of chevon in mixed-meat sausages may result in a low-fat product with superior water-holding, nutritional and textural properties (Gadiyaram, 2004).

Material and Methods

Mutton and Rabbit meat: Mutton meat is obtained of (Black bengal) and rabbit meat is obtained of (New Zealand White) breeds. Lean meat was cut into smaller chunks and minced in a Sirman mincer (MOD-TC 32 R10 U.P. INOX, Marsango, Italy) with 6mm plate. The common salt, vegetable oil, refined wheat flour (maida), nitrite, sodium tripolyphosphate, spice mixture and condiment mixture were added to weighed meat according to formulation. Meat emulsion for patties was prepared in Sirman Bowl Chopper [MOD C 15 2.8G 4.0 HP, Marsango, Italy]. Minced meat was blended with salt, sodium tripolyphosphate and sodium nitrite for 1.5 minute. Water in the form of crushed ice was added and blending continued for 1 minute. This was followed by addition of refined vegetable oil and blended for another 1 to 2 minutes. This was followed by addition of spice mixture, condiments and other ingredients and again mixed for 1.5 to 2 minutes to get the desired emulsion. Adequate care was taken to keep

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the end point temperature below 18°C by preparing the emulsion in cool hours of morning, by addition of meat and other ingredients in chilled/partially thawed form and by addition of crushed ice or ice water. Formulation of patties is presented in table 1.

water. Formulation of patties is presented in table 1.

Table-1: Formulation of patties from meat of mutton, mutton and chicken.

INGREDIENTS	PERCENT (W/W)
Lean meat	68.7
Added water	10.0
Vegetable oil	8.0
Condiment mixture	5.0
Refined wheat flour	4.0
Spice mixture	2.0
Table salt	1.5
Monosodium Glutamate	0.5
Sodium Tripolyphosphate	0.3
Sodium nitrite	120 ppm

Moulding of patties : Patties were moulded with circular ring on steel plates in case of oven roasting. The circular ring of 10 mm diameter and of length sufficient to fit in the hot air oven was used for oven roasting purpose. Holding the circular ring in one hand, an accurately weighed quantity (60 g) of meat mix/emulsion, in the form of a ball, was taken in the other hand, roughly made circular with hand and then accurately circular with the ring. With the help of moistened palm and fingers, it was gently spread evenly and moulded into a circular shaped patty. The height and diameter of the patty was determined by Vernier Calliper.

Cooking of patties: Steel plates with raw circular patties on them were placed longitudinally on the shelf of a perforated oven tray in a convection oven (Yorco sales Pvt. Ltd. India, Model-YS1-431, S. No. 02B2843). The moulded raw patties were smeared with vegetable oil and cooked in a preheated hot air oven at 180±2°C for a total time of about 16 minutes in case of rabbit meat substituted mutton patties and mutton patties and 12 minutes in case of rabbit meat patties. The internal temperature of patties was monitored by a thermometer and cooked to an internal temperature of 80±2°C for mutton 78±2°C for rabbit meat patties. The patties were removed from the plates, cooled to room temperature and weighed. Pooled sample of each treatment was assigned for analysis.

Sensory Evaluation: A semi-trained experienced sensory panel consisting of scientists and post graduate students of the Faculty of Veterinary Sciences and Animal Husbandry evaluated the sensory attributes viz: appearance, flavour, juiciness, texture and the overall acceptability of fresh and stored samples using 8 point descriptive scale (Seman et al., 1987) where 8 denoted extremely desirable and 1 denoted extremely poor. Panelists were seated in a room free of noise and odours and suitably illuminated. Coded samples for sensory evaluation were prepared by cutting patties into small (approx. 4 cm long) pieces and served warm to panelists. Refrigerated stored samples were warmed

in a preheated oven, cut into pieces and then presented to panelists. Water was provided for oral rinsing between the samples.

Statistical Analysis: Means and standard errors were calculated for different parameters. Factorial design of experiment was followed. Analysis of variance was performed as per Snedecor and Cochran (1980). In significant effects, least significant differences were calculated at appropriate level of significance for a pair wise comparison of treatment means.

Result and Discussion

Optimization of the basic formulation and processing conditions for the preparation of meat patties.

A series of experiments were conducted to standardize the formulation and processing of *patties* from chevon, mutton and chicken meat with substitution of rabbit meat. The results are presented through analyzed tables. The mean values for various sensory parameters are presented in Tables 2-4.

Standardization of level of added refined vegetable oil, refined wheat flour and time-temperature combination.

The sensory score at 8% refined vegetable oil level was significantly lower ($p < 0.05$) than 10% level whereas at 9% level of added fat, the overall acceptability scores were significantly higher ($p < 0.05$) than both 8% and 10%. Texture, juiciness and overall acceptability scores showed significantly higher ($p < 0.05$) of 4% than both 2% and 6 % level of incorporation of refined wheat flour (Table-3). Overall acceptability was significantly higher ($p < 0.05$) for *Patties* of chevon and mutton cooked at 82±2°C when compared to 80±2°C and 84±2°C. However, *Patties* of chicken cooked to a temperature of 78±2°C were having best score to those cooked to 74±2°C as well as to those cooked to 82±2°C for all sensory attributes. (Table-4). Higher level of fat has been reported to fade the colour affecting appearance. Fat content of meat and meat products have been found to be related with perceived juiciness, flavour, texture and mouth feel (Pearson and Gillett, 1997). Slight improvement in overall acceptability score may be due to increase in flavour and juiciness scores with increase in added fat level. Hence, incorporation of 9% refined vegetable oil was taken as optimum in the product. Gradual improvement in juiciness of *patties* was in accordance with findings of Wesley *et al.*, (1993), whereas decrease in flavour score with increase of incorporation level was supported by results of Wesley *et al.* (1993). Hence, incorporation of 4% refined wheat flour was taken as optimum in the product. Three internal temperatures i.e. 74±2°C, 78±2°C and 82±2°C for chicken and 76±2°C, 80±2°C and 84±2°C for chevon and mutton patties were used to optimize the cooking temperature. Non-significant change that included improvement in the appearance and flavour score as well as, a marginal improvement in colour might be attributed to leaching out of some fat at higher temperature. The decline in juiciness might be due to decrease in moisture percent of product cooked at higher temperature. An increase in

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flavour score with increase of cooking temperature could be attributed to those volatile substances that gave a pronounced meaty flavour at higher temperature and the result was in agreement with findings of Berry (1994) in beef patties and Kumar and Sharma (2005) in chicken patties. Thus on the basis of various physico-chemical and sensory attributes, the cooking temperature of $78 \pm 2^{\circ}\text{C}$ was taken as optimum for oven roasting method for rabbit substituted chicken patties, $80 \pm 2^{\circ}\text{C}$ was taken as optimum for oven roasting method for rabbit substituted chevon and mutton patties.

Table-3:

Effect of added refined vegetable oil on sensory attributes of cooked chevon, mutton & chicken meat patties substituted with rabbit meat. (Mean \pm SE)

Sensory attributes	Added refined vegetable oil level (%)		
	8	9	10
Appearance	$7.07^b \pm 0.05$	$7.17^c \pm 0.10$	$6.92^a \pm 0.13$
Flavour	$6.72^a \pm 0.11$	$6.94^b \pm 0.08$	$7.06^c \pm 0.13$
Juiciness	$7.05^c \pm 0.11$	$6.98^b \pm 0.12$	$6.95^a \pm 0.08$
Texture	$6.92^a \pm 0.13$	$7.05^b \pm 0.10$	$7.07^b \pm 0.05$
Overall acceptability	$6.93^a \pm 0.10$	$7.09^c \pm 0.10$	$7.01^b \pm 0.08$

Mean SE with different superscripts in a row differs significantly ($P < 0.05$). Mean values are scores on 8 point descriptive scale where 1- extremely poor and 8- extremely desirable. $n = 21$ for each treatment

Table-4:

Effect of added refined wheat flour incorporation on sensory attributes of cooked Patties substituted with rabbit meat. (Mean \pm SE)

Sensory attributes	Incorporation levels of refined wheat flour (%)		
	2	4	6
Appearance	$6.90^a \pm 0.12$	$7.02^b \pm 0.12$	$7.06^c \pm 0.10$
Flavour	$7.05^c \pm 0.05$	$6.93^b \pm 0.09$	$6.73^a \pm 0.07$
Juiciness	$6.92^b \pm 0.09$	$6.99^c \pm 0.08$	$6.87^a \pm 0.09$
Texture	$6.91^b \pm 0.14$	$6.95^c \pm 0.09$	$6.78^a \pm 0.11$
Overall acceptability	$6.92^b \pm 0.10$	$6.99^c \pm 0.14$	$6.83^a \pm 0.08$

Mean SE with different superscripts in a row differs significantly ($P < 0.05$). Mean values are scores on 8 point descriptive scale where 1- extremely poor and 8- extremely desirable. $n = 21$ for each treatment

Table-5:

Effect of internal end point temperature on sensory attributes of cooked Chevon and Mutton Patties substituted with rabbit meat. (Mean \pm SE)

Sensory attributes	Internal end point temperature levels ($^{\circ}\text{C}$)		
	76 ± 2	80 ± 2	84 ± 2
Appearance	$6.97^a \pm 0.19$	$7.06^b \pm 0.10$	$6.96^a \pm 0.10$
Flavour	$6.87^b \pm 0.10$	$7.05^c \pm 0.11$	$6.81^a \pm 0.11$
Juiciness	$7.06^c \pm 0.08$	$6.92^b \pm 0.13$	$6.89^a \pm 0.13$
Texture	$6.94^a \pm 0.10$	$7.04^a \pm 0.09$	$7.04^a \pm 0.07$
Overall acceptability	$6.88^a \pm 0.13$	$7.12^c \pm 0.13$	$6.93^b \pm 0.13$

Mean SE with different superscripts in a row differs significantly ($P < 0.05$). Mean values are scores on 8 point descriptive scale where 1- extremely poor and 8- extremely desirable. $n = 21$ for each treatment

Table-8:

Effect of internal end point temperature on sensory attributes of cooked chicken Patties substituted with rabbit meat. (Mean \pm SE)

Sensory attributes	Internal end point temperature levels ($^{\circ}\text{C}$)		
	74 ± 2	78 ± 2	82 ± 2
Appearance	$6.82^a \pm 0.09$	$6.82^a \pm 0.09$	$6.96^b \pm 0.10$
Flavour	$6.87^b \pm 0.10$	$6.97^c \pm 0.10$	$6.75^a \pm 0.11$
Juiciness	$7.13^c \pm 0.10$	$7.06^b \pm 0.08$	$6.99^a \pm 0.13$
Texture	$7.03^a \pm 0.11$	$7.08^b \pm 0.10$	$7.04^a \pm 0.07$
Overall acceptability	$6.66^b \pm 0.11$	$6.98^c \pm 0.13$	$6.92^b \pm 0.13$

Mean SE with different superscripts in a row differs significantly ($P < 0.05$). Mean values are scores on 8 point descriptive scale where 1- extremely poor and 8- extremely desirable. $n = 21$ for each treatment

Conclusions

Incorporation of 9% refined vegetable oil was found to be optimum for the formulation of the meat patties. Incorporation of 4% refined wheat flour was found to be optimum level as binder for the formulation of meat patties. An internal cooking temperature of 80°C for chevon and mutton patties and 78°C for chicken patties was found to be optimum for preparation in hot air oven.

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Adoption of improved cultivation practices of turmeric by farmers



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Abstract

The study was conducted in Lonar and Mehakar tahsils of Buldana district of Maharashtra state. The sample constituted 90 Turmeric farmers. Finding revealed that 48.89 per cent of the respondent turmeric growers were in the medium age group of 36 to 50 years, while, 40 per cent of the turmeric growers had completed high school level of education. The 56.67 per cent of the turmeric growers were observed in medium level of adoption, whereas, 22.22 per cent of them observed in low level of adoption and 21.11 per cent in high adoption level. The selected variables that is education, land holding, annual income, area under turmeric cultivation, source of information, extension contact, risk preference, irrigation facility, market orientation and productivity has positively and significantly correlated with adoption of improved cultivation practices of turmeric by the farmer. The variables like age and subscription for farm literature did not show any relation with adoption by turmeric growers.

Keyword: Turmeric growers, Adoption,

Introduction

Turmeric (*Curcuma longa* L.) is a herbaceous perennial plant growing up to the height of 60 – 90 cm with short stem and native of India south Asia particularly India. It belongs to family Zingiberaceae. The plant is propagated from rhizomes. The leaves are long, broad lanceolate and bright green. The flowers are pale yellow and born on dense spikes. The pseudo stem are shorter than leaves. The rhizomes were ready for harvesting about 7 to 9 months after plants.

As a medicine turmeric has been used in Ayurvedic system of medicine in India from times immemorial. It is claimed to be a stomachic tonic, blood purifier, antiseptic, antacid, antiperiodic and carminative. It is used medically for extended application and taken internally as a stimulant. It also used in cosmetic industries. In India companies like Godrej, Vicco are engaged in manufacturing different new products from turmeric like soaps, anticeptics, cosmetics, etc. Turmeric or Haldi powder boiled in milk along with small quantity of black pepper may be taken two-three times a day for sore throat, cough, cold and other acute respiratory infections. Further, clean white cloth dyed in turmeric and dried in sun can be used for wiping sore eyes thus, cures eye infection. Further it is also regarded by the Hindus as sacred item for use in ceremonial and religious function. A few years ago, India got the patent of turmeric due to strong evidences, ancient literature and references available with our country about the turmeric.

In the year 2000-2001 India produced 3726 thousand tones of turmeric and in 2009-10 the production was 4016 thousand tones (The Hindu survey of agriculture 2010). Maharashtra is also one of the important states in turmeric production. In the maharashtra about 113.60 thousand ha of cultivation area under turmeric crop and produce 96.60 thousand tones of turmeric. Looking towards increase in area under turmeric present is carried out.

Aim of Study

1. To study the adoption of improved cultivation practices of Turmeric by the farmers.
2. To study the relationship between profile of the farmers and adoption of improved cultivation practices of Turmeric.

Variables

Independent Variables – Age, Education, Land holding, Annual income, Area under turmeric cultivation, Source of information, Extension contact, Risk preference, Irrigation facility, Subscription of farm literature, market orientation and productivity.

Dependent Variable - Adoption

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Tools

a) Selection of panchayat samities

The purposive selection of two panchayat samities will be made on the basis of large area under Turmeric cultivation in the Buldana district.

b) Selection of villages

The list of turmeric growing villages of Lonar and Mehakar tahsil was obtained from Taluka Agriculture Officer. There are 96 and 110 villages in Lonar and Mehakar tahsil respectively. The area under turmeric cultivation in Lonar and Mehakar Tahasil were 120 ha and 100 ha. The out of these, 5 villages from Lonar and 5 villages from Mehakar tahsil i.e. total 10 villages were selected, having larger area under turmeric cultivation.

c) Selection of respondents

List of Turmeric growers with 3-4 years old field was obtained from Taluka Agriculture Office (TAO) under study of the Tahasil. Ten respondents from each village were selected purposively. Thus, total 90 respondents were constituted a sample for the study.

d) Collection of Data

The data was collected by administering the pretested interview schedule to the respondent turmeric growers. The questions and statements were asked in local language i.e. Marathi. The respondent turmeric growers were personally interviewed by the investigator which enabled him to get first hand information and an opportunity to observe the respondents personality. It was made sure that the questions correctly understood by the respondent turmeric growers by repeating questions whenever necessary. The researcher attempted to contact the respondents at home as well as at their farms during their convenient time to get information. Friendly atmosphere was maintained during the interview to see that respondents were at ease and expressed their opinions fairly and frankly.

e) Statistical Tools Used for

Following statistical techniques were used in the present study for analysis of data and drawing of conclusion.

1. Arithmetic mean (\bar{X})
2. Standard deviation (S.D)
3. Coefficient of correlation (r)
4. Multiple regression analysis (b)

Results and Discussion

Adoption level of respondents

Table1:
Distributions of respondents according to their adoption of turmeric cultivation practices by farmer..

Sr. no	Statement	Respondent (n = 90)		
		Complete adoption	Partial adoption	Non adoption
		Freq. (%)	Freq. (%)	Freq. (%)

1	Preparatory tillage operations carried out by you in field.(ploughing, cloud crushing, harrowing, leveling)	90 (100)	0 (0)	0 (0)
2	Variety of turmeric crop are grown and area under each of them. (Waygoan, selam, Phule swarupa, rajapuri, krushna)	19 (21.12)	71 (78.88)	0 (0)
3	Quantity of seedling required per hectare(2250--2500)	43 (47.78)	28 (31.12)	19 (21.10)
4	The spacing did you sow turmeric. On how many hectares.(22.5-30 cm)	30 (33.33)	60 (66.67)	0 (0)
5	chemical used for seed treatment of turmeric and Quantity of total seed you have treated with this chemical.(dithane M-45 0.3%, and ekalux 0.2%)	15 (16.67)	63 (70.00)	12 (13.33)
6	Intercultural operation did you undertaken. (earthing up, hoeing, weeding, irrigation, intercropping)	70 (77.78)	0 (0)	20 (22.22)
7	Quantity of manure did you apply to turmeric crop per hectare.(FYM 40 tonnes/ha)	19 (21.11)	71 (78.79)	0 (0)
8	Quantity of fertilizer did you apply to turmeric crop per hectare. (200 N:100 P:100 K)	22 (24.44)	50 (55.56)	18 (20.00)
9	Weedicide is used by you for control of weed in turmeric. (Pendimethalin 1.5 kg/ha, oxyfluorfen)	30 (33.33)	40 (44.45)	20 (22.22)
10	Number of irrigation did you provide to turmeric crop and irrigation interval.(15-40Irrigation)(8 to 10 days interval)	34 (37.78)	42 (46.67)	14 (15.56)
11	Did you undertake plant protection measures? If yes, which chemical you have used for the control of following pest and disease. Stat its quantity.(Ridomil 0.25%, mancozeb 0.3%, Hinsan 0.1%, Nimcake 2 tonnes/ha)	09 (10.00)	37 (41.11)	44 (48.89)
12	At what stage did you Harvest the turmeric crop	07 (7.78)	10 (11.11)	73 (81.11)

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The adoption of improved cultivation practices of turmeric by the respondents was ascertained practice wise, and the same have been reported in Table 1. It is evident from in Table 1, that the majority of respondents completely adopted some improved cultivation practices like preparatory tillage operation in the field after harvest of previous crop (100 %), the intercultural operation (77.78%), sowing the quantity of seedling in filed (47.78%), application of irrigation (37.78%), spacing and weedicide (33.33%) and quantity of fertilizer (24.44%).

However, it was observed that majority of the respondents partial adopted the improved cultivation practices like variety and area of each them sown in field (78.88%), quantity of manure apply in field (78.79%), use seed treatment apply (70.00%), spacing and how many hector (66.67%), quantity of fertilizer (55.56%), number of irrigation in crop and irrigation interval (46.67%), weedicide used (44.45%) and plant protection measure (41.11%).

It was also found that majority of respondents had not adopted the integrated pest management practices like harvesting the turmeric crop (81.11%), plant protection measures (48.89%), intercultural operations and weedicide used (22.22%) and quantity of seedling required per hectare (21.10%).

Table 2:
Distribution of the respondents according to their adoption level.

Sr. No.	Category	Respondents(n =90)	
		Frequency	Percentage
1	Low	20	22.22
2	Medium	51	56.67
3	High	19	21.11
	Total	90	100.0

Table 2 revealed that two third of the farmers (56.67%) were included under medium category of adoption level of improved cultivation practices, followed by low level of adoption (22.22%) and (21.11 %) farmers were found in high level of adoption of improved cultivation practices of turmeric. It could be inferred from the above findings that two third of the respondents were in medium level of adoption of improved cultivation practices of turmeric. These finding is similar to Salame (2000), Gaikwad (2005) and Karpagam (2006).

Table 3:
Coefficient of correlation of characteristics of the respondents with their adoption

Sr. No	Variables	"r" values
1	Age	0.12209 NS
2	Education	0.375432**
3	Land holding	0.258986**
4	Annual income	0.211724*
5	Area under turmeric cultivation	0.308388**

6	Source of information	0.351759**
7	Extension contact	0.481571**
8	Risk preference	0.223094*
9	Irrigation facility	0.260315**
10	Subscription for farm literature	0.128017 NS
11	Market orientation	0.380579**
12	Productivity	0.284289**

It could be seen from Table 3 among the selected variables like annual income, risk preference has positively and significantly correlated with adoption at 0.05 level of probability. Education, land holding, area under turmeric cultivation, source of information, extension contact, irrigation facility, market orientation and productivity has positively and significantly correlated with adoption at 0.01 level of probability. The variables like age and subscription for farm literature did not show any significant relation with adoption by turmeric growers.

.. Table 4:
The multiple regression analysis of independent variables with adoption of improved cultivation practices in turmeric by farmer.

S N	Variables	'b' value	S. E	't' value
1	Age	-0.03687	0.195683	-0.1884
2	Education	0.627617	0.577501	1.086781
3	Land holding	0.525026	0.565249	0.928841
4	Annual income	1.34E-05	1.46E-05	0.921682
5	Area under turmeric cultivation	1.906302	2.018167	0.944571
6	Source of information	0.659738	0.462284	1.427128
7	Extension contact	1.435178	0.569474	2.52018*
8	Risk preference	-0.138	0.314896	-0.43825
9	Irrigation facility	0.565091	0.750253	0.7532
10	Subscription for farm literature	0.547044	1.322863	0.41353
11	Market orientation	0.562077	0.328644	1.710291*

12	Productivity	0.767128	0.479152	1.601013
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The multiple regression analysis of personal, situational, communicational psychological characteristics with their adoption have been depicted in Table 4

It is evident from the data in the Table 23 that multiple regression analysis (R^2) was 0.40941. It means that 40.94 percent of total variation in the adoption level was explained by the 12 independent selected variables, selected for study.

The critical look at Table 23 further revealed that Market orientation ($t=1.710291$) had influence on the adoption at 0.05 level of probability. Whereas, Extension contact ($t=2.52018$) had influence on the adoption at 0.01 level of probability. Whereas, other variable not influence on the adoption.

Conclusion:

The turmeric growers had medium level of exposé to various sources of information about recommended onion cultivation practices, so as to increase the awareness about turmeric cultivation practices, extension worker should make efforts to expose the turmeric grower to the different information sources and create an urge in the minds of farmers to acquire knowledge from them.

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Effectiveness of radio programme Kisanvani



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Abstract

The study entitled, "Effectiveness of radio programme Kisanvani" was purposively conducted in Akola tahsil of Akola district in Vidarbha region of Maharashtra. For present study, 90 listener farmers were selected from 9 villages. Data were collected with the help of structured interview schedule. The majority of the respondents 57.78 per cent in effectiveness of radio programme Kisanvani. The characteristics of radio listener's i.e. age, family type, family size, annual income, innovativeness, extension contact and attitude towards Kisanvani programme were positively and significantly related with effectiveness of radio programme Kisanvani. In this study, preferences of the radio listeners about different aspect of effectiveness of radio programme Kisanvani were also studied with following headings understandability, usefulness, gain in knowledge, new information, mode of presentation, coverage of information, language, entertainment, seasonality, adequacy of time, accuracy of information, speed of presentation, quality of sound after listening the Kisanvani programme.

Keyword: Effectiveness; Radio programme Kisanvani

Introduction

Effective communication of scientific findings and allied field to millions of farmers is a necessity and key to economic progress of the nation. This is more so in developing country like India, where the gap between intellectuals and common man is very wide. This gap can be reduced through effective use of different communication media. Among the mass media made available in India, radio has an edge over other in a sense that even the illiterate people can listen the radio programme without bothering about unfriendly condition at their home at distant places and in sparsely populated area.

Radio is a good source of communication of ideas to the rural people. It carries news bulletins and special programme for rural people, housewives and children. It is a good source of dissemination of agricultural information to farmers. Radio has the power to bring the knowledge of science and technology to the society for its improvement. It is one of the important, reliable and cheapest mass media through which message can be conveyed to a large number of farmers in the quickest possible time (Nataraju 1997). Despite rapid technological changes

in telecommunication in the last few decades, radio broadcasting remains the cheapest mode of information dissemination, catering equally to the needs of the rich and poor, rural and urban masses and reaching the remotest parts of the country. Needless to say, it plays a vital role in the country's socio-economic and cultural development (Krishnamurthy 1999).

All India Radio provides extensive information on diverse subjects such as land and water conservation, sustainable agriculture, biotechnology, integrated pest management in crops, crop insurance schemes, environment protection, disaster management, role of Panchayat in rural development. These programmes are produced with the help of subject matter specialists. All India Radio maintains a very close liaison with the Ministry and Departments of Agriculture & Rural Development of central and state Governments. The programmes are mounted in regional and local dialects from different stations. Local Radio stations also broadcast regular programmes on rural development. Keeping in view the importance of the subject, all the AIR Stations are broadcasting a daily programme on Environment for 5 to 7 minutes duration and a weekly programme of longer duration for more than a decade.

Akashvani, Akola was established in May 1, 1991, in Akola. The main objective of Akashvani is to dissemination of the information, education and entertainment. Akashvani Akola set up by frequency 102.4 MHz's it cover area 80 km. in Akola, Washim, Buldhana and Amravati

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district. Akashvani Akola broadcasted in one day twenty programmes and two programmes are related to agriculture that is "Kisanvani," and "Krishivarta." Kisanvani programme broadcasted every day at a time 7.30 pm to 8.00 pm. In Kisanvani programme agriculture related information that is weather forecast, market status, scientist interaction etc. are provided to the farmers.

Akashvani Akola broadcasts a programme at 7.30 pm known as "Kisanvani" for disseminating the agricultural information for rural people. These programme are composite programme, consists of talk, discussion, interview, dialogue intermixed with few folk songs. It is educative, informative as well as entertaining programme. These programme covers information related to recent technological development in agriculture. The present investigation was carried out with the following specific objectives.

Aim of Study

Akashvani Akola has become the main source of agricultural information for the farmers from Vidarbha region in general and the farmer from Akola district in particular. The present study was conducted in one block of Akola district to measure the effectiveness of radio programme Kisanvani.

Akashvani Akola broadcasts a programme at 7.30 pm known as "Kisanvani" for disseminating the agricultural information for rural people. This programme are composite programme, consists of talk, discussion, interview, dialogue intermixed with few folk songs. It is educative, informative as well as entertaining programme. These programme covers information related to recent technological development in agriculture.

Effectiveness of radio programme Kisanvani as perceived by the listeners is important. It is common observation that the radio programmes which serve their purpose effectively are listened by the listeners more frequently, regularly and consciously. In other words, the effective programme lead to improving the listening behaviour of the listeners and that is exactly the objective of the Akashvani Akola.

Objective

1. To study the profile of the farmers.
2. To study the effectiveness of radio programme Kisanvani on listener farmers.
3. To study the relationship between profile of farmers and effectiveness of radio programme Kisanvani.

Variables

Sr. No.	Variables	Empirical measures
1	Independent variables	Age, Education, Family type, Family size, Land holding, Cropping pattern, Annual income, Innovativeness, Social participation, Extension contact, Attitude towards Kisanvani programme.
2	Dependent variable	Effectiveness

Tools

An exploratory research design of social research was used for the present investigation. The aim of present study was to effectiveness of radio programme Kisanvani.

Sample

This study was conducted in Akola tahsil of Akola district in Vidarbha Region of Maharashtra state. Nine villages of the selected tahsil were randomly selected for the study. After the selection of villages, a village wise list of radio listeners was prepared and total 90 respondents were selected randomly. The data were collected through a well structured and pre-tested interview schedule. The characteristics of the farmers viz. age, education, family type, family size, land holding, cropping pattern, annual income, innovativeness, social participation, extension contact, attitude towards Kisanvani programme were considered as independent variable and effectiveness as dependent variable. The statistical tests and procedures were used for analyzing the data, included percentage, mean, Karl Pearson's coefficient of correlation.

Results and Discussion

Table-1 Distribution of the respondents according to their variables (n=90)

Sr. No.	Profile	Respondents (n=90)	
	Age	Number	Percentage
1	Young (Below 35)	28	31.11
2	Middle (36-50)	47	52.22
3	Old (Above 50)	15	16.67
	Education		
1	Illiterate (No School)	10	11.11
2	Primary school (Up to 4 Std)	18	20.00
3	Middle school (5 th to 7 th std)	17	18.89
4	High school (8 th to 10 th std)	23	25.56
5	College (11 th and above)	22	24.44
	Family type		
1	Nuclear	35	38.89
2	Joint	55	61.11
	Family size		
1	Small (1 to 3)	10	11.12
2	Medium (4 to 6)	47	52.22
3	Large (7 to 9)	20	22.22
4	Very large (10 and above)	13	14.44
	Land holding		
1	Marginal (below 1 ha)	21	23.33
2	Small (1.01 to 2 ha)	23	25.56
3	Semi-medium (2.01 to 4 ha)	32	35.56
4	Medium (4.01 to 10 ha)	11	12.22
5	Large (above 10 ha)	3	3.33

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	Cropping pattern		
1	Seasonal cropping	57	63.33
2	Biseasonal cropping	13	14.44
3	Annual cropping	12	13.33
4	Biannual crop	5	5.57
5	Perennial crop	3	3.33
	Annual income		
1	Up to 50,000	13	14.44
2	50001 to 1,00,000	32	35.56
3	1,00,001 to 1,50,000	26	28.89
4	1,50,001 to 2,00,00	11	12.22
5	Above 2,00,000	8	8.89
	Innovativeness		
1	Low	10	11.12
2	Medium	58	64.44
3	High	22	24.44
	Social participation		
1	No participation	11	12.22
2	Low participation	13	14.45
3	Medium participation	46	51.11
4	High participation	20	22.22
	Extension contact		
1	Low	9	10
2	Medium	66	73.33
3	High	15	16.67
	Attitude towards Kisanvani programme		
1	Less favorable	23	25.56
2	Favorable	56	64.44
3	Highly favorable	10	10
	Effectiveness		
1	Low	17	18.89
2	Medium	52	57.78
3	High	21	23.23

Profile of the respondents:

Most of the respondents i.e. 52.22 per cent were included in the middle age group of 36 to 50 years. Maximum numbers (25.56 per cent) of the respondents were educated up to high school. More than two-third of the respondents i.e. 61.11 per cent were had joint family. More than half of the respondents (52.22 per cent) had medium size family. Relatively higher proportion of the respondents 35.56 per cent belonged to category of small land holding ranging from 2.01 to 4.00 ha. Little less than two-third of the respondent 63.33 per cent had seasonal cropping pattern. More than one-third of the respondents i.e. 35.56 per cent were having annual income ranging from Rs.50, 001 to Rs.1 lakh. Little less than two-third of the respondents i.e. 64.44 per cent had medium innovativeness. More than half of the respondents i.e. 51.11per cent had medium category of social participation. Less than three fourth of the respondents (73.33 per cent) had belonged to medium category of extension contact. Less than two-third of the respondents i.e. 64.44 per cent were having favorable attitude towards Kisanvani programme. Majority of the respondents (57.78 per cent) had medium level of overall effectiveness of radio programme Kisanvani.

The main objective the data was processed with the help of statistical technique using Mean, Standard Deviation, and 'Coefficient of correlation (r)' which are represented in tables.

Table-2 Distribution of the variables according to their coefficient of correlation (n=90)

Sr. No.	Variables	Coefficient of correlation (r)
1	Age	0.248 *
2	Education	-0.436**
3	Family type	0.226*
4	Family size	0.467**
5	Land holding	0.118 NS
6	Cropping pattern	0.169 NS
7	Annual income	0.414**
8	Innovativeness	0.509**
9	Social participation	-0.137 NS
10	Extension contact	0.246*
11	Attitude towards Kisanvani programme	0.462**

** Significant at 1 per cent level of probability

* Significant at 5 per cent level of probability

NS = Non Significant

It was evident from Table 2 that, the independent variable viz., age, family type, family size, annual income, innovativeness, extension contact and attitude towards Kisanvani programme were positively and significantly related with effectiveness of radio programme Kisanvani. This mean increase the level of age, family type, family size, annual income, innovativeness, extension contact and attitude towards Kisanvani programme there was corresponding increase in the effectiveness of programme. The independent variable education was negatively and significantly related with effectiveness of radio programme Kisanvani. This means that less the education more the effectiveness of radio programme i.e. education increase effectiveness decreases. However, land holding, cropping pattern and social participation could not show any relationship with effectiveness of radio programme Kisanvani.

Conclusion:

The study has brought out to limelight the personal and socio-economic characteristics of the radio programme Kisanvani listener farmers. These listeners were middle aged, medium family size, medium land holding, seasonal cropping pattern, medium innovativeness, medium extension contact and medium attitude towards Kisanvani programme. This profile of the listener farmers should be kept in mind by the producers of radio programme and accordingly the programme should be prepared.

Suggestions :

Effectiveness of radio programme Kisanvani so organizers of the programme must give more emphasis on these characteristics while preparing the programme for increasing effectiveness of the programme.

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Utilization and credibility pattern of information sources used by the cotton growers



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Abstract

As regards profile of respondents, it is observed that more than half of the cotton growers (62.67 %) were found in the middle age category and educated up to Primary School. More than half (58.00 %) and (56.67 %) of the cotton growers were found in the big family size category (Family members 5 & above) and medium farm size category i.e (4.1 to 10 ha of land) respectively. About 64.67% of the cotton growers were found in the medium annual income category i.e (Rs. 28000 to 64000). More than half of respondents were found in the medium social participation category (56.00 %), medium risk orientation category (59.33 %), medium innovation proneness category (49.33 %) medium economic motivation category (62.00 %) and medium overall modernity category (62.00 %).

As regards information sources utilization of the respondents Majority of the cotton growers were often using progressive farmers (66.66%) as the personal localite source. While (56.66 %) respondents were using village extension workers as personal cosmopolite sources of information. Where as Newspaper and Demonstration / Exhibitions was often used by 57.33 % and 52.00 % of cotton growers respectively as mass media source of information for getting agricultural information.

As regards relative credibility of the sources of information, Agricultural University Scientists were most credible sources of information ranked I.

Keyword: Information Sources, Credibility,

Introduction

Utilization of improved agricultural technology by the farmers to a larger extent depends upon the effective sources of information and channels to which they generally exposed directly or indirectly. Only major problems of agricultural development in India is not only the availability of improved agricultural technologies, but also converting them into production accomplishment. Therefore, transfer of agricultural technology to the farmers to increase their production and productivity has been playing a vital role in agricultural development. In this context, the sources and channels of Information utilized by farmers with regards to farm practices play an important role. The quality and credibility of farm information largely depend upon the sources of information used by the farmers.

Adoption of improved package of practices by the farmers varies from farmer to farmer depending upon the availability and credibility of information sources to them. The importance of information sources in adoption of farm innovations is well recognized. Realizing the importance in its true sense and also evident from the past researches all information sources and communication media are not equally utilized by different segment of the farming communities. The utilization pattern of these sources also varies to a great extent in adoption of agricultural innovations.

Objectives

1. To study socio-personal and psychological characteristics of the cotton growers.
2. To study the information source utilization pattern of the cotton growers.
3. To study the information source credibility amongst the farmers.

Aim of Study

Locale of the study

The present study was conducted in Akola district of the Vidarbha region of the Maharashtra State.

Research Design

The Ex-post-facto approach was used in the research study.

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Selection of taluka and villages

From Akola district Akola taluka was selected. Six villages which have occupied major area under cotton crop were selected randomly.

Selection of respondents

A list of cotton growers in selected villages was prepared and 25 respondents were selected randomly from each village. Thus total number of 150 cotton growers were selected for the study.

Variables

Dependent Variables

Information Source utilization Pattern and Credibility

Independent Variables

Age, Education, Family size, Farm size, Annual income, Social participation, Risk orientation, Innovation proneness, Economic motivation and Overall modernity

Final selection of sources for the study

As a first step, the various sources used by the farmers to obtain information were identified. The officials like Subject Matter Specialists and Extension Staff of state Agricultural department were requested to point out the sources generally used by the farmers for obtaining the information regarding cultivation practices of cotton. Thus a list of sources of information was prepared. A pilot study was undertaken in the nearest village. A list of 30 farmers were interviewed and they were asked to indicate whether during the last two years, they used any of these sources for obtaining information regarding cultivation practices of cotton. The responses of farmers were obtained and after analyzing the responses, the information sources were finalized for the study. These included five personal localite, five personal cosmopolite and six mass media sources. These 16 sources were, therefore, retained as items in the final instrument.

Personal localite : Personal localite sources refer to the localized persons like family members, neighbors, relatives, friends and progressive farmers.

Personal cosmopolite : Personal cosmopolite sources like the personal source of agricultural information from outside the village like Village level workers i.e. Agril. Asstt., Representatives of Private Company/ Input Dealers, Agricultural University Scientists, Taluka Agricultural Officer/Agricultural Officer/ Mandal Agricultural Officer, Sub Divisional Agricultural Officer / Superintendent Agricultural Officer.

Mass Media: Mass medial sources refers to the sources of agricultural information capable of reaching at large number of audience like radio, television, newspaper, film show, demonstration/ Exhibition, Shivar Pheri/ Farmers Fair and printed agricultural literature.

Measurement of utilization of information sources.

To measure the extent of sources utilization, the respondents were asked to state the utilization of information sources on a three continuum scale viz. Often, Some times and Never by assigning 3, 2 and 1 score, respectively. On the basis of above scoring

pattern, Information Source Utilization Index was developed on the lines of Ramchandran (1974). The Information Source Utilization Index is the score obtained by an individual farmer, out of the potential score. Thus the Information Source Utilization Pattern (ISUP) was computed by using the formula

$$ISUP = \frac{\text{Information Source Utilization Score}}{\text{Potential Source Utilization Score}} \times 100$$

Measurement of credibility of information Sources.

Credibility of sources as referred in this study is the trustworthiness and faithfulness of the sources as perceived by the farmers in communicating information.

The credibility of information Sources was measured with the help of Most – Least Credibility Index method by Sandhu (1973). The farmers were asked to indicate the least and the most credible sources used by them for getting the information. The relative credibility index was worked by using the formula,

$$\text{Relative Credibility Index} = \frac{X}{Y} \times \frac{100}{N}$$

Where,

X = Number of farmers who believed the source most credible.

Y = Number of farmers who believed the source least credible.

N = Total number of farmers in the sample

Thus the information Source utilization pattern and relative credibility index was worked out and rank were assigned as per the order of preference of use by the farmers.

Collection and analysis of data

A structural interview schedule was prepared and used for data collection, In accordance with the objectives of the study questions were framed in the schedule. Thus, the information obtained from 150 farmers was taken for analysis.

Results and Discussion

1. Socio-personal and psychological characteristics of cotton growers.

1.Age

Sr.No.	Category	Number	Percentage
1.	Young age (up to 32 Years)	17	11.83
2.	Middle age (33 to 49 years)	94	62.67
3.	Old age (50 and above)	39	26.00
	Total	150	100.00

2. Education

It is observed from table 2, that 34.67 per cent of the cotton growers were educated up to Primary School, while 30.67 per cent were illiterate. Where as 20.00 per cent of the cotton growers educated up to Secondary School. It is also reported that 7.33 per cent of the cotton growers educated up to High School and College level education

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Table 2 Distribution of cotton growers according to education.

Sr.No.	Category	Number	Percentage
1.	Illiterate	46	30.67
2.	Primary	52	34.67
3.	Secondary	30	20.00
4.	High School	11	7.33
5.	College	11	7.33
	Total	150	100.00

3. Family Size

It is observed from table 3, that majority (58.00 %) of the cotton growers were found in the Big family size category i.e Family members above 5, followed by 42.00 per cent in Small family size category i.e up to 5 Family members.

Table 3 Distribution of cotton growers according to their family size.

Sr.No.	Category	Frequency	Percentage
1.	Small (up to 5 members)	63	42.00
2.	Big (above 5 members)	87	58.00
	Total	150	100.00

4. Farm Size

It is observed from table 4 that majority (56.67 %) of the cotton growers were found in the Medium farm size category i.e (4.1 to 10 ha of land), followed by 36.00 per cent in Small farm size category i.e up to 4 ha of lands. It is also reported that 7.33 per cent of the cotton growers were having land above 10.1 ha of lands.

Table 4 Distribution of cotton growers according to farm size.

Sr.No.	Category	Frequency	Percentage
1.	Small (up to 4 ha)	54	36.00
2.	Medium (4.1 to 10 ha)	85	56.67
3.	Big (10.1 and above ha)	11	7.33
	Total	150	100.00

5. Annual Income

It is observed from table 5 that majority (64.67 %) of the cotton growers were found in the medium annual income category i.e (Rs. 28000 to 64000), followed by 27.33 per cent in annual income category i.e up to Rs. 28000. It is also reported that 8.00 per cent of the cotton growers were found in the high annual income category i.e (above Rs.64001).

Table 5 Distribution of cotton growers according to annual income.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to Rs. 28000)	41	27.33
2.	Medium (Rs. 28000 to 64000)	97	64.67
3.	High (Rs. 64001 and above)	12	8.00
	Total	150	100.00

6. Social Participation

It is observed from table 6 that more than half (56.00 %) of the cotton growers were found in the medium social participation category , followed by

32.00 per cent in Low social participation category . It is also reported that 12.00 % of the cotton growers were found in the high social participation category.

Table 6 Distribution of cotton growers according to social participation.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 1)	48	32.00
2.	Medium (2)	84	56.00
3.	High (Above 3)	18	12.00
	Total	150	100.00

7. Risk Orientation

It is observed from table 7 that majority (59.33 %) of the cotton growers were found in the medium risk orientation category , followed by 26.67 per cent in Low risk orientation category. It is also reported that 14.00 per cent of the cotton growers were found in the high risk orientation category.

Table 7 Distribution of cotton growers according to risk orientation.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 14)	40	26.67
2.	Medium (15-27)	89	59.33
3.	High (28 and above)	21	14.00
	Total	150	100.00

8. Innovation Proneness

It is observed from table 8 that near about half (49.33 %) of the cotton growers were found in the medium innovation proneness category , followed by 31.33 per cent in Low innovation proneness category. It is also reported that 19.37 per cent of the cotton growers were found in the high innovation proneness category.

Table 8 Distribution of cotton growers according to innovation proneness.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 7)	47	31.33
2.	Medium (8-9)	74	49.33
3.	High (and above 3)	29	19.37
	Total	150	100.00

9. Economic Motivation

It is observed from table 9 that majority (62.00 %) of the cotton growers were found in the medium economic motivation category , followed by 24.67 per cent in Low economic motivation category. It is also reported that 13.33 per cent of the cotton growers were found in the high economic motivation category.

Table 9 Distribution of cotton growers according to economic motivation.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 14)	37	24.67
2.	Medium (15-27)	93	62.00
3.	High (28 and above)	20	13.33
	Total	150	100.00

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10. Overall Modernity

It is observed from table 10 that majority (61.33 %) of the cotton growers were found in the medium overall modernity category, followed by 24.67 per cent in Low overall modernity category. It is also reported that 14.00 per cent of the cotton growers were found in the high overall modernity category.

Table 10 Distribution of cotton growers according to overall modernity.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 17)	37	24.67
2.	Medium (18-24)	92	61.33
3.	High (25 and above)	21	14.00
	Total	150	100.00

2. Information source utilization pattern of cotton growers.

It is observed from table 11 that majority (64.67 %) of the cotton growers were found in the medium information source utilization category, followed by 23.33 per cent in Low information source utilization category. It is also reported that 12.00 per cent of the cotton growers were found in the high information source utilization category.

Table 11 Distribution of cotton growers according to extent of information source utilization pattern.

Sr.No.	Category	Frequency	Percentage
1.	Low (up to 47.33)	35	23.33
2.	Medium (47.04 to 67.17)	97	64.67
3.	High (67.18 and above)	18	12.00
	Total	150	100.00

2.1 Use of personal localite sources of information by cotton growers

It was observed from Table 12 that cotton growers were often using the personal localite sources like progressive farmers (66.66 %), family members (64.00 %) and friends (62.66 %) respectively.

It was also revealed that neighbors (36.66 %) and relatives (25.33 %) were sometimes used as personal localite sources by cotton growers. Similarly, friends as a source of information was used sometimes by 28.00 per cent cotton growers.

Table 12 Distribution of cotton growers according to use of personal localite sources.

Sr.No	Personal localite sources	Often	Some times	Total
1.	Family members	96 (64.0)	36 (24.0)	132 (88.0)
2.	Neighbors	83 (55.33)	55 (36.66)	138 (92.0)
3.	Relatives	78 (52.0)	38 (25.33)	116 (73.33)
4.	Friends	94 (62.66)	42 (28.0)	136 (90.66)
5.	Progressive farmers	100 (66.66)	41 (27.33)	141 (94.0)

(Figures in parentheses are the percentage)

2.2 Use of personal cosmopolite sources on information sources by cotton growers.

It was revealed from table 13 that village extension workers (56.66 %), Representatives of Private Company/ Input Dealers (54.00 %) and Agril. University Scientists (49.33 %) were often use as personal cosmopolite sources of information by cotton growers. Whereas, Agricultural officers (46.00 %) were sometimes used as personal cosmopolite sources of information by cotton growers.

Table 13 Distribution of cotton growers according to use of personal cosmopolite sources.

Sr. No.	Personal cosmopolite sources	Often	Some-times	Total
1.	Village Extn, Workers i.e. Agril. Asstt./Agril. Supervisors	85 (56.66)	30 (20.0)	115 (76.66)
2.	Representatives of Private Company/ Input Dealers	81 (54.0)	28 (18.66)	109 (72.66)
3.	Agril. University Scientists	74 (49.33)	20 (13.33)	94 (62.66)
4.	TAO/AO/MAO	18 (12.0)	69 (46.0)	87 (58.0)
5.	SDAO/SAO	15 (10.0)	28 (18.66)	43 (28.66)

(Figures in parentheses are the percentage)

2.3 Use of mass media by cotton growers

As far as use of mass media is concerned, it was revealed that Newspaper was used by 57.33 per cent cotton growers for getting agricultural information. Demonstration/Exhibitions (52.00 %) was often used by cotton growers. It was also noted that Shivar Pheri/Farmers Fair (42.66 %) and printed agricultural literature (42.00 %) were sometimes used by cotton growers as mass media as source of information.

Table 14 Distribution of cotton growers according to use of Mass Media sources.

Sr. No	Mass Media	Often	Some-times	Total
1.	Newspaper	86 (57.33)	19 (12.66)	105 (70.0)
2.	Demonstration / Exhibitions	78 (52.0)	18 (12.0)	96 (64.0)
3.	Shivar Pheri/Farmers Fair	23 (15.33)	64 (42.66)	87 (58.0)
4.	Radio	28 (18.66)	49 (32.66)	77 (51.33)
5.	Printed Agril. Literature	20 (13.33)	63 (42.0)	93 (55.33)
6.	Television	15 (10.0)	30 (20.0)	45 (30.0)

(Figures in parentheses are the percentage)

3. Relative credibility of the sources of information:

In case of relative credibility of the sources of information, it was revealed from table 15 that

Agricultural University Scientists and Village Extension Workers (Agril. Assistants / Supervisors) were most credible sources of information ranked I and II respectively. Where as Demonstration / Exhibitions and Shivar Pheri /Farmers Fair were ranked III credible source of information.

Table 15 Relative credibility of the sources of information by Cotton growers.

Sr. No	Information sources	Cotton Growers		
		Total score	Mean rank	Rank order
1	Agril. Univ. Scientists	168	2.24	I
2	VEW	163	2.17	II
3	Demonstration/Exhibitions	158	2.10	III
4	Shivar Pheri/Farmers Fair	158	2.10	III
5	Progressive Farmers	150	2.00	IV
6	News paper	149	1.98	V
7	Printed Agricultural Literature	149	1.98	V
8	Friends/Neighbour/ Family Members	145	1.97	VI
9	Radio	145	1.97	VI
10	TAO/ AO/MAO	144	1.96	VII
11	TV	143	1.94	VIII
12	SAO/ADO	141	1.88	IX

The other credible source of information perceived by cotton growers respectively ranked in following order: Progressive Farmers – IV, News paper and Printed Agricultural Literature – V, Friends/Neighbour/ Family Members and Radio - VI, Taluka Agricultural Officer/Agricultural Officer/ Mandal Agricultural Officer - VII , Television- VIII and Sub Divisional Agricultural Officer / Superintendent Agricultural Officer- IX.

Conclusion:

Majority of the farmers were often using the progressive farmers as personal localite source of information, village extension workers as personal cosmopolite sources of information and newspaper as mass media source of information for getting agricultural information. However as far as relative credibility of the sources of information is concerned, Agricultural University Scientists were most credible sources of information and were ranked I.

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Periodic Research

A Study of Determining Energy Saving Behaviour and Energy Awareness amongst College Students



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Abstract

The gradual increase in the amount of energy used in connection with technology makes energy an even more important issue. Taking raw material from the natural environment, humans produce nutrition and energy in a production environment. One of the main reasons for air and environmental pollution is fossil fuels like coal, petroleum and natural gas which are used in industry and for heating purpose. Furthermore, since the use of fossil fuels might cause environmental pollution, energy production and consumption processes lead to destructive environmental pollution. For these reasons, the consumption of energy sources causes environmental problems and retards sustainable development. Population growth, economic growth and the efforts for achieving high living standards are among the factors that affect this increase in global energy consumption. Due to the fact that energy sources are restricted, energy saving, renewable energy sources and energy awareness are crucial subjects today. Individuals particularly students should acquire personal behaviours and habits at an early age. The role of current energy saving and energy awareness studies in students developing positive attitudes towards energy saving and energy awareness is unknown. The focus of the present research was to determine energy saving and energy awareness of college students. The sample of the present study consisted of 135 undergraduate students of Faculty of Commerce, The M. S. U. of Baroda, selected by way of random sampling method. Interview schedule was used for data collection. Descriptive statistics was used for the study to determine the energy saving and energy awareness level of the students. It was found that the college students had a high level of awareness about renewable energy sources, energy saving and energy awareness, however they had a moderate level of interest in energy. It was further found that there was a significant difference among energy saving awareness of college students according to gender and this difference was in favour of females. The present research would prove beneficial in solving major environment problems like global warming and environmental pollution.

Keywords : Energy Saving Behaviour, Energy Awareness and Interest in Energy

Introduction

The gradual increase in the amount of energy used in connection with technology makes energy an ever more important issue. Nature is a source of nutrition, oxygen, water, energy and production for human beings. Taking raw material from the natural environment, humans produce nutrition and energy in a production environment. As a result of this production process, a product is obtained but a waste then enters the natural environment. While nature recycles and transforms some part of these wastes into raw material, a greater part pollutes the natural sources (Invergard, 1976). Air and environmental pollution are the most widely known types of pollution. One of the main reasons for air and environmental pollution is fossil fuels like coal, petroleum and natural gas which are used in industry and for heating purposes. Among the emissions produced as a result of burning of these fossil fuels, particularly carbon dioxide and sulfur dioxide are the leading air and environmental pollutants. These gases compound with water in the air and fall back to the earth in the form of acid rains. Acid rains damage the flora and our buildings and cause water and environmental pollution (Alpdogan, 1996). Furthermore, since the use of fossil fuels might cause environmental pollution, energy production and consumption processes lead to destructive environmental pollution (Ayvaz, 1991). For these reasons, the consumption of energy

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sources causes environmental problems and retards sustainable development. Global energy consumption increases approximately by 2% annually. Population growth, economic growth and the efforts for achieving high living standards are among the factors that affect this increase in global energy consumption. By the end of the 21st century, it is inevitable that this increase will double. The decrease in energy source reserves increases energy costs as well. Therefore, yield losses should be minimized in energy production and consumption. The increase in yield losses draws attention to environmental problems. In addition the reduction in energy reserves threatens sustainable development. There is a strong relationship between environmental effects of energy use and sustainable development. To achieve sustainability, renewable energy sources should be efficiently used and environmental pollution must be prevented. Plans should be made to minimize environmental problems emerging during energy production and consumption. These plans must develop economic and reliable use of energy sources (Selici et al., 2005).

Energy cannot be destroyed. However it decreases as a result of entropy (entropy is the randomness and disorder in a system. As disorder increases in systems, entropy increases as well. In this case, entropy reduces the amount of useful energy and increase the amount of non-useful energy). For example, fossil fuels burnt for heating and lighting purposes in houses and work places increase the amount of carbon-dioxide emissions in the air (Darby, 2010). The increase in the use of this kind of energy results in global warming and environmental pollution. For example, while tropic ocean surface temperatures increased by half a degree between the years of 1949 to 1989, there was an 8% increase in melting snow in the northern hemisphere since 1983. For these reasons, energy saving and renewable energy sources are even more important today.

Regarding the problems arising due to the desire of the European Union and the United States of America to forward their interests through the wars of oil and to hold power in the management of oil sources, the power-hungry countries began to seek alternative energy sources and ways to develop energy saving policies (Caha, 2008).

One of the measures taken by the European Union countries to reduce gradually increasing energy need was to require certification of each building according to the amount of energy use. Furthermore, to ensure that less energy is used for heating, ventilation, lighting and hot water in the buildings, these countries require employment of an energy manager.

The increase in number of vehicles and the growing interest and desire in using electrical devices constitute the areas of greatest energy use. Energy consumption according to sectors was as follows: 29% in industry, 30% in transport and 41% in individual consumption (European Commission, 2006).

Educational programs for energy saving, the European Union emphasizes that consumers should

be informed about the environmental impacts of energy and energy saving as well. It is expected that simply changing the behaviour of keeping electrical devices in stand-by mode would conserve 44 billion kWh in general. It is expected that enhancing the scope of this implementation will lead to an improvement particularly in energy efficiency of buildings with high energy consumption. With emission trading, the enterprises which exceed their quotas will have the right to purchase emission released into the atmosphere. However as a result of less carbon release into the air, the enterprises are expected to tend to be energy efficient and save energy in order to gain income through emission trading (Caha, 2008).

If energy saving can be achieved, a saving of up to 20% can be achieved in 20 years. This, in turn, might provide an average family to make a saving of 200 to 1000 Euros in a year. Furthermore, reduction of energy consumption might decrease greenhouse gas effects and climate changes. Therefore, advanced technologies are in development for industrial energy saving in Europe.

The motive in energy is to achieve the most efficient use of limited energy sources and to reduce unnecessary energy consumption and losses. The goal is to perform the same work using less energy. To reduce unnecessary energy consumption and losses, humans should consume energy consciously. One of the ways of achieving this is through education. Students, families and teachers, in short, the society, should be trained for a conscientious consumption of energy. It is important to provide training to raise an awareness of energy and economic use of energy starting from primary education, which is the starting point of formal education. It is impossible or very difficult to change the habits acquired at a young age. For this reason, education can be considered as the most effective way of creating a lasting behavior change from a young age. Considering the importance of energy and saving, it is necessary to emphasize energy and saving at every school grade and college level.

A review of the literature revealed that there were numerous projects and studies on energy saving and efficient energy use (Mumma et al., 1966; Rowland, 1980; Sarvis, 1980; Wenig, 1981; Theiss, 1982; Crellinsen, 1983; Nicholson, 1996; Newson, 1997; Kirchhoff, 2001; Hjeresen et al., 2002; Papadouris, Constantinou and Kyratsi, 2008). In addition, to meet the increasing energy need in Europe in parallel to developing technology, renewable energy sources are of utmost importance.

Energy and energy sources are necessary for the survival of humans on earth. For this reason, energy and energy sources have always drawn the attention of humankind for many years and have led to many wars. Attempts to find new energy sources are ongoing. Water, sun, petroleum, wind, different gases, some mines, some plants have been used as energy sources; however, in recent years reaching these sources or obtaining energy became difficult. These restrictions in the field of energy or negative

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human impact on the environment have led humankind to seek renewable energy sources. Today the importance given the particularly renewable energy sources has increased and studies are undertaken to perfect renewable energy sources. For example, smart house-buildings (buildings that produce their own electricity and heat themselves) projects have increased in recent years, indicating more importance given to renewable energy sources. Wind, Sun, and geothermal energy sources can be considered renewable energy sources. Renewable energy sources are directly or indirectly sun-based. Sunlight and sun energy are used for heating, lighting and electrical production. In addition, renewable energy sources have many advantages:

- i) Renewable energy sources are clean energy sources. They have much less impact on nature than fossil fuels.
- ii) While other energy sources are limited, renewable energy sources are limitless.
- iii) Renewable energy sources require necessary materials and work power; as they are produced and installed in the immediate environment, they do not create energy dependency on external sources.
- iv) While the use of fossil fuels is unreliable, there is no security risk for renewable energy sources (Morgil et al., 2006)

Due to the fact that energy sources are restricted, energy saving, renewable energy sources and energy awareness issues are crucial subjects today. Individuals should acquire personal behaviours and habits at an early age. Particularly children at the primary education level have an important potential for this preparation. The role of current energy saving and energy awareness studies in children's developing positive attitudes towards energy saving and energy awareness is unknown. One of the ways of determining this role is to ask their views on these issues. Considering that a review of the literature revealed no studies on determining energy saving and energy awareness or on the investigation of the factors affecting students awareness, and that it is in civilization's interest to acquire energy awareness of particularly college students because they will be decision-making adults in the future. Furthermore it is believed that collected feedback will have an important role in past and future studies and projects on energy saving and energy awareness. Feedbacks are necessary elements for effective learning (Darby, 2010). McCalley and Midden (2002) reported that as a result of feedback given to the participants, there was a positive increase in participants' energy saving behaviors. In line with the above review the study was planned with the following objectives:

Objectives of the study

- 1) To determine the baseline characteristics of the college students.
- 2) To determine energy saving behaviours and energy awareness amongst college students.
- 3) To determine whether there existed any differences amongst energy saving awareness of college students according to various socio

demographic characteristics.

Methodology

The research is a survey method. The population of the study consisted of 135 college students enrolled in the Faculty of Commerce, The M. S. U. of Baroda, Vadodara. A sampling of the study was determined using random method among random sampling method. A scale namely (ESEAS) Energy Saving and Energy Awareness was developed by reviewing the related literature and used for data collection. Additionally, Renewable Energy Awareness Scale was also developed to determine renewable energy awareness. A five point Likert scale consisting of 54 items namely "I strongly agree, I agree", I partially agree, I disagree and I strongly disagree was used. Content validity and reliability of the scale was established. An exploratory factor analysis was made initially on the 54 items and the items having a load value below 0.30 or the ones which were found to have high load value in more than one factor were excluded from the scale. A total of 21 items were retained to the scale, wherein the highest score was 105, while the lowest was 21. The sub factors were named as renewable energy sources, energy saving, interest in energy and energy awareness. The reliability coefficient of the scale was found to be 0.80 using the Cronbach's alpha reliability analysis.

Table 1 : Names given to the factors related to ESEAS, number of items, results and reliability study, and sample items

Sub Dimensions	Number of Items	Cronbach Alpha	Sample Items
Renewable energy sources	8	0.71	Renewable energy sources are also clean energy sources.
Energy saving	5	0.66	Without hesitation I warn someone who does not pay attention to energy saving.
Interest in energy	3	0.71	I read scientific articles about energy.
Energy awareness	5	0.55	We should tend to use alternative energy sources in energy consumption.

The data was analyzed using one way MANOVA analysis. The statements "I strongly agree" was considered as 5 points; the next was 4 point and so on.

Findings and Discussion:

The results of energy saving behaviour and awareness levels of college students have been assessed by an equal interval scale. Moreover energy saving and energy awareness have been categorized equally as low level, moderate level and high level respectively.

The results indicated that the students had a

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high level of awareness of renewable energy sources, energy saving and energy awareness and a moderate level of interest in energy.

It was found that there was a statistically significant difference among the mean scores of students in terms of sub-factors of ESEAS $E = 0.962$, $F(4,395) = 3.50$, $p < 0.01$.

Factor based one way ANOVA analysis according to gender indicated that the childrens energy saving awareness significantly varied according to gender [$F(1,398.405)$, $p < .05$: wherein it was observed that average scores of females was higher than those of males.

Table 2 : Equal Interval Scale Evaluation performed to determine Energy Saving Behaviour and Energy Awareness level of college students

Subscales	Score Intervals		
	Lower level	Middle level	Higher level
Renewable energy sources	8.00 - 18.66	18.67 - 29.33	29.34 - 40.00
Energy saving	5.00 - 11.66	11.67 - 18.33	18.34 - 25.00
Interest in energy	3.00 - 7.00	7.01 - 11.00	11.01 - 15.00
Energy awareness	5.00 - 11.6	11.67 - 18.33	18.34 - 25.00

Conclusion

The world realizes today that real development cannot take roots if it by passes students, who are the future of our nation and also represent the very kernel around which social change takes shape. Though the government of India is working towards an environmentally sound and sustainable quality of life. The problems, challenges and issues are multi-faceted. However, students are playing a crucial role in protection and conservation of environment. To achieve this, resources and inherent capabilities of students need to be channelized to develop their full potential so as to take their rightful place as equal partners in all spheres. Thus environmental degradation is related not only to biosphere alone, but to the social sphere as well.

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Periodic Research

Effect of Detergent on the Strength of Cotton Fabrics



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Abstract

Apparel can enhance or undermine appearance and an immaculately dressed person is appreciated by all. Daily-wear of fabrics involve contact with wind blown particulate and soil.

The measurement of breaking, tearing and abrasion strength given us the idea of the strength as well as durability of the fabrics while unwashed. Washing with detergents brings about changes in these properties of the fabrics. These tests can serve the purpose for evaluation of the efficiency of any detergent or soap for laundering purpose.

The measure of determination of these values pertaining to the strength of fabric after repeated washing with the types of detergents and soaps.

To Study the effect of detergents on the strength of cotton fabric firstly to select the common popular brands of detergent by doing survey of housewives. After analyzing the results of survey 3 brands were selected namely surf, Wheel and Nirma.

Abrasion Tear breaking strength, all are related to the toughness and strength and hence the durability of the fabric. The measurement of these factors gives us the idea of the strength of the fabric while unwashed. Washing with detergents brings about changes in these properties of the fabric.

Effect of various Detergents viz Surf, Wheel and Nirma on various strength after washing the white cotton fabric has been evaluated. It was found that out of three detergents used the maximum abrasive strength.

Tear strength and breaking strength was observed when white cotton fabric was washed with surf and the second more strength was noticed, When washed with wheel. Fabric washed with nirma gave least strength. Similar pattern was observed when Turquoise colour fabric was washed with above three detergents.

Keyword: Fabrics, Apparel

Introduction

Apparel can enhance or undermine appearance and an immaculately dressed person is appreciated by all. Daily-wear of fabrics involve contact with wind blown particulate and soil.

Soap the primitive cleansing agent obtained by the saponification of triglyceride ester present in oils and fats is still used extensively because of its cheapness and is preferred by washer-man and professional launderers. The housewives skill-full management of her finances time and energy has led to the prevalent popularity of synthetic detergents.

The measurement of breaking, tearing and abrasion strength given us the idea of the strength as well as durability of the fabrics while unwashed. Washing with detergents brings about changes in these properties of the fabrics. These tests can serve the purpose for evaluation of the efficiency of any detergent or soap for laundering purpose.

The measure of determination of these values pertaining to the strength of fabric after repeated washing with the types of detergents and soaps.

Methods and Materials

To Study the effect of detergents on the strength of cotton fabric firstly to select the common popular brands of detergent by doing survey of housewives. After analyzing the results of survey 3 brands were selected namely surf, Wheel and Nirma.

The procedure has been divided into the following subsections.

1. Survey of the housewives
2. Preparation of soil and soil samples
3. Washing of soil samples by washing machine.

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4. Determination of the strength. Viz. Breaking, Tear and Abrasion Strength.

Two commercially available fabric were used. These were cotton (Poplin) white and coloured (Turquoise).

Preparation of Soil, and Soiled Sample

According to Singh O.P. ingredients used for soil are :

1. Floor sweep - Main ingredient of soil
2. Carbon Tetrachloride - used as a solvent
3. Kerosene Oil - For emulsion soiling
4. Ground Nut Oil - Represents general oil contents
5. Animal Charcoal - Grey Coloured pigment

Determination of Breaking or Tensile Strength

The breaking strength is a measure of the resistance of the fabric to tensile load or stress in either warp or weft direction as given by P. Angappan and R. Gopal Krishnan. To measure the breaking strength there are three test that may be used.

1. Ravelled Strip Method
2. Cut Strip Method
3. Grab Method

In this study "Revelled Strip Method" was used

The specimen should be of 2 inches width and 8 inches test length. For this, samples of 12 inches X 2.5 inches are cut and longer side taken in the direction of testing.

The extra length is allowed for gripping in the jaws. From these samples, threads from both the edges are removed until the width is reduced to 2 inches exactly.

Determination of Strength

I. Abrasion Strength :

Abrasion is just one aspect of wear and is the rubbing away of the component fibers and yarns of the fabric. This experimental determination is performed in the physical lab. of the Hukum chand mills Ltd. Indore. In this test 'Taber Abrassor' machine was used and percentage weight loss in 1000 cycles was observed.

II. Determination of Tearing Strength :

The tearing strength is a measure of the resistance to tearing of either the warp or weft series of yarn in a fabric.

Preparation of Test Specimens for Tearing Test

From the fabric sample, warp-wise and weft-wise test specimen of the required size are prepared with the help of a template. The length wise direction shall be parallel to the warp or weft direction for which the tearing strength is required. The specimen are cut so that no two warp way specimens contain the same set of warp yarns and no two weft specimens contain the same set of weft yarns.

Table – 1
Strength Of White Cotton Fabric Washed With Different Detergents

Washing	Name of Detergent	Abrasion Strength Fabric wait in gms.	Tear Strength in Kg.		Breaking strength in Kg.	
			Warp	Weft	Warp	Weft
I	Surf	0.021	4.750	2.912	30.09000	18.01932
II	Surf	0.0065	1.320	2.112	29.23900	16.65966
III	Surf	0.005	4.000	1.664	28.66200	16.32000
I	Wheel	0.0085	4.512	2.080	29.74932	17.67966
II	Wheel	0.0065	4.288	1.920	27.64200	15.97932
III	Wheel	0.0065	3.648	1.920	22.09932	11.89932
I	Nirma	0.005	4.096	2.360	28.56000	15.97320
II	Nirma	0.003	3.360	1.400	27.98166	15.97932
III	Nirma	0.003	2.400	1.400	25.32966	11.89932

Strength of Original Clothe

Abrasion wt. in gms. 0.030.

Tear strength in Kg.

Warp	Weft
------	------

Washing	Name of Detergent	Abrasion Strength Fabric wait in gms.	Tear Strength in Kg.		Breaking strength in Kg.	
			Warp	Weft	Warp	Weft
I	Surf	0.019	3.808	3.488	38.38	23.01
II	Surf	0.017	3.456	3.072	40.76	19.00
III	Surf	0.016	3.456	2.656	39.16	18.75
I	Wheel	0.008	3.680	3.328	39.78	22.27
II	Wheel	0.009	3.616	2.944	37.80	21.14
III	Wheel	0.008	3.52	2.464	35.36	18.97
I	Nirma	0.001	3.296	2.944	36.38	17.61
II	Nirma	0.005	3.232	2.816	33.21	15.43
III	Nirma	0.014	3.232	2.560	29.56	14.78

4.832	3.008
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Breaking strength in Kg

Warp	Weft
30.54	18.007

Table – 2

Strength Of Coloured (Torquoise) Cotton Fabric Washed With Different Detergents

Strength of Original Clothe

Abrasion wt. in gms. 021 gms.

Tear strength in Kg.

Warp	Weft
3.968	3.008

Breaking strength in Kg.

Warp	Weft
41.63	22.130

Result and Discussion

Abrasion Tear breaking strength, all are related to the toughness and strength and hence the durability of the fabric. The measurement of these factors gives us the idea of the strength of the fabric

while unwashed. Washing with detergents brings about changes in these properties of the fabric.

Effect of various Detergents viz Surf, Wheel and Nirma on various strength after washing the white cotton fabric has been evaluated. It was found that out of three detergents used the maximum abrasive strength.

Tear strength and breaking strength was observed when white cotton fabric was washed with surf and the second more strength was noticed, When washed with wheel. Fabric washed with nirma gave least strength. Similar pattern was observed when Turquoise colour fabric was washed with above three detergents.

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Periodic Research

Effect of Detergent on the Strength of Cotton Fabrics



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Abstract

Apparel can enhance or undermine appearance and an immaculately dressed person is appreciated by all. Daily-wear of fabrics involve contact with wind blown particulate and soil.

The measurement of breaking, tearing and abrasion strength given us the idea of the strength as well as durability of the fabrics while unwashed. Washing with detergents brings about changes in these properties of the fabrics. These tests can serve the purpose for evaluation of the efficiency of any detergent or soap for laundering purpose.

The measure of determination of these values pertaining to the strength of fabric after repeated washing with the types of detergents and soaps.

To Study the effect of detergents on the strength of cotton fabric firstly to select the common popular brands of detergent by doing survey of housewives. After analyzing the results of survey 3 brands were selected namely surf, Wheel and Nirma.

Abrasion Tear breaking strength, all are related to the toughness and strength and hence the durability of the fabric. The measurement of these factors gives us the idea of the strength of the fabric while unwashed. Washing with detergents brings about changes in these properties of the fabric.

Effect of various Detergents viz Surf, Wheel and Nirma on various strength after washing the white cotton fabric has been evaluated. It was found that out of three detergents used the maximum abrasive strength.

Tear strength and breaking strength was observed when white cotton fabric was washed with surf and the second more strength was noticed, When washed with wheel. Fabric washed with nirma gave least strength. Similar pattern was observed when Turquoise colour fabric was washed with above three detergents.

Keyword: Fabrics, Apparel

Introduction

Apparel can enhance or undermine appearance and an immaculately dressed person is appreciated by all. Daily-wear of fabrics involve contact with wind blown particulate and soil.

Soap the primitive cleansing agent obtained by the saponification of triglyceride ester present in oils and fats is still used extensively because of its cheapness and is preferred by washer-man and professional launderers. The housewives skill-full management of her finances time and energy has led to the prevalent popularity of synthetic detergents.

The measurement of breaking, tearing and abrasion strength given us the idea of the strength as well as durability of the fabrics while unwashed. Washing with detergents brings about changes in these properties of the fabrics. These tests can serve the purpose for evaluation of the efficiency of any detergent or soap for laundering purpose.

The measure of determination of these values pertaining to the strength of fabric after repeated washing with the types of detergents and soaps.

Methods and Materials

To Study the effect of detergents on the strength of cotton fabric firstly to select the common popular brands of detergent by doing survey of housewives. After analyzing the results of survey 3 brands were selected namely surf, Wheel and Nirma.

The procedure has been divided into the following subsections.

1. Survey of the housewives
2. Preparation of soil and soil samples
3. Washing of soil samples by washing machine.

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4. Determination of the strength. Viz. Breaking, Tear and Abrasion Strength.

Two commercially available fabric were used. These were cotton (Poplin) white and coloured (Turquoise).

Preparation of Soil, and Soiled Sample

According to Singh O.P. ingredients used for soil are :

1. Floor sweep - Main ingredient of soil
2. Carbon Tetrachloride - used as a solvent
3. Kerosene Oil - For emulsion soiling
4. Ground Nut Oil - Represents general oil contents
5. Animal Charcoal - Grey Coloured pigment

Determination of Breaking or Tensile Strength

The breaking strength is a measure of the resistance of the fabric to tensile load or stress in either warp or weft direction as given by P. Angappan and R. Gopal Krishnan. To measure the breaking strength there are three test that may be used.

1. Ravelled Strip Method
2. Cut Strip Method
3. Grab Method

In this study "Revelled Strip Method" was used

The specimen should be of 2 inches width and 8 inches test length. For this, samples of 12 inches X 2.5 inches are cut and longer side taken in the direction of testing.

The extra length is allowed for gripping in the jaws. From these samples, threads from both the edges are removed until the width is reduced to 2 inches exactly.

Determination of Strength

I. Abrasion Strength :

Abrasion is just one aspect of wear and is the rubbing away of the component fibers and yarns of the fabric. This experimental determination is performed in the physical lab. of the Hukum chand mills Ltd. Indore. In this test 'Taber Abrassor' machine was used and percentage weight loss in 1000 cycles was observed.

II. Determination of Tearing Strength :

The tearing strength is a measure of the resistance to tearing of either the warp or weft series of yarn in a fabric.

Preparation of Test Specimens for Tearing Test

From the fabric sample, warp-wise and weft-wise test specimen of the required size are prepared with the help of a template. The length wise direction shall be parallel to the warp or weft direction for which the tearing strength is required. The specimen are cut so that no two warp way specimens contain the same set of warp yarns and no two weft specimens contain the same set of weft yarns.

Table – 1
Strength Of White Cotton Fabric Washed With Different Detergents

Washing	Name of Detergent	Abrasion Strength Fabric wait in gms.	Tear Strength in Kg.		Breaking strength in Kg.	
			Warp	Weft	Warp	Weft
I	Surf	0.021	4.750	2.912	30.09000	18.01932
II	Surf	0.0065	1.320	2.112	29.23900	16.65966
III	Surf	0.005	4.000	1.664	28.66200	16.32000
I	Wheel	0.0085	4.512	2.080	29.74932	17.67966
II	Wheel	0.0065	4.288	1.920	27.64200	15.97932
III	Wheel	0.0065	3.648	1.920	22.09932	11.89932
I	Nirma	0.005	4.096	2.360	28.56000	15.97320
II	Nirma	0.003	3.360	1.400	27.98166	15.97932
III	Nirma	0.003	2.400	1.400	25.32966	11.89932

Strength of Original Clothe

Abrasion wt. in gms. 0.030.

Tear strength in Kg.

Warp	Weft
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Washing	Name of Detergent	Abrasion Strength Fabric wait in gms.	Tear Strength in Kg.		Breaking strength in Kg.	
			Warp	Weft	Warp	Weft
I	Surf	0.019	3.808	3.488	38.38	23.01
II	Surf	0.017	3.456	3.072	40.76	19.00
III	Surf	0.016	3.456	2.656	39.16	18.75
I	Wheel	0.008	3.680	3.328	39.78	22.27
II	Wheel	0.009	3.616	2.944	37.80	21.14
III	Wheel	0.008	3.52	2.464	35.36	18.97
I	Nirma	0.001	3.296	2.944	36.38	17.61
II	Nirma	0.005	3.232	2.816	33.21	15.43
III	Nirma	0.014	3.232	2.560	29.56	14.78

4.832	3.008
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Breaking strength in Kg

Warp	Weft
30.54	18.007

Table – 2

Strength Of Coloured (Torquoise) Cotton Fabric Washed With Different Detergents

Strength of Original Clothe

Abrasion wt. in gms. 021 gms.

Tear strength in Kg.

Warp	Weft
3.968	3.008

Breaking strength in Kg.

Warp	Weft
41.63	22.130

Result and Discussion

Abrasion Tear breaking strength, all are related to the toughness and strength and hence the durability of the fabric. The measurement of these factors gives us the idea of the strength of the fabric

while unwashed. Washing with detergents brings about changes in these properties of the fabric.

Effect of various Detergents viz Surf, Wheel and Nirma on various strength after washing the white cotton fabric has been evaluated. It was found that out of three detergents used the maximum abrasive strength.

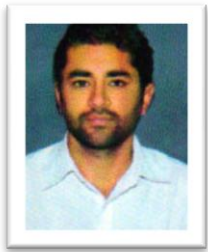
Tear strength and breaking strength was observed when white cotton fabric was washed with surf and the second more strength was noticed, When washed with wheel. Fabric washed with nirma gave least strength. Similar pattern was observed when Turquoise colour fabric was washed with above three detergents.

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4. Shrivastava, M. L., 1989. Soil release finishes for durable press fabric. *The Indian Textile Journal*,:157.

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Land use and land cover change in patiali rao watershed: a remote sensing and gis application



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Abstract

The term land use relates to human activity or economic function associated with a specific piece of land, while land cover is the physical material on the surface of the earth. Land cover includes grass, asphalt, trees, bare ground, water, etc. The change in spatial pattern of any material related to Land-use and land cover is called land-use and land cover change (LULCC). LULCC also known as land change is a general term for the human modification of Earth's terrestrial surface. Due to human activities it is changing at a very rapid rate. Changes in Land use and land cover are resulting in loss of biological productivity and biodiversity in aquatic and terrestrial ecosystems. To measure the changes in environmental conditions of a place, it is essential to detect the changes in land –use and land-cover of that place. The emergence of geospatial technology has provided an easy way to detect these changes. Remote sensing is an essential tool of land-change detection because it facilitates observations across larger extents of the Earth's surface at short time intervals which would not be possible by ground-based observations. Remote sensing satellites provide data at short and regular interval which is very beneficial to detect even minor changes in land use and land cover. GIS is further beneficial for analyzing land-use and land cover. The present study lays emphasis on the role of remote sensing and GIS in detection of land-use and land cover change. The area of study is the watershed of Patiali Rao. Satellite imageries for the years 1989 and 2005 are used for this purpose. Erdas Imagine 9.1 and Arc GIS 9.3 software are used for satellite data processing and reliable results are obtained from the study.

Keyword: Geospatial Technology, Environmental Conditions.

Introduction

"Land is the basic natural resources... it is perhaps regarded as a resource base rather than a resource itself" (Mather, 1986). Almost all the needs of human beings for food, clothing, shelter and energy are fulfilled the land. They always bring changes in the character of the land. "The term land use relates to the human activity or economic function associated with a specific piece of land." (Lillesand and Kiefer, 2008). In other words it has to do with series of operations on land, carried out by humans, with the intension to obtain products and/or benefits through land resources. The land use is simply regarded as the various ways by which man utilizes the land resource at a given time period. It has also been defined as the arrangements, activities and inputs people undertake in a certain land cover type to produce, change or maintain it (FAO, 1997a; FAO/UNEP, 1999). Another term is used as interchangeably with land use i.e. land cover. The land cover reflects the biophysical state of the earth's surface and immediate subsurface, thus including the soil material, vegetation, and water (Prakasam, 2010). It is the physical and biological material found on the earth's surface whether it is natural or manmade, (Environmental Literacy Council, 2008). "The term land cover indicates the type of features present on the surface of the earth" (Lillesand & Kiefer, 2008). In other words it can be described as ground blanket of natural and cultural landscape. Campbell (1987) defines land cover as the vegetation (natural or planted) or man-made constructions that is found on the earth's surface. But these both terms are different from each other. Land use refers to how land is used by humans. In other words it refers to the economic use to which land is put. On the other hand, land cover refers to the vegetation, structures or other features that cover the land (CARA, 2006). At any

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one point or place, there may be multiple and alternate land uses, the specification of which may have a political dimension.

But when we talk about the changes on the earth's surface we use both terms jointly. Because human affects land use as well as land cover. Land-use and land-cover change (LULCC) is the change in the terrestrial surface of the Earth. It is the most ancient human phenomenon induced in the biosphere (Turner II, 2001). It is also known as land change is a general term by the human beings to the Earth's terrestrial surface (EOEARTH, 2010). Human beings are the agents which bring changes in the character of the land more than any other agents. Originally the nature is dominating factor for land use and land cover change. But now, humans are leading to nature and modifying the earth which is very difficult to bring under its original purpose. Centuries ago where we found large area under forests, now we find that area under agriculture, industries and large cities. The land resources are being damaged at an alarming rate in an unplanned manner.

Land change puts an impact of the environment of the area (Kostrowicki, 1983), (Li et al, 2009). Land carries ecosystems; land use is the application of human controls, in a relatively systematic manner, to the key elements within any ecosystem, in order to derive benefits from it. The conversion of agricultural lands to non agricultural uses is almost inevitable and irreversible. So, comprehensive information on the spatial distribution of agricultural land use and pattern of their change is prerequisite for planning, utilization and management of the land resources. Such information thus permits a better understanding of the land utilization aspects on cropping pattern, grazing lands, wastelands, surface water bodies, settlements and communication network, which are vital for overall development planning.

Land change is the primary modifier of the landscape, which leads to an impact on socioeconomic, biological, climatic, and hydrologic Systems (Sohl and Sohl, 2012). To identify the changes taking place at different times are known as change detection (Singh 1989). Remote sensing data is widely used to provide a cost-effective means to develop land change coverage over large geographic regions (Lunetta et al. 2006). The spatial and temporal distribution of land use and land cover is very important in understanding a wide variety of global change phenomenon. Geospatial technology is very much helpful to monitor such changes (Rajan and Shibasaki, 2000). Remote sensing techniques are applied by several scholars for land change detection (Campbell et al, 2003), (Deszo et al. 2004), (Fan et al. 2007), (Panahi et al. 2010) etc. (Singh et al. 2010) tried to investigate the land change of the adjoining area of the study region and established a link between land change and natural resources. Satellites provide a wide range of data of an area of different time periods. Essentially, it has the ability to quantify temporal effects using multi-temporal data sets (Singh 1989).

For better understanding the land use and land cover change we always need to develop a classification scheme for the whole area and divide all the objects into different classes according to our requirement (Anderson et al. 1976). The categorization of land use and land cover makes our work more useful and authentic.

This study also aims at to find the land change, responsible factors and to testify the relevance geospatial technology to carry out such type of studies.

Study area

The study of changes in land use and land cover is conducted in Patiali Rao Watershed which has its origin in Chandigarh Siwaliks (Singh, 2005). It covers an area of 21 sq km. The topography of the region is hilly. Most of the area is characterized by steep slopes; the remaining area comprises of undulating topography. Steep slopes pose serious limits to arable agriculture. This area was originally covered with extensive forests. But since the last century the area under forests is losing its extent. Now, this area is under bushes and stunted vegetation (Gosal, 2004). Human invaders are disturbing the ecology of this area. (Singh, 2005) found that since last five decades the area is experiencing environment and biodegradation. The areal extent of the area is from 30°46'39" N latitude to 30°50'13" N latitude and 76°48'07" E longitude to 76°52'20" E longitude. The location of the study area in India is shown on Map 1.

Methodology

Data Acquisition

To detect the land use and land cover change satellite imageries of atleast two different times are required. So, satellite imageries from Landsat TM (1989) and IRS P6 LISS-III (2005) imageries are used. Except this a toposheet (53 B/13) which cover the whole study area are used. Further ground verification is conducted with the help of GPS to verify the signatures and to verify the results.

Data Processing

For data processing visual image interpretation and digital image interpretation techniques are used. Signatures are identified from satellite imageries. Erdas Imagine 9.1 and ArcGIS 9.3 GIS software were used for data processing. Supervised classification was done for both images. Signatures of the classes are identified from satellite imageries and verified in the field. Eight classes of the land use and land cover are created in both time periods.

Data Analysis

The data which is processed with GIS software is also analyzed with these software. The changes in area under each category, mapping etc. all work is done with the help of GIS software. Mainly Erdas Imagine 9.1 is used for analysis the raster data.

Classes of the land use and land cover

For identifying the land use and land cover classes, classification scheme developed by National Remote Sensing Agency (NRSA) in 1995 is used. So on the basis of this scheme 8 land use and land cover

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classes are created. These land use and land cover classes are:

1. Closed Forest
2. Open Forest
3. Scrubs
4. Agricultural Land
5. Barren Land
6. Settlements
7. Water Bodies
8. Choes (Seasonal Streams)

Analysis and Discussion

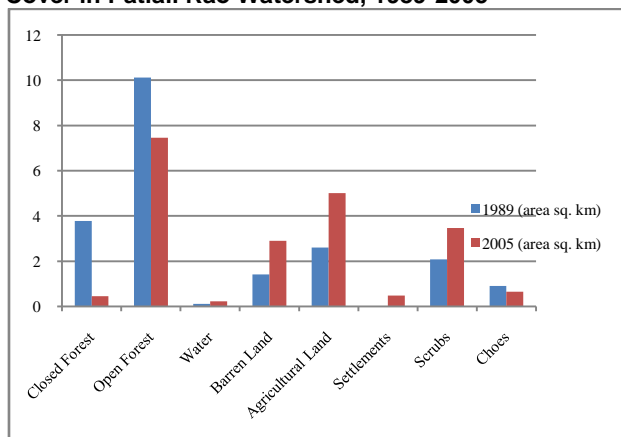
For the detection of land use and land cover in 1989 and in 2005, Landsat TM and IRS P6 satellite imageries are used respectively. Supervised classification is done for land use and land cover detection. Significant areas are identified under these categories from the satellite imageries. Areas under these classes are further verified by field verification. The details of area under each category are given below in Map 2a and 2b. On the basis of analysis of the area for the years 1989 and 2005, several changes are found in land use and land cover of the study region. These changes are found in every land use and land cover class. Table No. 1 is showing the changes in land use and land cover:-

Table No. 3 - Changes in Land Use and Land Cover in Patiali Rao Watershed, 1989-2005

Category	1989 (area sq. km)	2005 (area sq. km)	Changes (area sq. km)
Closed Forest	3.78	0.45	-3.33
Open Forest	10.12	7.46	-2.66
Water	0.11	0.23	0.12
Barren Land	1.41	2.9	1.49
Agricultural Land	2.6	5.01	2.41
Settlements	0.02	0.48	0.46
Scrubs	2.08	3.47	1.39
Choes	0.91	0.65	-0.26

The results show that area under natural vegetation is decreasing. The trend of land change is shown with the help of Figure No. 1.

Figure No. 1 – Changes in Land Use and Land Cover in Patiali Rao Watershed, 1989-2005



Determinants of Changes in Land Use and Land Cover

Changes in the land use and land cover do not occur itself. These are determined by several factors. The determinants of changes in land use and land cover of an area are different from the other area. There is lot of determinants for the changes in land use and land cover in Patiali Rao watershed which are given below:-

1. The occupation of the people living in this area is agriculture. The agriculture in this area is intensive. So, people in this area are trying to cultivate more area. They are modifying valleys for agriculture and also capturing the choes area for cultivation. They are trying to sow their crops on every possible area in the region.
2. Area under natural vegetation is decreasing at a very fast rate in this area. The main cause of this is that people of this area are mainly dependent on fuel wood for cooking purposes. So, they cut natural vegetation for this purpose. They also use grasses and other small plants to feed their domestic animals like buffaloes, cows, camels etc.
3. The area under scrubs is also increasing because people are cutting trees in uncontrolled way. The scrubs are thorny in nature, so people rarely use them. So, in the several parts of dense vegetation only scrubs are left behind.
4. The area under water bodies has increased. Several reservoirs have taken place in recent years. These are introduced to proper utilize the water of the choes, which is available in monsoon season.
5. The barren land is also increasing at a very fast rate due to deforestation.
6. The area under choes is also decreasing, this is due to people are modifying land for agricultural purposes.
7. Settlements are also increasing in this area. This trend is found in the whole India due to high growth rate of population. So, it is natural that settlement will cover more space in the study region.

So, these above mentioned causes are the determinants of changes in the land use and land cover in study area.

Summary and Conclusion

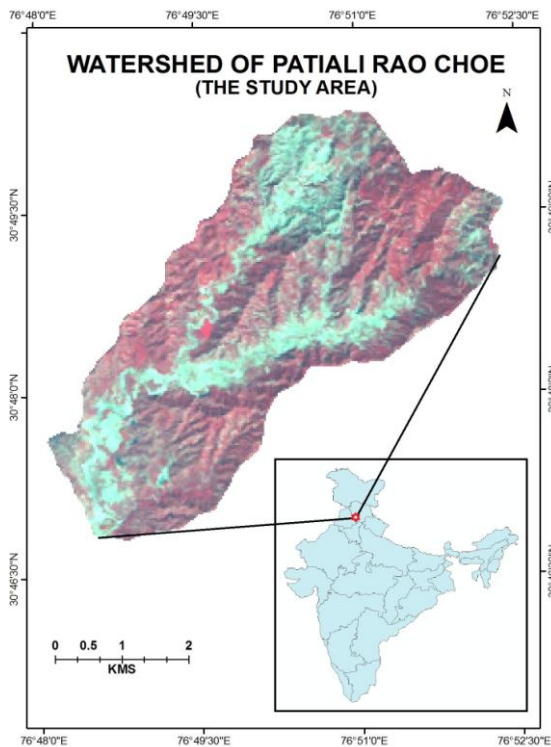
On the basis of discussion it can be said that there are several changes are identified in the Patiali Rao Watershed. These changes are taking place at a rapid rate. The main change in this area is found that land under natural vegetation is decreasing at alarming rate. Most of the dense vegetation that is referred as closed forest is losing its extent. Most of the land which was under closed forest in 1989 is under open forest in 2005. So, this means that the density of natural vegetation is decreasing in this area. Similarly several other changes like increasing area under water bodies, agricultural area, settlements are also found in a noticeable way. Due to the loss of natural vegetation, the environment degradation is also taking place in this area. All the land changes are disturbing the ecology of the region.

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Another objective of the study was that testing of the remote sensing and GIS for the purpose of detection of land use and land cover. This objective is successfully achieved in the study. When the results from remote sensing and GIS were compared with the ground reality they are found quite reliable. The results are found near to the reality. Remote Sensing is very useful for the view of the study area. Different time period satellite imageries are very useful for the detection of changes, which are taking place in short time period. This method saves efforts and time of the researcher who wants to investigate the changes taking place over large area. GIS is also very useful in such type of studies. GIS software are very useful for the processing of satellite imageries. The classifications which are done with these software for the detection of objects in the imageries are very reliable and time saving. We can detect a lot from satellite imageries in a single click just because of GIS.

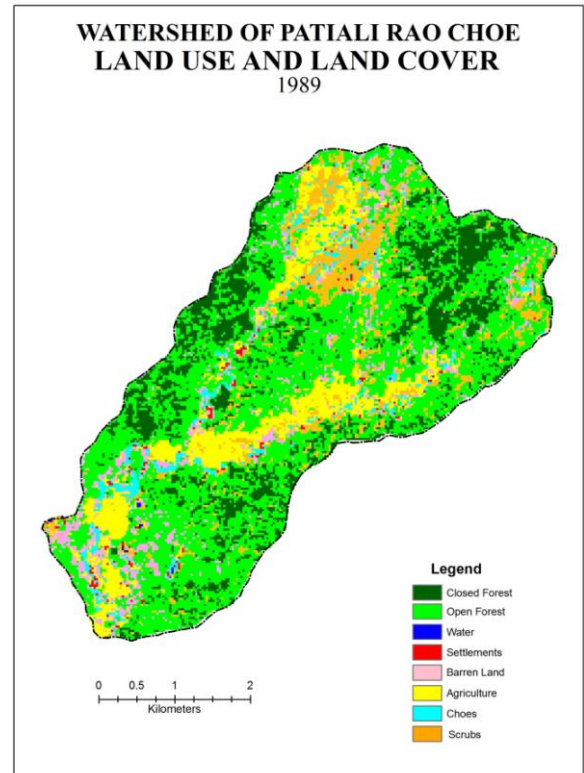
Finally, we can say that modern technology has made it very easy to identification the changes over the earth surface and made it very easy to handle a large area at a single time.

Map No. 1 Location of the Study Area in India

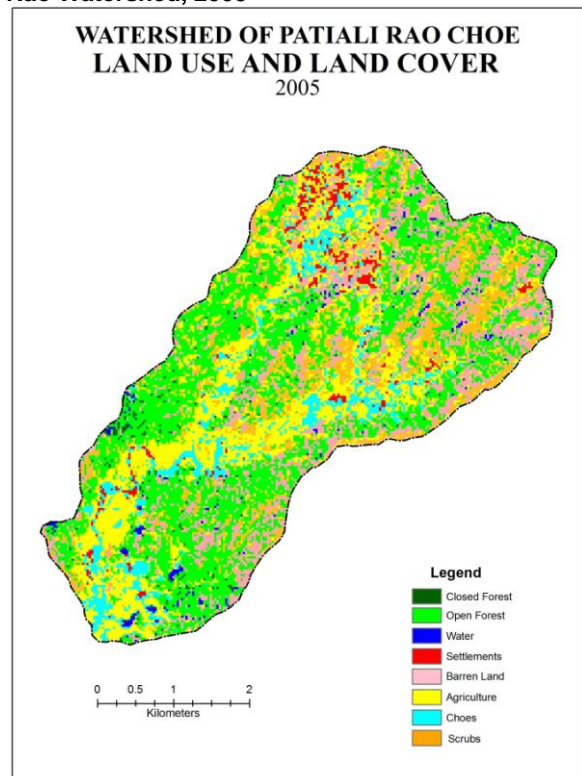


Source: LandsatTM16-10-1989

Map No. 2(a) - Land Use and Land Cover in Patiali Rao Watershed, 1989



Map 2(b) – Land Use and Land Cover in Patiali Rao Watershed, 2005



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Tourism and Resource Development: A Case Study of Gujarat



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Abstract

At present **tourism** is considered as one of the important economic sector, which impels the growth & development of many of the states of India. Tourism provides a marketable product, which does not depend on raw materials from outside. This paper analyzes the problems & strategies for tourism and resource development, which bears great prospects in future development of Tourism. Hospitality, the foundation on which the edifice of Gujarat tourism built, is indigenous to Gujarat. Gujarat sends largest number of travelers to almost every corner of the world, but its strengths to be host is not yet been fully utilized due to the lack of information highway. Gujarat is also known, as the “**Jewel of the West**” is the westernmost state of India. It offers colourful experience to its travelers packed with pleasant surprises, endowed with forest & deserts, hills & plains, seas & lakes, tribal hinterlands & special interest destination with a strong rail, road, & air network. The Poor infrastructure, ineffectual marketing & inefficient management of resource ensures that tourist steer clear, little wonder then, Gujarat contribute little over **2%** to the total tourist traffic of the country, while neighboring Rajasthan share is over **4%**. The Government policies has been introduced to eradicate the problems associated, but still it is on the paper & will have to travel far long way to reach their destinations. Most of tourism planning in the region appears to be ad hoc. Therefore, it is essential to move away from such an ad hoc approach to draw up definite plans of action, charting out the future directions clearly.

Keyword: Tourism, resource development, eradication, hospitality and infrastructure.

Introduction

The Tourism is the fastest growing industry in the world, and more so in the eastern hemisphere of the globe. About 600 million tourists go globe-trotting every year, of which India receives only 2.30 million, yet it stands as the third largest foreign exchange grosser for the country (Dr. A. Satish Babu). The concept of tourism differs among the people of various branches. Tourism is the act of travel for the purpose of recreation and business, and the provision of services for this act. Tourists are people who are “*traveling and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to exercise of an activity remunerated from within the place visited*” (official UNWTO definition). The distance between these two places is of no significance. Sometimes Tourism and Travel are used interchangeably. In this context travel has a similar definition to tourism, but implies a more purposeful journey. In 1976 Tourism Society of England defined it as “*Tourism is the temporary, short-term movement of people to destination outside the places where they normally live and work and their activities during the stay at each destination. It includes movements for all purposes.*”

A more comprehensive definition would be that tourism is a service industry, comprising a number of tangible and intangible components. The tangible elements include transport systems- air, rail, road, water, vegetation (forest) and now, space; hospitality services- accommodation, foods and beverages, tours, souvenirs; and related services such as banking, insurance and safety and security. The intangible elements include: rest and relaxation, culture, escape, adventure, new and different experiences. “*Tourism is the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs*” (Mathieson & Wall, 1982).

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During their stay in the destination, tourists interact with local residents and the outcome of their relationships is, the changes in the host individual's and the host community's quality of life, value systems, labour divisions, family relationships, attitudes, behavioral patterns, ceremonies and creative expressions (Fox, 1977; Cohen, 1984; Pizam & Milman, 1984), interaction of tourists do not ends here, rather it has multi-facet and has its implication on the natural surroundings as well. It is a major socio-cultural phenomena of the new age society & is related with economic mobility and thereby several consequences. However, the movement of people to the places of interest was there since time immemorial but was without commercial approach & organizational & managerial skill. Tourism, in today's context, is considered to be a virile instrument of economic development & employment generation for both educated & uneducated masses.

Objectives

The main objectives of this study:

- 1) To find out the function of resources in the tourism development
- 2) To study of problems associated with development of tourism on resources and strategies for their management.

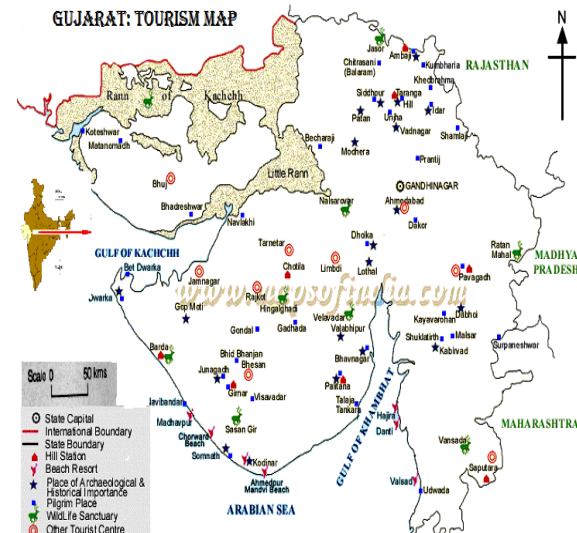
Data Base & Methodological Framework

The study is based on the personal observations & available secondary sources. The secondary sources includes the reports provide by Gujarat Tourism Corporation Limited (GTCL), various articles at state, national & international level. Now days the places of natural surroundings are becoming a major attraction for tourists interests, because of its pure natural values. The tourist as observer, have a significant role in changing pattern of utilizing the resources & bringing the spatial variation in it over a region, which have direct or indirect influence on tourism environment. In this viewpoint, the present attempt has been generalized to understand the impact of environment on tourism development.

Study Area

The study area is located between the latitude of 20° 01'N & 24° 07'N; longitude of 68° 04'E & 74° 04'E, encompassing an area of 196,024 km². Gujarat enjoys dominantly a tropical monsoonal climate. Since the study area is not concentrated to any particular place or point but Gujarat as a whole. The current world tourism contribution to GDP is 11%, while, Indian tourism contribution to GDP is 1.8% and it is targeted to reach 6% in the next decade. If this can be re-targeted to reach 10%, an additional 1.2 crore jobs can be created. A majority of the 2 crore NRIs, are Gujaratis who are prosperous as professionals and traders. This untapped resource can be motivated to become prospective tourists and investors in this sector and the GDP level can be improved considerably. The state of Gujarat has been transformed into an industrial powerhouse during the last three decades reducing its dependence on agriculture and textiles. Although the population of Gujarat is only about 5% of India, it accounts for 10% of India's consumption, 16% of total exports and 30%

of total stock market capitalization. The Gujarat account for 6% of India's GDP and the State Domestic Production (SDP) stands at around US \$12 bn. One of the most vibrant states, the economy of Gujarat registered a growth rate of 17.6% between 1990-91 and 1997-98.



Development of Gujarat Tourism

Gujarat has a long historical and cultural tradition dating back to the days of the Harappan civilization established by relics found at Lothal. Situated on the western part of the Indian sub-continent, Gujarat derives its name 'Gujaratta' meaning the land of Gurjars. The Gurjars passed through the Punjab and settled in some parts of Western India, which came to be known as Gujarat. According to the Hindu epics, Lord Krishna and his elder brother Balarama, evacuated Mathura and established themselves at Kushasthali, now known as Dwarka and started what is known as the Yadava dynasty. Dwarka subsequently became one of the four seats (mathas) set up by Adi Shankaracharya. The Parsees when they fled from Iran in the eighth century first landed at Sanjan on the shores of Gujarat with the holy flame, which still burns in Udwada in Valsad. The Muslim influence left its lasting imprints on the local art and architecture and it came to be known as the Indo-Saracenic style.

Among the earliest Europeans in Gujarat were the Portuguese who settled in Diu, a small island off the southern coast of Saurashtra. After that came the British who set up ware houses in Surat in 1612. Gujarat was a part of the erstwhile Mumbai state during the British Rule. But in 1960, the 'Gujarati population decided to secede from that union, which resulted in the formation of two new states, namely Gujarat and Maharashtra. The new State of Gujarat came into existence on May 01, 1960 because of this bifurcation.

Tourism is one of the most important sectors in Gujarat, which is to be exploited in the coming years. The Gujarat, where azure seas meet sparkling sands, blushing sunsets embraces rosy dawns. The jungles are verdant, lush and green, where Lions

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prowl and flamingoes preen. Marble temples white and pure, reflect the glory of the days of yore. Age-old palaces browned in the sun and water parks for a day of fun. Here tribal life is a celebration, of music, dance and multi-coloured traditions. Activities like religious and archeological tourism, heritage, coastal and beach tourism, adventure tourism, highway tourism etc are being encouraged. The State thus offers scope for investment in tourism related activities in the form of accommodation projects, food oriented projects, amusement parks and water sports, handicraft village complexes, sea/river cruise, safari project, sports/health facility complexes, etc. The Government would also like to encourage service-oriented projects like travel operation, tour operation, transport operation etc.

Gujarat has a long varied history and a great number of interesting places to visit. Gujarat had close ties with the life of the father of modern India, Mahatma Gandhi. Mahatma Gandhi was born and had spent his early years in Gujarat. Some of the most important sites in Gujarat are Jain Temples at Palitana, and at Girnar Hill, near Junagarh. Gujarat is one of the India's wealthier states with a number of important industries, particularly textiles and electronics and has the dubious distinction of having the largest petrochemical complex in the country. Apart from its Jain Temples Gujarat's major attraction include the last Asian lions, in the Gir Forest and the fascinating Indo-Saracenic architecture of Ahmedabad.

The tourism policy in India provides boost to the tourism industry in order to harvest the socio-economic benefits of this service providing sector. The ministry of tourism in the year 2004 has launched the "*Atithi Dev Bhav*", "*Guest is God*" & is the latest key to the Indian tourism sector, in order to attract a fairly good chunk of tourists both local as well as international. Similar type of promotional movement can be seen in almost all the states as for example, "*Gujarat, where life is celebration*" is the new mantra of the Gujarat state tourism corporation & has declared the year 2006 as tourism year to promote tourism in Gujarat.

Gujarat, perhaps the most colourful state, also called the 'Jewel of the West', is the westernmost state of India having largest coastline (1600 km) among all the states of India, making ideal for water sports. Its position on the western coast of India, the state has had the advantage of access to lands across the Arabian Sea and the influences of their artistic traditions. The coastline of Gujarat, dotted with lovely beaches and ports. Gujarat is also known for its multiform pilgrim destinations, world class Science City, sparkling festivals, scenic beauty, national parks, wildlife sanctuaries, hill stations, archaeological sites & monuments & diversified world known heritage sites.

Tourism & Resource Development

According to Prof. Zimmerman, 'Resource does not refer to a thing or substance but to a function which thing or substance may perform or to an operation in which it may take part'. The significance

of the term tourism & resource relationship can be understood by economic geographer as resource is neither a material nor substance but a positive interaction between man & nature, positive in terms of satisfying individual needs & social objectives that we may apply for tourism development. Tourism and resource both are interrelated. Tourism helps in upgrading the quality of resources, which has not yet been fully utilized. Say for example most the hills & mountains are remain virgin i.e. not been touched by the human beings, because of prevailed inaccessibility, can be developed as a hill tourism or mountain tourism, such as adventure, climbing, tracking, hill station tourism etc. Some of the Hilltop shrines like Ambaji, Palitana, Girnar and Pavagadh are similarly steeped in legend and celebrated in history. Palitana is known for their architectural splendor. The south, central & north Gujarat has lots of potential for this type of tourism.

The Gujarat possess a longest coastline, of different types such as rocky, plain & muddy beaches & not all the beaches are fully developed, only some of the beaches are functioning as a central attraction such as the Ahmedpur Mandvi (whose chief attraction is the ethnic beach resort. Cottages modeled on rural Gujarati architecture look out onto a sheltered beach, one of the state's chief centers for water sports), Chorwad Beach, Tithal beach, Dandi etc, & the beaches like Ubhrat, Dumus, Hazira, Mandavi (Kutch) etc are facing a problem of industrial affluent & lack of infrastructure. The plain has now become the hub of all cultural development, in fact we can say it possesses the world's best-developed potential tourism environment in the world. Now the new type of tourism is coming in view i.e. the forest & wildlife tourism, which has catered a huge number of tourists from all over the world, because of its natural environment. In Gujarat such places are Ratanmal, Jambughoda, four major national parks are Gir National Park, Blackbuck National Park, Vansda National Park, and Marine National Park.

Tourism has the potential to create beneficial effects on the resource development by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance. The quality of the environment, both natural and man-made, is essential to tourism. The impact of tourism on the land environment can be seen in the form of sprouting hotels restaurants, & others kinds of related infrastructures, which fulfils the demand of the tourists. Rise of cultural landscape in the form of nature park natural reserves, parks, golf courses etc. transforms the natural landscape. In short complete land use pattern alter in the places of tourists interests.

Gossling (1999) suggests that nature-based tourism is derived from the existence of natural areas with no specific concern for their protection, whereas ecotourism is concerned with the protection of natural areas mostly to achieve rural economic development by enabling people who live in rural areas to capture

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the economic nonuse values derived from natural areas. Typical services offered at ecotourism destinations might include local arts and crafts, guided hikes and wildlife viewing, publications, natural history lectures, photography, and local food. Revenues are generated from fees for these services, as well as natural area user fees and local expenditures for hotels, restaurants and bars, and transportation services (Seidl 1994). Some writers qualify ecotourism even more specifically, suggesting that it also must provide direct revenue toward the conservation or protection of natural areas and educate tourists about related environmental issues. The Ecotourism Society defines ecotourism as "travel to natural areas to understand the cultural and natural history of the environment, taking care not to alter the integrity of the ecosystem, while producing opportunities that make the conservation of the natural resources beneficial to local citizens" (Wood 1993). The qualification that ecotourism not harm the natural environment raises the issue of sustainability and the additional concept of sustainable tourism. Sustainability in tourism literature can be considered within political, social, economic, ecological, and cultural contexts (Henry and Jackson 1996) with sustainability of natural resources being the predominant view.

Ecotourism precludes more intensive exploitation of natural resources in rural areas or developing countries by providing economic returns that exist as positive incentives to local residents who are enlisted in natural resource protection. In this view, non-tourism industries generally are portrayed as exploitative and degrading to natural resources, whereas tourism generally, and ecotourism specifically, are advocated as ways to capture natural resource use and nonuse values. According to this view, non-tourism industries must be controlled and ecotourism promoted. Some researchers view the tourism industry itself as exploitative and degrading to natural resources as well as indigenous people and cultures. According to this view, the development of tourism is what must be controlled to sustain natural resources and cultural attributes on which tourism depends.

Constraints Associated with Tourism Resource Development

Gujarat is one of the premier commercial & industrial states, has recognized tourism to be a major thrust area for economic growth in the state. The Govt. of Gujarat realized the potential of tourism wealth creation & employment generation. In 2005, Gujarat is one of the state which received one the highest international tourists and ranked 6th among all the states of India. This situation was very worst during 2004 where it was ranked 17th among all the states. There was marginal increase of tourists in Gujarat during 2000, thereafter it has gone worst in 2004 i.e. 0.25% of the total tourists in India. In 2005, when the Govt. of Gujarat has realized its potential resources & made some valuable policies to attract tourists internationally, nationally as well as locally & it has achieved also (0.47, table). Now days the GTCL

is concentrating more to locate only the foreign tourists, this is the major drawback for the tourism development. "We don't consider the person as tourists who arrive here whether he is from foreign countries or localized, do not stay in the hotels. Those who (NRI's, foreigners etc) are staying in their relative houses, we don't count them as a tourists", says Shri PD Vaghela, IAS, Managing Director, TOURISM CORPORATION OF GUJARAT LIMITED. It shows that in Gujarat the domestic tourism has not gain much importance than international tourism. This is the main reason the people of Gujarat move to other states such as Rajasthan, Maharashtra, Madhya Pradesh etc. to spend their holidays. Nearly 63 per cent of the 1.14 crore (11.4 million) domestic tourists visiting the state every year are Gujarati's while the rest are mostly on pilgrimage tourism, Kishore Rao said. But still, more than 50% of Gujarati's move to other states mostly to Madhya Pradesh.

Paradoxically however, growing recognition of the importance of travel and tourism by the Govt. of Gujarat, there seems to be a lack of appreciation of its scope, complexity, & dynamism. This industry works beyond local boundaries at global level bringing together diverse industries. The Govt. of Gujarat should inculcate this appreciation of travel and tourism industry to obtain long-term gains for the state. The urgent need for the govt. of Gujarat is to view the tourism in a holistic sense, beyond its national & global boundaries bringing together the internal dynamic elements like its stakeholders-the community the private sector to work towards a tourism concept that benefits all & retains tourism assets for future. In the development of tourism environment the local participants plays a very important role, because these people are well aware of their local availability of resources. The Government level organizations cannot work alone without taking consideration the local level. The gap between these two level is high in Gujarat. There is a need of some Semi-Governmental organizations, which can provide the required information about the area or place. The lack of proper knowledge of the places of interests, the guide's misguide the tourists in fake of just making the money from them, because of this the tourist get bored & don't take interest. They also charge very high per hour from tourists.

Some Basic Problems associated with Foreign Tourists in Gujarat

A foreigner might be gaped at and fawned over almost everywhere in the state, but he is treated in a most unfair manner when it comes to paying tourist tariffs. In Gujarat, a foreign visitor has to pay almost eight and in some cases 25 times more than an Indian tourist. Although the Union government is now planning to end the discriminatory regime across the country, in Gujarat it will take much more than that to boost tourist traffic. For instance, the entry fee at Gir for a foreigner (adult) is \$5, while it is just Rs 30 for Indians. If a foreigner wants to carry a camera, it will cost him another \$5 while an Indian has to pay Rs 50. A foreigner would have to shell out \$ 200 for shooting amateur video and \$ 1,000 for a feature film.

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An Indian will have to pay Rs 2,500 and Rs 20,000 respectively. Hotel and food costs are higher too. For foreigners, AC rooms would cost \$ 50 and for Indians Rs 1,000. The dominance of these problems we are losing the number of tourists apart from other continents, which becomes a big hindrance in the tourism development in Gujarat. Apart from differential tariffs, the state has a whole lot of other disadvantages. Poor infrastructure, ineffectual marketing and inefficient management of resources ensure that tourists steer clear. The cumulative effect is that tourist traffic seems to be falling in the state.

According to Gujarat Industrial & Technical Consultancy Organization (GITCO), which collates tourist data in the state, number of foreigners has actually dropped in the past two years. In 2002-03, 37,252 foreigners visited the state, which dropped to 31,271 in 2003-04 and to 21,567 in 2004-05. But tourism officials say that the data was incorrect. "GITCO has been collecting figures only from hotels. We have directed it to get data from airlines too," an official claims. After the changes were made, the GITCO data between 2005 April and December shows number of foreigners shot up to 48,020. While the government dithers on exact tourist data, observers say, it must get its act together and develop a sound tourism policy. Said, by the convener of Indian National Trust for Art and Cultural Heritage (INTACH) Gujarat chapter, Umang Hutheesing, "Tariffs are a non-issue. We will have to look at fundamental issues hampering tourist traffic in the state, one of which is poor marketing". "The revision in tariff structure will encourage more foreigners to come to the state. But that is not it - physical resource has to be improved and tourist sites need to be better managed," says head of master program in urban design at Centre for Environmental Planning & Technology (CEPT) PVK Rameshwar.

Apart from these problems the interference of politics, is the biggest obstacle for the tourism development, which are very common in all governmental organizations. The waste of money behind unnecessary expenditures is another drawback in the tourism sector & in the hotel industry. This is a time to the globalization where we need highly trained, experienced, efficient, intelligent & dynamic professionals. We earn more money & reputation at the cost of hard work. There is much to be done. If tourism development is not taken up with some urgency and in a planned manner it is quite possible that instead of tourism providing an economic push, in a liberalized atmosphere, the region may suffer from a reverse flow. In tourism, as elsewhere, if the goods cannot meet the competition, the outflow may overtake inflow.

Tourism Resource Management Strategies

Maintaining the natural resource power planning & getting the result in the tourism corporation is a challenging task for Gujarat Govt. due to inefficient human resource as well as planning techniques. The attempts have been made to provide the management strategies & planning techniques to maintain the sustainability, they are follows:

-The semi governmental organizations would work more in the needed areas of tourism development, because of their knowledge about people behaviour as well as local resources because they are more mingled with local people as well as the local resources. This sort of management will have the following advantages as compared to the governmental system-

- The freedom to utilize foreign funds.
- The ability to experiment freely with innovative approaches.
- Flexibility in adapting to local situations and responding to local needs.
- Good rapport with people and ability render micro-assistance to very poor people as they can identify those who are most in need and tailor assistance to their needs.
- The ability to communicate at all levels, from the neighborhood to the top levels of government.
- The ability to recruit both experts and highly motivated staff with fewer restrictions than the government.

The tourist places which comes under the forest department should carries out the following regular activities to maintain ecotourism-

- Protection of the legally declared forest areas from misuse by the public.
- Protection of the wildlife from getting poached.
- Developing and managing eco-friendly tourism in the forest areas.
- Implementing alternate income generation activities for the forest dependent people.
- Conservation education programs for various target groups like school and college students.
- Design, printing and distribution of information brochures, booklets etc. among the public to create environmental awareness.

Conclusion

From the above study it can be said that the growth of economy generated by tourism industry would affect positively to all levels of people, not only at higher level but also to local level, which may help in improving their social economic conditions & will results in balance growth. The proper planning and management techniques definitely will play a key role in improving the standard of living of people who are dependent on the tourism. The Gujarat endowed with plenty of resource (both physical & human resource), which must be utilized in a sustainable manner. The state should give importance to the concept of eco-tourism & development of nature based tourism rather than setting up the environment exhaustive economic activities. The encouragement of private sectors to enter in this field would definitely make a lot of difference in managing the available tourism resource. Only just capital investments will not help in development but the local people participation is also required. The various institutions working in this field should undertake the long term planning methods to develop the region. The Gujarat being a sovereign of almost all type of potential resource, it has great future prospect in the tourism development.

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Statewise Foreign Tourist Visits In India
(Major States) (2000-2005) Table-I

STATES	2000	2001	2002	2003	2004	2005
Andhra P.	78713	67147	210310	479318	501019	560024
Bihar	73321	85673	112873	60820	38118	63321
Goa	291709	260071	271645	314357	363230	336803
Gujarat	31748	30930	34187	37534	21179	47107
Haryana	1113	898	85281	84981	66153	59353
Himachal P.	111191	135760	144383	167902	204344	207790
J & K	19400	21298	7821	24330	40242	44345
Karnataka	208000	140703	59545	249908	530225	545225
Kerala	209933	208830	232564	294621	345546	346499
Madhya P.	1075169	107824	67319	92278	145335	160832
Maharashtra	111036	915399	768935	986544	1218382	1448656
Rajasthan	623100	608283	428437	628560	971772	33310
Tamilnadu	785876	773073	804041	901504	1058012	1131164
Uttar P.	848000	795000	710000	817000	1037243	1174597
West Bengal	197061	284092	529366	705457	775694	895639
INDIA	5893542	5436261	5157518	6708479	8360226	9939782

Source: Travel Biz. Monitor, 2007.

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Scenario of being apartment dwellers: A case study from Burdwan Town, West Bengal, India

Abstract

In post- independence India so many changes happened in social structures and activities but the majority of the population remained dependent on agriculture. The increase in Indian population has been both a national and global issue. Land mass remained constant but land available for agriculture gradually shrunk because some of it has to be utilized for other necessities of the growing population. This has affected the very bond of joint family in a rural economy. Shortage of food and amenities became chronic, which promoted selfish intentions and destroyed the attitude of co operations between members of families (Harold 2010).

Keyword: Occupational Structure, Urban Amenities

Introduction

While the less efficient members stuck to their roots, the more enterprising ones choose to migrate to places with promises of better life and opportunities. The type of business changed, activities got diversified, but these centers had sustained requirement and went on absorbing the rural as well as neighboring urban migration. The infrastructure once established remained and further got improved creating more possibilities and more opportunities. The process of shrinking of land assets continued in the rural areas, beckoning those who were affected by this crisis (Shova 2001). The immediate result has been splitting of families. Those who migrated needed to drastically change habits life style and also the ways of interaction with neighbors. At the same time they lost the emotional support which they used to get in a joint family located in a rural backdrop (Sil 2007).

In this context the present study was carried out to get a glimpse over the concurrent scenario of apartment dwellers residing in Burdwan town, West Bengal, India. Specifically the objectives were to assess their – occupational structure, causes for settling in Burdwan, available amenities and living pattern.

Methodology

Study Site

Burdwan town, the largest municipality of the district and also the district headquarter is located almost in the central portion of Burdwan Sadar subdivision. Burdwan covering an area of 26.30 sq Kms is divided in 35 wards and the administration of which is controlled by the Burdwan Municipality. Burdwan lies between the latitudinal and longitudinal extension of 23° 12' 30" N to 23° 15' N and 87° 49' E to 87° 53' 15" E. Burdwan ranks 5th among the towns of West Bengal, with a population of 3, 21, 937 in 2011.

Sample opinion surveys were carried out among 50 randomly selected families (resident of Apartment or Flat) during 2011-2012. Further information was collected based on a questionnaire survey prepared for household queries. Secondary data has been collected from district census handbook, gazetteer and official leaflet or project report of Burdwan Development Authority (A statutory Body). Similarly, promoters and owners of real estate companies were also interviewed. The observations were noted and the data thus collected was processed and compiled. Collation of data and analysis of information sources was done during the study period.

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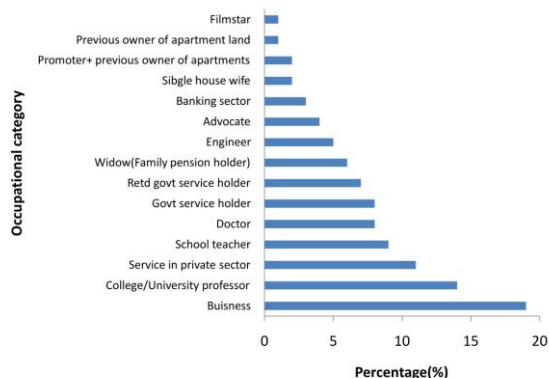
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Results and Discussion

Occupational structure

The measure of symbiosis comes along with occupation income and qualifications of the inhabitants. It is found that a stupendously large majority of persons staying in the flats are businessman (19%) Figure 1, followed by college and University professors (14%), those engaged in school teaching (9%). Next important proportion (8%) is Doctor servicing at government hospital, and same proportion (8%) is government service holder. Retired government service holder. Retired government servicemen constitute 7% of total residents. One remarkable feature is 6% residents are family pension holder, widow living singly (mainly in the oldest apartment Sanchayan). A small proportion (5%) is of engineer, advocate (4%) and bank employee (3%). The rest 6% constitute promoter plus previous owner of apartments land (1%), only engaged in real estate business (2%), previous land of old dilapidate home on which new apartment built(1%), single widow (1%), financial assistance by daughter (living in other states) and film star (1%). Thus there is an occupational diversity among the flat dwellers and most of the inhabitants seem to be in well paid jobs.

Fig 1: Occupational structure of the flat dwellers in Burdwan Town, W.B, India

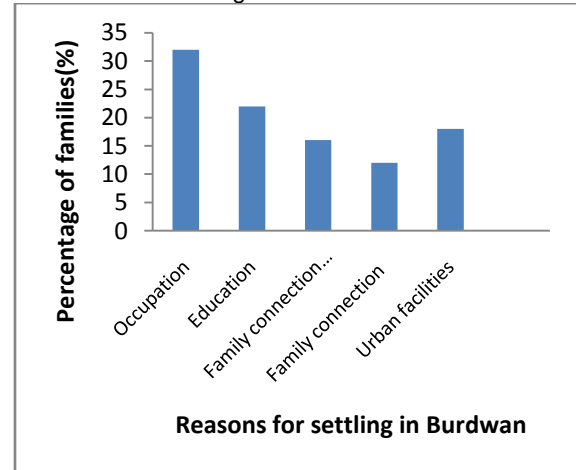


Reasons for coming to this town

Majority of the respondents (32%) said that due to occupational reasons they came to this town and after spending a lot of time in this town they decided to settle down here. According to them the cultural background of this town and the urban facilities of the town in addition to the sense of security arising out of familiarity with this place influenced their decision to stay here. About 22 % of the respondents come to this town for better education of their children (Figure 2). According to some of the respondents (16% and 12%) the family connection influenced them to come back to this town after their retirement. For many of them, who used to live in the interior villages which are less developed than this town, urban facilities of this municipal corporation like well connectivity, educational and

medical facilities etc inspired them (18%) to come here.

Fig 2: Graph showing the responses of families for settling in Burdwan town



Reasons for choosing a flat to live

When asked why they choose a flat instead of constructing their own individual house, responses were different. Increasing house rent and shelter change once a year is the fate of middle class service holder family. As their original home is far from their work place, they are compelled to adopt this system/tradition. The dominating nature and whims of landlord / land lady regarding inhabiting and leaving his/her house is the prime cause of tenant's tension. Packing of goods utensils, furniture each and every time, expenditure cost and last of all headaches.

In this critical situation the concept of flat or apartment house was introduced. If the monthly house rent would become the EMI (Equal Monthly Investment) and he/she would become the owner of the flat, there is no problem. There are so many banks interested to offer loans in terms of guarantee of service or business or by mortgage of gold, or saving certificates (N.S.C, LIC deed) etc. Only condition is repaid of EMI on a regular basis. Security 24 hour service plays an important role in choosing an apartment house. So it is safe to go out by locking the door of a flat. Beside this, after closing of the door, there is own world.

Trends towards purchasing a flat instead of old house (or constructing own individual house) are numerous. First of all land value is increasing vigorously which is out of reach of the middle class as there is no loan offerings by bank for purchasing land (Siddhartha 2009). A large sum is not cash in hand by this economic class (except the retired ones) only to purchase land. In most cases promoters himself / themselves make arrangements for bank loan within 48 hours.

Secondly for general customer 20% cash investment is necessary for booking (10%) and agreement (10%) and rent 80% offered by bank loan. In case of high profile customer (Husband wife both

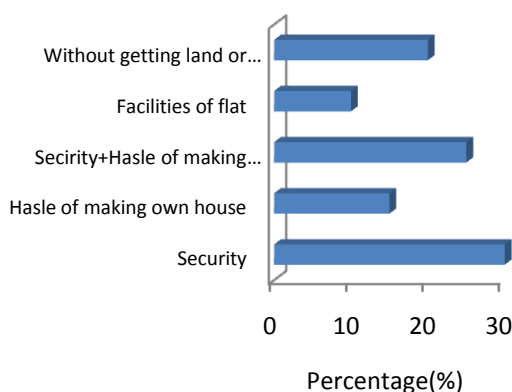
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are engaged in higher earning jobs) 90% is provided by bank loan. Third, due to price hike in Indian economy, the cost of building material has been accelerating / increasing several times. Fourthly present generation opined / perceived it is better to be a owner of flat by taking bank loan at the starting of service life than to be a owner of own individual home by savings of entire service life in late stage. Fifth point to note, our survey reveals that those who are interested to purchase flat they not only want a roof above their head, but also want all amenities needed for everyday life only by providing finance without going in any hassle.

One retired University professor couple opined that there are sharing facilities with other flat owners. They also express their feeling that presences of neighbors provide a sense of special security and togetherness. Seventhly, flat resident enjoy favorable location (as these areas are high connectivity zone) and all amenities with least / cheap expenditure and responsibility.

According to 30% of the surveyed families security is the main reason why they choose to stay in the flat (Figure 3). About 25% replied that they reside here not only for security but also to avail any hassle of building a house. The people who came here after retirement to their old houses faced space problem in their old houses and preferred to shift to a flat because in this old age they did not want to take any hassle of building a house. About 20% respondents opined that they did not get land or readymade house in favourable location. About 15% replied that when they came to the town with their appointment letter (all of them are single women) they needed immediate shelter within a budget which suited their pocket. So they opted for flat, because constructing their own house would have been more time taking and expensive. According to 10% of respondents the choice was for the multiple facilities like security, twenty four hour water supply, generator, lift etc available in the flat.

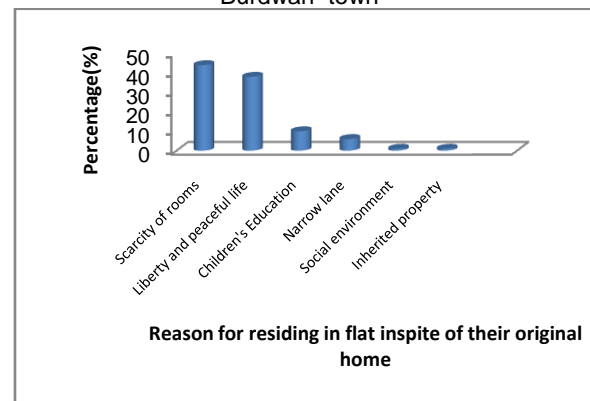
Fig 3 : Graph showing the responses of families for choosing a flat to live



Reason for residing in flat in spite of their original home at Burdwan town:

When asked why they choose a flat instead of having their original home at Burdwan Town, responses were different (Figure 4). According to 45 % of the families, scarcity is sufficient number of rooms is the prime reason why they chose to stay in the flat. This is the result of breaking up joint family system. Next important group comprises 38% wishing to enjoy liberty and peaceful life (as definitions of peace vary man to man) by residing at flat. Rest 10 percent of the original home respondents are staying here for their children's education. Rest 7% came in these apartment houses for several reasons like narrow lanes in front of the original house and also lack of space for construction of garage compelled them to purchase flats. One retired respondents replied that in spite of constructing an individual house and residing there for 15 years, he was compelled to sell that house for surrounding social environment and decided to stay here. Another reason is in care of two children one boy and the other girl, economically affluent father is deciding to purchase a flat in addition to own house for their future asset. One grandpa offered/gifted two flats along with his original house to his three grandsons. Majority of them keeping strong/ close attachment to their original home nearly by daily commuting.

Fig 4: Graph showing the responses of families for residing in flat in spite of their original home at Burdwan town



Conclusion

Regarding the choice of flat, instead of building own house main reason is security (Gibson 2000). Majority of the respondents, even that apartment which has no security guard and register copy for outcomes'. The residents also opined that they may go for out of station leaving the nest under lock and key without any tension. Sharing facilities with other flat owners help to reduce the maintenance cost per family per month (Sengupta 2009). Thus the flat owners enjoy all urban amenities at a minimum maintenance cost. The flat dwellers (specially aged retired couple, single woman, sometimes and mother without her kid/kids when her husband is that presence of neighbors in one complex provides a sense of special security and togetherness). In case of any emergency or any problem mutual help and cooperation between neighbors has been maintained

in most cases. Each and every family of flats wants unencumbered life so they prefer to reside at flat where common electricity, water supply, garbage clearance, security (Maintained mainly by Samiti) all regulated jointly not individually. Only responsibility is to repair flats, within four walls (with the help of cities mason, carpenter etc.) Outer portion of each and every flat is maintained by Samity. First and foremost advantage of flat residents is that they enjoy economic liberty as well as liberty in all respect.

Acknowledgement

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Periodic Research

Spatial distribution of Biodiversity in Nagaur District of Rajasthan, India

Abstract

The aim of the paper is biological diversity include pressing for the early entry into forces of the convention on biological diversity with the widest possible participation the development of national regional strategies for the conservation of biological diversity. Biodiversity is the term applied to the variety of the genes, species and ecosystems found in respect to their geographical condition on planet. It embraces all the life forms plant and animal life in micro organism and the water land and air in which they live and interact this richness the earth's living wealth provides an abundant and essential supply of indispensable goods and services.

Geographical Biodiversity- Much of our understanding about the relationship between biodiversity and environment has come studies in land bio-geography. These studies have revealed the power influence of two geographic factor area and distance, on species diversity.

Keyword: Ecosystem, Biodiversity

Introduction

Geographical Introduction of the Area

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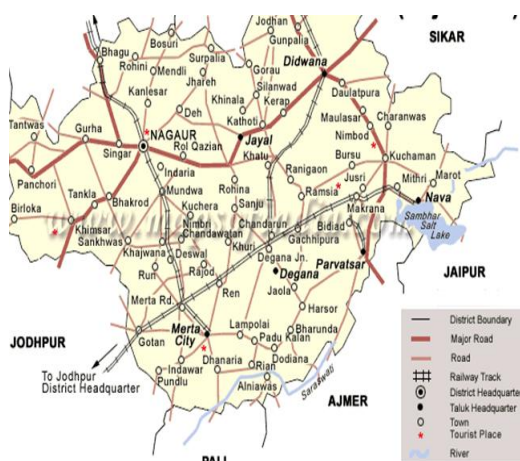
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The district is located between latitude $26^{\circ}25'$ and $27^{\circ}40'$ N and longitude $73^{\circ}10'$ and $75^{\circ}15'$ E. The district is irregular in shape. Four of its eight tehsils Nagaur, Jayal, Ladhun and Didwana, Merta, Degana, Parvatsar, Nawa.

A paper discussed a richness of biodiversity, geographical distribution, factors affecting uniqueness of the area. The ecology of rural India is on the verge of collapse the reason behind it is the non-satisfaction of man's ego which is infinite. He treats the earth like his parental property. The faculty approach of development under the model of modernism and industrialism, stadia, fly overs, highways, metro-rails and urban infrastructural construction at the cost of rural resources are creating the situation bad to worse and fared the country towards ecological holocaust. The people of the Nagaur are very knowledgeable about their environment around the villages are no exception to this situation. By and large, the people of these villages are quite conscious of their biodiversity richness and its genetic variability, and consider them as unique repositories of their subsistence. In spite of lack of scientific literature on people's science and biodiversity repositories, a fairly good knowledge on flora and fauna exists in the form of oral tradition and desert ethos in the study area.

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Locational map of Nagaur 1

The topography is fairly even but for some scattered hills, generally wooded in the north and the east, near Makrana. There are only a few seasonal streams and hullaahs which rise and disappear in the district itself.

Lakes – Sambhar, Lunkaransar, Didwana, Nawa, Kuchaman.

Minerals – The district has large deposits of the following minerals of economic importance. Gypsum, Wolfram, Marble, Lime Stone, Sand stone, Salt and sodium sulphate.

Climate

On an average there are 22 rainy days in a year in the district and 10^0 to 48^0 temperature.

Objectives of the research

- Identify potential area for vegetation type, land use, land cover to endemic plants, birds and larger animal distribution.
- An evaluation of status of habitats areas all forest division of the area.
- A geographical analysis of selected endemic plant species distribution.
- Investigate the relationship between forest fragmentation and density of Animal.

Methodology

The present study will be micro level study of Nagaur District.

- Primary data** – The primary source of data to be used in the present investigation is field work, field survey, observation, questionnaire etc.
- Secondary data** related to birds and animal, forest are also collected from concerned department and they are properly tabulated and computer in order to find and result. Interviews – The surveys has supplemented by developing simple questionnaire to elicit information through people's knowledge of the area. Like land cover, institutional farms, biodiversity, riches, subsistence practices, land use practices, grazing and browsing pressures, soil types agriculture practices and soon. These random interviews

numbering 360 were contended to 6 tehsil and was conducted during Jan 2008 to Jan 2009.

The Village Sub habitats

Survey and interviews helped considerably to demarcate variety of sub habitats or institutional areas each representing a sub ecosystem in itself. Studies were attempted in these sub habitats or village institution to understand the biodiversity and variations thereof. These village institution are –

- (1) Gaucher – Defined as Gram Panchayat controlled grazing Landi.
- (2) Oran – Defined as areas where tree cutting is barred by community consent and divine control and where such restraint is actively observed.
- (3) Follow lands – Defined as Khatedari (Private agricultural) lands with usually 'Kharif' crops. At least 2-3 years in follow managed as closed fodder fields during the growing season and there after as community wide open grazing.
- (4) Plough Fields – These are of two types (i) Traditional – Those in which ploughing is done by animals to avoid destruction of useful species in the fields during tilling. (ii) Disc – In which mechanized method are used wherein massacre of species takes place.
- (5) Sand dunes – Defined as natural sand masses either stationary or stabilized or shifting usually with good moisture.
- (6) Forest enclosures – Defined as land under the present control of the forest department for plantation.
- (7) Gravel Lands – Defined as low productive.
- (8) Wastelands – Defined as area provided with mixture of characteristics with low productivity.
- (9) Water (salt) Lakes – Defined as a conservation area of saline water organism.

These villages institutions or sub ecosystems encompasses all kinds of major land forms of the study area.

Nagaur has sufficient potential for conservation of resources and biodiversity of the area. Availability of water resources in less and conservation of water resource and bio-diversity is necessary of the area and local people of survival. All this may lead to the bright future of the biodiversity in Rajasthan, if little more care and attention is provided to them by the government capitalists and local people in right manner. If the present condition of the area is not improved. The future generation will bear the blunt of controlled and illogical use of resources.

Not much work has been done by Indian geographer's on such an important resource as forest and there is hardly any significant research contribution in systematic study of state fauna and flora.

Present paper will contribute a lot to resource and biogeography.

Geographical Biodiversity

Today the scale of human impacts on the global biosphere is increasing dramatically due to activities that arise from the rapid growth in human population and increasing rates of consumption

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systems are being altered and destroyed; while species in same groups of plants and animals are going extinct rates some fifty to a hundred times higher than they otherwise would and others are having their populations depleted.

The genetic resources essential for agriculture forestry and other continue to be lost. This tragic loss and degradation of biodiversity holds serious economic, ethical and cultural consequences for humanity and evaluation of life on earth.

If we look at a map of a vast tract of semi arid region of Rajasthan under going destruction you find that patterns is usually very patchy. As clearing progresses many of these forest patches disappear, but some survive because they are protected by rough terrain, land ownership or cultural religious factor or same factor.

Biological Diversity of the Study Area

There is a strong relationship between the presence of certain tree species and animals, tree species with understory, herb and grasses. This relationship is important for village biodiversity. Along with village forests, fallow fields, are an important ecological regime. Ecological the vegetation of the study area fall under the category of "thorn forest type". Some changes are seen due to cultivation and changes in the soil-climate condition. Nevertheless, the natural vegetation has a substantial contribution to the productivity of the trees like, khejri, khimp, keeker, rahedra, kar, neem, prosopis, cineraria, which are highly valued and conscientiously maintained. Besides this a lot of shrubs and grasses are found growing in fallow as well as crop lands of course in grazing lands. These are deep rooted, tenacious enough to survive expanded droughts and get efficient in pulling up a good biomass.

A variety of animals are found in study area. The area spectacular biodiversity because of its evolutionary history and geographical location. Some biota possesses saharian affinities (Holoxylon, gazelladorcas) while other are malayan (Ficus Mangifers pteropus gigantcus) while certain elements are Deceanean (Rattus cutchicus, cyolunda ellioti), quite a few are macro endemic (stenodactylus orientalis, gerbillus geadavi) and micro endemic taxa (Bangarus caerulers sindanus, felis silvertris ornate).

Climate features of study village

The major climatic components which influence the biodiversity of the area like temperature, rainfall, relative humidity were considered for Molasar, Kolia, Thanwala villages shown in Table No. 1.

Table : 1

Climatic components	2006		2007		2008	
	Min	Max.	Min.	Ma	Min.	Max.
	.			x.		
Temperature	70	470	8300	480	9.8	49.7
Rainfall	324		278		218	
Rainy days	22		21		13	
R.H.	47	62	43	67	32	51

*During study period

There is a strong relationship between the presence of certain tree species and animals between tree species with understory herbs and grasses. This relationship is important for village biodiversity. Alongwith village forests, fallow fields, are an important ecologies regime.

Interviews

The field surveys were supplemented by developing simple questionnaire to elicit information through peoples knowledge of the area, like land cover, institutional forms, biodiversity niches, substance practices, land use practices, grazing and browsing pressures, soil types, agriculture practices and so on. these random interviews numbering 660 were confined to 17 villages and were conducted during Jan. 2008 to Jan 2009.

These interviews provided basic biodiversity related issues of the Nagaur and with more insight of past, present and future scenario of the biodiversity.

List of surveyed villages

1. Nagaur	1. Sankhwas, 2. Kheenwsar 3. Nagaur
2. Jayal	1. Deh 2. Jayal
3. Merta	1. Gotan 2. Merta
4. Degana	1. Degana 2. Khuri Kalan
5. Parvatsar	1. Makrana 2. Peelwa
6. Nawa	1. Nawa 2. Kuchaman
7. Didwana	1. Molasar 2. Didwana
8. Ladnun	1. Ladnun 2. Nimji Jodha

Soil characteristics of study villages

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Table : 2 Soil Characteristics of Study Villages

Soil Type	Kator	Ratili	Murad	Average
pH	8.24	8.54	9.05	8.5
Sample Variance in pH	7%	4%	1%	11%
Organic Carbon	0.45	0.25	0.31	0.31
Sample variance	2%	1%	2%	2%
Texture	Fine	Coarse	Coarse/stony	NA
Color	Yellow/grey	Yellow	Yellow	NA
(n) Number of samples	31	29	14	64

Biocommunity

The dominant species encountered in the study villages reflect typical desert flora and fauna. Limited for the most part by moisture availability the predominate adaptations follow the "pulse response" (Nov-Meir, 1973) patterns of arid vegetation; perennials retreat or with stand long dry seasons and drought years, while annuals have short, productive growing periods. On the other hand, the wild animal taxa and the domesticated breeds have over the ages nature selected having physical, physiological and thermoregulatory properties making them successful in this habitat. All these animals from small rodents who live in tunnel and burrows to large mammals surviving in the open have had great deal of adaptive radiation.

The community dynamics and relationship between plants and animals and between trees and understory in an important feature of village ecology, especially the "orans" or village forests. The ecological dynamics of human planting and follow patterns also effect the large areas under long-fallow cultivation.

Flora

Botanical Divisions

The flora of the district is richer to its geographical situation. Its western portion presents a dreary look as it is devoid of any natural vegetation cover except the low shrubs or grasses grown on the low sand-dunes, which too turn pale due to intense heat during the summer. The south-eastern areas including a part of the northern tehsils of Merta, Degana, Jayal, Kuchaman and Didwana, are much greener than the north-west region of the district.

Table 3 : Plant Species Found in the Study Area
(Abbreviations : All = Annual herb, T = Tree, S = Shrub, AG = Annual Grass; PH = Perineal Herb; PG = Perineal Grass.

Botanical Name	Common Name	Nature	Collected at Village, Dhani
1. Acacia nilotica	Deshi Babul	T	Kolia
2. Acacia Jacquemonti	Nimbica	S	Daulatpura
3. Acacia Senegal	Khumbat	T	Badao
4. Acacia Tortilis	Israeli Babul	T	Kuchaman
5. Aerva Persica	Bui	S	Parbatsar
6. Albizia lebbek	Sares	T	Nagaur
7. Aristida adscensionis	Lamp	AG	Merta
8. Aristida funiculata	Lamp	AG	Kuchaman
9. Aristida hirtigluma	Delio-Lamp	PG	Chord
10. Aristida mutabilis	Lamp	AG	Kolia
11. Arnebia hispidissima	Rambus	AH	Badao
12. Azadirachta indica	Neem	T	Badao
13. Blepharis sindica	Bhangri	AH	Badao
14. Boerhaavia diffusa	Chinavari	AG	Rasulr
15. Calligonum polygonoides	Phog	S	Kuchaman
16. Calotropis procera	Aak	S	Nagaur
17. Capparis deciduas	Ker	T	Common
18. Celosia argentea	Imarti	AH	Nevara
19. Cenchrus biflorus	Bhurat	AG	Commo
20. Cenchrus ciliaris	Dhaman	PG	Kolia
21. Cenchrus pruriens Labio	Bhurat	AG	Ladnun
22. Cenchrus setigerus	Dhamanio	AG	Merta
23. Citrullus lanatus	Matira	AH	Common
24. Citrullus colocynthis	Tumba	PH	Degana
25. Cleome Viscosa	Bagara	S	Common
26. Clerodendrum phlomidis	Arna	S	Common
27. Coccinia grandis	Shivlingi (Golan)	T	Badao

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28. <i>Cocculus pendulus</i>	Pilwan	S	Nagaur
29. <i>Commiphora wightii</i>	Gugal	T	Bidasar
30. <i>Convolvulus microphyllus</i>	Sinter	T	Common
31. <i>Corchorus depressus</i>	Chom-gas	S	Kolia
32. <i>Cordia gharaf</i>	Goondi	T	Parbatsar
33. <i>Cressa cretica</i>	Rudenti	AG	Nawa
34. <i>Crotalaria burhia</i>	Sunniya	AG	Common
35. <i>Cucumis callosus</i>	Kaehri	PG	Kuchaman
36. <i>Cyamopsis tetragonoloba</i>	Guar	AG	Common
37. <i>Cymbopogon jawarncusa</i>	Burada	AH	Badao
38. <i>Cynodon dactylon</i>	Dub	T	Common
39. <i>Cyperus arenarius</i>	Motha	AH	Parbatsar
40. <i>Cyperus bulbosus</i>	Mogara	AG	Merta
41. <i>Cyperus rotundus (tuberosus)</i>	Kal-Ghas	S	Common
42. <i>Dactyloctenium aegyptium</i>	Ghantiya	S	Mokhab
43. <i>Desmostachya bipinnata</i>	Dab	T	Mokhab
44. <i>Dichanthium annulatum</i>	Khad Ghas	AH	Common
45. <i>Digera muricata</i>	Lelru	AG	Kuchaman
46. <i>Ephedra foliata</i>	Sua phagoro	PG	Parbatsar
47. <i>Eragrostis tremula</i>	Chiria Ket	AG	Common
48. <i>Euphorbia caducifolia</i>	Thor	AG	Nawa
49. <i>Euphorbia granulata</i>	Dudhili	AH	Nawa
50. <i>Fagonia schweinfurthii</i>	Dhamasa	PH	Peeh
51. <i>Fasretia hamiltonii</i>	Kag-Pilang	S	Degana
52. <i>Gisckia pharnacioides</i>	Sareli	S	Kuchaman
53. <i>Glossonema varians</i>	Dodh	PS	Common
54. <i>Grewia tenax</i>	Gangani	S	Merta
55. <i>Heliotropium marifolium</i>	Rawa	S	Salasar
56. <i>Heliotropium rariflorum</i>	Karsunniya	PH	Merta

57. <i>Heliotropium subulatum</i>	Kala-Bui	PH	Badao
58. <i>Indigofera cordifolia</i>	Bhekar	T	Nevera
59. <i>Indigofera hochstetteri</i>	Adio-Bekario	AG	Common
60. <i>Indigofera linifolia</i>	Lutya-Bhekar	S	Nawa
61. <i>Indigofera oblongifolia</i>	Jhil	PH	Ladnun
62. <i>Indigofera sessiliflora</i>	Phaliwala Bekar	C	Nawa
63. <i>Iomoca darmaea</i>	Kuti	PG	Merta
64. <i>Justicia implex</i>	Makhnia	PG	Nagaur
65. <i>Lasiurus sindicus</i>	Sevan	PH	Common
66. <i>Leptadenia pyrotechnica</i>	Khemp	PH	Bidasar
67. <i>Lycium barbarum</i>	Morali	AG	Badao
68. <i>Maytenus emarginata</i>	Kankero	PG	Merta
69. <i>Mimosa hamata</i>	Jhinjani	PG	Nagaur
70. <i>Mollugo cerviana</i>	Adeka Ket	PG	Common
71. <i>Panicum turgidum</i>	Murat	AH	Badao
72. <i>Phyllanthus maderaspatensis</i>	Khejaria-Khad	S	Parbatsar
73. <i>Protulaca oleracea</i>	Mamamoli	AG	Kuchaman
74. <i>Prosopis cineraria</i>	Khajari	S	Common
75. <i>Prosopis juliflora</i>	Angrezi Babul	AH	Merta
76. <i>Pulicaria angustifolia</i>	Sonila	S	Common
77. <i>Rivea hypocrateriformis</i>	Rata bell	S	Nagaur
78. <i>Rhynchosia minima</i>	Chiri-Motio	AG	Ladnun
79. <i>Salvadora obovata</i>	Mitha Jal	T	Degana
80. <i>Salvadora persica</i>	Khari Jal	T	Kuchaman
81. <i>Seetzenia lanata</i>	Dakdi	AH	Merta
82. <i>Sesamum indicum</i>	Til	C	Common
83. <i>Tamarindus indica</i>	Imli	T	Ladnun
84. <i>Tecomella undulata</i>	Rohida	T	Kuchaman
85. <i>Tephrosia purpurea</i>	Bioni	PH	Common
86. <i>Tephrosia strigosa</i>	Jhino-Biyono	AH	Parbatsar

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87. <i>Trianthema portulacastrum</i>	Sata	AH	Common
88. <i>Trianthema triquetra</i>	Lakryo	AH	Common
89. <i>Tribulus terrestris</i>	Kanti	AH	Badao
90. <i>Urochloa panicoides</i>	Kuri-Ghas	AG	Ladnun
91. <i>Zaleya redimita</i>	Sunavri	AH	Common
92. <i>Ziziphus jujuba</i>	Vad-Ber	AH	Merta
93. <i>Ziziphus nummularia</i>	Bordia	T	Common

Table 4 : Selected Natural Vegetation of Nagaur District

Scrub	Anogeissus pendula	Main flora
Woodland and Thorny scrub	Acacia catechu Acacia sengal	
	Prosopis cineraria Capparis deciduas Acacia nilotica Zizyphus nummularia	Associated shrub
	Balanites aegyptica Salvadora persica Salvadora oleoides Acacia nilotica Ephedra foliata	Other flora
Arid Sandy Vegetation	Calligonum procera (on dune) Haloxylon salicornicum (Interdune)	

Table 5 : Important Economic plants of Nagaur District

Product	Plant Species
Fibre, Mats, Baskets	Acacia jacquemontii (Bacoli) Leptadenia pyrotechnica (Khimp) Saccharum bengalensis
Gum	Acacia Senegal (Kumta) Acacia nilotica (Deshi Babul)
Dyes	Betea monosperma (Dhak) Lawsonia alba (Mahendi)
Non-edible oil	Salvadora oleoides (Jal) Citrullous colocynthis (Tumba)
Medicinal	Nagauri Methi Plantago ovata (Isubgol) Commiphora wightii (Gugal) Aswagandha Gokhru (small & large) Amla Kaith Bhrangraj Ker

Fauna

Wild Animals

There is no big game in the district. Chinkaras and black bucks which are seen in this area, are protected species under the Rajasthan Wild Animals and Birds Protection Act (1951). Among the small game only titars (partridges) are found. Other fauna of the district consists of deer, hare, jackal, pig and wild cat, Nagaur Ox, Cow, Marwari Horse and Sheep goat.

Table : 6 Animal Profile

Protoza	30 species, 26 genera 34 species, 25 genera
Sponges	5 species, 4 genera
Leeches	6 species, 5 genera
Mollusca	28 species, 21 genera
Crustacea	45 species, 18 genera
Termites	19 species, 12 genera
Aquatic beetles	22 species, 13 genera

Table 7 : common taxa : lizards, birds and Mammals found in the study area

Zoological Name

Lizards

1. *Stenodactylus orientalis*
2. *Cyrtodactylus scaber*
3. Spotted Indian House gecko, *Hemidactylus brooki*
4. *H. triendrus*
5. Bark gecko, *Hemidactylus leschenaulti*
6. Yellow Bellied house gecko, *Hemidactylus flaviviridis*
7. *Calotes versicolor*
8. Brilliant Agama, *Agama agilis* and *Agama minor*
9. *Phrynocephalus laung walensis*
10. Indian spiny-tailed lizard, *Uromastix hardwicki*
11. Indian Sand Skink, *Ophiomorus tridactylus*
12. Indian fringe-toed sand lizard, *Acanthodactylus cantoris cantoris*
13. Cobra Snake-eyed lizard, *Ophisops microlepis*
14. Golden Striped lizard, *Ophisops Jerdoni*
15. Monitor lizard, *Varanus bengalensis*

Snakes

1. Blind Snake, *Ramphotyphlops bramini*
2. Beaked Thread Snake, *Leptotyphlops macrorhynchus*
3. Indian Sand Boa, *Eryx johni johni*
4. Dhaman, *Ptyas mucosus*
5. Glossy-bellied racev, *Argyrogena Ventromaculatus*
6. Rajat bansi, *Sphalerosphis diadema diadema*
7. Indian Krait, *Bungarus Cacerculus*
8. Cobra, *Naja naja naja*
9. Russell's viper, *Vipera russelli russelli*
10. Viper, *Echis carinatus*

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Birds

1. Cattle Egret, *Bubulus ibis*
2. Little Egret, *Egretta gazetta*
3. White-eyed Pochard, *Aythya nyroca*
4. Tufted Duck, *Aythya fuligula*
5. Demoiselle Crane, *Anthropoides virgo*
6. Common Crane, *Grus grus*
7. Black-shouldered Kite, *Elanus caeruleus*
8. Black Kite, *Molvus migrans* govinda
9. Kind Vulture, *Sarcogyps calvus*
10. Cinereous Vulture, *Aegypius monachus*
11. Indian Longbilled Vulture, *Gyps indicus*
12. White backed Vulture, *Gyps bengalensis*
13. Egyptian Vulture, *Neophron percnopterus*
14. Pale Harrier, *Circus macrourus*
15. Mohtagu's Harrier, *Circus pygargus*
16. Marsh Harrier, *Circus acrogenus*
17. Short-toed Eagle, *Circus gallicus*
18. Longlegged Buzzard, *Buteo rufinus*
19. Desert Buzzard Buteo, *Buteo buteo vulpinus*
20. Tawny Eagle, *Aquila rapax vindhiana*
21. Steppe Eagle, *Aquila rapax nipalensis*
22. Lesser Spotted Eagle, *Aquila pomarina*
23. White-eyed Buzzard-eagle, *Aquila pomarina*
24. Laggar Falcon, *Falco biarmicus* jugger
25. Redheaded Merlin, *Falco chicquera*
26. Kestrel, *Falco tinnunculus*
27. Grey Partridge, *Francolinus pondicerianus*
28. Grey Quail, *Coturnix coturnix*
29. Rain Quail, *Coturnix coromandelica*
30. Great Indian Bustard, *Choriotis nigricipes*
31. Houbara, *Chalmydotis undulata*
32. Redwattled Lapwing, *Vanellus indicus*
33. Creamcoloured Courser, *Cursorius cursor*
34. Indian Courser, *Cursorius coromandelicus*
35. Collared Pratincole, *Glarula pratincola*
36. Stone Curlew, *Burhinus oedipnemus*
37. Temminck's Stint, *Calidris temminckii*
38. Little Ringed Plover, *Charadrius dubius*
39. Kentish Plover, *Charadrius alexandrinus*
40. Lesser Sand Plover, *Charadrius mongolus*
41. Indian Sandgrouse, *Pterocles exustus*
42. Spotted Sandgrouse, *Pterocles senegallus*
43. Imperial Sandgrouse, *Pterocles orientalis*
44. Blue Rock Pigeon, *Columba livia*
45. Indian Ring Dove, *Streptopelia decaocto*
46. Little Brown Dove, *Streptopelia senegalensis*
47. Pled Crested Cuckoo, *Clamator jacobinus*
48. Shorteared Owl, *Asio flammeus*
49. Spotted Owllet, *Athene brama*
50. Green Bee Eater, *Merops orientalis*
51. Blue-Cheeked Bec-eater, *Merops supercoliosus*
52. European Roller, *Coracias garrulous*
53. Indian Roller, *Coracias benghalensis*
54. Hoopoe, *Upupa epops*
55. Wryneck, *Jynx torquilla*
56. Yellow fronted Pied Woodpecker, *Picoides maharattensis*
57. Redwinged Bush Lark, *Mirafra erythroptera*
58. Ashycrowned Finch Lark, *Eremopterix grisea*
59. Blackcrowned Finch Lark, *Eremopterix nigriceps*
60. Rufoustailed Finch Lark, *Ammomanes phoenicurus*

61. Hoopoe Lark, *Alaemon alaudipes*
62. Short-toed Lark, *Calandrella brachydactyla* (Leisler)
63. Eastern Calandra Lark, *Melanocorypha bimaculata*
64. Crested Lark, *Galerida cristata*
65. Swallow, *Hirundo rustica*
66. Whitecheeked Bulbul, *Pycnonotus leucogenys leucotis*
67. Redvented Bulbul, *Pycnonotus cafer*
68. King Crow, *Dicrurus leucophaeus*
69. House Crow, *Corvus splendens*
70. Raven, *Corvus corax*
71. Common Babbler, *Turdoides caudatus*
72. Large Grey Babbler, *Turdoides malcolmi*
73. Bluethroat, *Erithacus svecicus*
74. Rufous Chat, *Erythrophysia galactotes*
75. Black Redstart, *Phoenicurus ochruros*
76. Stoliczka's Bush Chat, *Saxicola macrorhyncha*
77. Collared Bush-Chat, *Saxicola torquata*
78. Pied Bush Chat, *Saxicola caprata*
79. Isabelline Chat, *Oenanthe isabellina*
80. Desert Wheatear, *Oenanthe deserti*
81. Pied Chat, *Oenanthe picata*
82. Red-tailed Wheatear, *Oenanthe xanthopyrma*
83. Plain Wren-warbler, *Prinia gracilis*
84. Steaked Wren-warbler, *Prinia gracilis*
85. Orphean Warbler, *Sylvia hortensis jerdoni*
86. Desert Lesser Whitethroat, *Sylvia curruca minula*
87. Desert Warbler, *Sylvia nana*
88. Streaked Fantail Warbler, *Cisticola juncidis*
89. Booted Warbler, *Hippolais caligata*
90. Chiffchaff, *Phylloscopus collybita tristis*
91. Grey Shrike, *Lanius excubitor*
92. Baybacked Shrike, *Lanius vittatus*
93. Pale Brown Shrike, *Lanius collurio* or Isabelline Shrike *Lanius isabellinus*
94. Tawny Pipit, *Anthus campestris*
95. Brown Rock Pipit, *Anthus similis*
96. Yellow Wagtail, *Motacilla flava*
97. Rosy Pastor, *Sturnus roseus*
98. Starling, *Sturnus vulgaris*
99. Bank Myna, *Acridotheres ginginianus*
100. Common Myna, *Acridotheres tristis*
101. Purple Sunbird, *Nectarinia asiatica*
102. Whitethroated Munia, *Lonchura malabarica*
103. Green Munia, *Amandava formosa*
104. House Sparrow, *Passer domesticus*
105. Spanish Sparrow, *Passer hispaniolensis*
106. Yellowthroated Sparrow, *Petronia xanthocollis*

Mammals

1. Hemiechinus auritus callaris
2. Paracchinus micropus micropus
3. Suncus murinus sindesis
4. Suncus stoliczkanus
5. Pteropus giganteus giganteus
6. Cynopterus Sphinx Sphinx
7. Rhinopoma microphyllum kinneari
8. Rhinopoma hardwickei hardwickei
9. Taphozous perforatus perforatus
10. Taphozous melanopogon melanopogon
11. Taphozous nudiventris kachhensis

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12. *Megaderma lyra lyra*
13. *Rhinolophus lepidus lepidus*
14. *Hippisideros fulvous pallidus*
15. *Tadarida aegyptica thomasi*
16. *Pipistrellus mimus*
17. *P. ceylonicus indicus*
18. *Scotozous dormeri*
19. *Manis crassicaudata*
20. *Canis aurcus aurcus*
21. *Canis lupus pallipes*
22. *Vulpes Vulpes pussilla*
23. *Lutrogale perspicillata*
24. *Viverricula indica deserti*
25. *Herpestes auropunctatus* = *H. javnicus*
26. *H. edwardsi* (nyula)
27. *H. smithi*
28. *Hyaena hyaena hyaena*
29. *Felis silvestris ornate*
30. *Felis caracal*
31. *Sus scrofa cristatus*
32. *Boselaphus tragocamelus*
33. *Antilope cervicapra raiputani*
34. *Gazella bennetti*
35. *Lepus nigricollis*
36. *Hystrix indica indica*
37. *Gerbillus nanus*
38. *G. gleadowi*
39. *Tatera indica indica*
40. *Meriones hurrianus*
41. *Mus musculus*
42. *Mus booduga*
43. *Mus saxicola*
44. *M. Platythrix*
45. *Rattus rattus*
46. *Millardia meltada pallidior*
47. *Millardia gleadowi*
48. *Cremnomys cutchicus*
49. *Golunda ellioti gujerati*
50. *Vandeleuria oleracca*
51. *Bandicota bengalensis*
52. *Nesokia indica*
53. *Funambulus pennanti*

Phytodiversity shaping pature, fallow and scrub forests in Nagaur

Three important aspects related to biodiversity and regional ecology were studied in the study villages. First, the community dynamics of plant species, interrelationship between plant species and the relationship between trees and under strong. Second, the ecological dynamics of human planting and fallow patterns which effect large areas of the district under long fallow cultivation. Third, the graphical braving patterns of dominant domesticated fauna which sculpt the village ecology in a definitive way.

Over 93 species which includes common and uncommon ones were encountered. The common species are found in nearly all the survey villages and most play an important role in the human ecology of the region. The most common of these are divided into 4 groups : 1) trees and shrubs, 2) Annual herbs and grasses, 3) Perennial herbs and grasses, 4) domesticates.

The common names given here are the ones used dominantly in the study villages. The brief description discusses the plants adaptations and significance in human ecology. The information is derived from field observation, conservation with locale people.

Conclusion

Biodiversity is being destroyed in the present time by human activities at unprecedented rates. The adverse effects of human impact on biodiversity are increasing dramatically and threatening the very foundation of sustainable development. Loss of biological resources and their diversity threatens our sustained food supplies, resources of wood medicines and energy opportunities for recreation and tourism and interfaces with essential ecological function. The semi area region in Rajasthan is very important from the point of view of its biodiversity.

The increasing agriculture and are creasing follow have brought down biodiversity quantum in Nagaur leading to dissemination of taxa and whipping out of several useful native species which provide survival support of the people of Nagaur.

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Global climate change: an international perspective

Abstract

There are differences in the perception and evaluation of climate change and the acceptance of protection measures in different countries. These differences are due to their socio-economic and other conditions. Such differences are important in order to understand the difficulties in the international negotiation processes. From this study, it also became apparent that how climate change could influence and solely responsible for the future extinction of different biological species. Warning of nature such as Global warming, Green house effect, Climate change, Acid rain, Ozone depletion, deforestation, etc. are dealing with different nations but due to so many factors very little output are coming into limelight. Thus, images of nature might be a general cultural background variable for many related problems. Starting from 1985 to 1992 a number of international conferences are being organized globally but the outputs are not satisfied from the available data. Developed countries are using genetic engineering method for heavy food grain production which is not directly related with climate change but poor countries are using traditional methods of using fertilizers, insecticides, pesticides and CFCs which is more vulnerable for climate change.

Keyword: Global warming, Climate change, Green house effect

Introduction

The recent interest in global warming and sustainable development of the world's resources for "Our common future" has filled the airwaves throughout. Humanity is talking about these issues everywhere. Everybody starting from ecologists to politicians are discussing on the matter of global climate change. A large number of international conferences are arranging every week somewhere in the world. The most important global environmental topics are human population growth, bio-diversity conservation, climate change, deforestation, waste management, land degradation, genetic engineering, atomic waste management, etc. The important point is that man is as closely related to nature as he is a part of it. So he is affected and in turn effects the other constituents which are as much a part of nature as man himself.

Climate has from the very beginning regulated man in practically every aspect of life all round the world. Initially impact on climate began by burning and felling forest and tilling the earth. Until the industrial revolution man had little effect on the climate except on a very local scale. Extensive climate change has been taking place from the middle of the present century. Now, the fact is that environmental challenges are said to be a concurrent international dispute!

Conventions:

Several conferences in the recent years have taken place in the international level. Here a brief reference is given for better understanding.

1. For protection of global atmosphere at Vienna (March 22, 1985).
2. Role of green house gases Villach (October 9-15, 1985 & Nov 9-13, 1987).
3. Depletion of Ozone layer at Montreal (September 16, 1987)
4. Changing atmosphere at Toronto (June 27-30, 1988).
5. Protection of global climate at UNO (December 1989).
6. Saving the ozone layer at London (March 5-7, 1989)
7. For protection of global atmosphere at Helsinki (March 11, 1989)
8. Meeting on montreal protocol at Hague (May 1-5, 1989)
9. Summit of industrial countries at Paris (July 14, 1989)
10. Global warming at Noordwijk (November 6-7, 1989)
11. Global change at Washington (April 16-18, 1990)
12. Common future at Norway (May 14-16, 1990)

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13. London summit at London (June 1990)
14. Agreement on Antarctica at Madrid (October 5, 1991)
15. Earth summit at Rio de Janeiro (June 3-14, 1992)

Scorecard of the historic meet:

During the Earth Summit, success in a limited form was seen in the different treaties signed by the attending nations. Two key treaties were signed by over 150 countries—the treaty on biodiversity and climate change. Nawaaz Sharif told in G-77 nations conference that the world will never be the same again after the conference. But later on there were serious examples of non-cooperation and lack of unanimity. The summit did not take up many relevant issues including toxic wastes, nuclear energy, over population, etc. There was another major stumbling block, the question of funding. There was also a lack of consensus, as to when the funding will be organized.

- a. The concentration of carbon-dioxide into the atmosphere has increased by 25 per cent since the industrial revolution.
- b. The concentration of Methane has more than doubled during the last three centuries. It is increasing at a rate of one per cent per year and is responsible for about 20 per cent of the current increases in the green house effect.
- c. The concentration of nitrous oxide has increased by 5-10 per cent since pre-industrial times.
- d. CFCs were introduced into the atmosphere for the first time during the century; the most common species are CFC-11 and CFC-12.
- e. The chemistry of the atmosphere is changing due to emission of carbon monoxide, nitrogen dioxides, and volatile organic compounds.

Activities of International Organisations:

The need for extensive research is understood by all the scientific community for the method of curbing the accelerated climate change. Many government and non-governmental organizations have been set up and have made efforts in this regard. The UNEP, UNDP, EEC, ESF, FAO, WMO, IOC, SCOR, WWW, WCP, WCIP, PAGES, IGOSS, HDGG, GEMS, GCTE, EPOCH, etc. are some of the organizations doing activities on climate change and fight against disaster for saving global environment.

Issues involved:

The Earth's atmosphere is being changed at an unprecedented rate by pollutants resulting from human activities. These changes are already having harmful consequences over many parts of the globe. The composition of the earth's atmosphere is changing. Detailed background atmospheric concentration measurement combined with analyses of ancient air trapped in Antarctica and Greenland ice, now give a compelling picture, and also of major changes that have occurred in pre-industrial times.

Magnitude of the change:

The first analysis of the effect of increasing carbon-dioxide concentration on global warming was conducted by the Swedish Chemist, Svante Arrhenius in 1896. He was identified the harmful

effect of carbon-dioxide. He estimated that if the atmospheric concentration of carbon-dioxide doubled, the surface of the planet would warm by about five degree celcius. After Arrhenius many studies were done in order to understand the reasons for the changing global climate and its future repercussions. Several organizations like NAS(1979), IASA(1981,1983), etc. also done tremendous work on global climate change and its consequences.

The green house effect:

The green house effect is a natural phenomenon that plays a central role in determining the earth's climate. The increase of the different green house gases have been documented by the United State Environmental Protection Agency, Office of Policy, Planning and Evaluation in 1989.

Ozone depletion:

The detection of the ozone hole in the 1980s is considered one of the most important scientific discoveries of the past fifty years. Since then, it has been recognized as having a significant impact on the global atmospheric system, and in particular on Antarctic climate. It has recently been discovered that the Antarctic Polar Vortex, which forms during the polar winter as a result of ozone depletion, has played a major role in maintaining the stability of the East Antarctic Ice sheet over the last 50 years. Work is currently being undertaken to investigate the likely evolution of the Antarctic ozone hole in the future, in particular how a reduction in size might impact on Antarctic climate. It is possible that as the Antarctic Polar Vortex weakens the continent will no longer be shielded from the warming that has been occurring over the rest of the globe. As a result of this it is predicted that stratospheric temperatures could rise by up to 9° Celsius and that sea ice could decline by up to a third, if the size of the ozone hole is reduced to pre-1980 levels, as it is predicted to do by the end of the twenty-first century.

Acid rain:

The phenomenon of acid rain was identified in Manchester in 1852 and described thoroughly in 1872; modern scientific research has been going on only since the mid 1950s. Acid precipitation is a mixture of sulphuric acid, nitric acid and hydrochloric acid in rain water and snow. It is usually defined as having a pH of less than 5.6. The primary reason for concern is that acid deposition acidifies streams and taken on coarse sandy soils low in lime. Acid deposition can also mobilize heavy metals from pipes into supplies of potable water. It also penetrates deep into lungs and can cause lung diseases and increase mortality rates.

Deforestation:

Forests play a critical role in the terrestrial carbon cycle. Each year at least 11.3 million hectares of forest are cleared in the tropics. The causes of deforestation are well known. They include population pressure for agricultural land, the demand for industrial timber production and export, inappropriate government policies regarding land tenure, economic incentives, and other population issues. Population growth appears to be the critical factor affecting

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deforestation. The majority of the population practices agriculture which directly and indirectly related to deforestation.

Global warming and Agriculture:

Agriculture contributes to the emission of green house gases through three primary means- use of fertilizers, pesticides and enteric fermentation in domestic animals. It has been found out the emission from all three categories of agricultural practices are expected to increase over 1985 levels: Global methane emissions from rice and enteric fermentation increase about 35 per cent and 65 per cent respectively by 2020-2025, and nitrous oxide emission from fertilizer use are projected to increase by 133 per cent by 2025. By 2100, emissions from rice, enteric fermentation, and nitrogenous fertilizer increases by approximately 40 per cent, 125 per cent and 175 per cent respectively.

The global climate change and biological diversity:

Previous natural climate changes have cause large scale geographical shifts, changes in species composition and extinction among biological communities. But due to greenhouse effect many more biological species would be threatened. For example, it is known that one race of the dwarf birch (*Betula nana*) can only grow where the temperature never exceeds 22 degree celcius, then a hypotheses could be made , that it would disappear from those areas where global warming causes temperatures to exceed 22 degree celcius.

Observations have led to believe that plants and animals are very sensitive to climate. It is also known from the fossil records that some species have become completely extinct because they were unable to find suitable habitat when climate change made their old homes unlivable.

If rapid action is not taken now by the countries of the world, these problems will become progressively more serious, more difficult to reverse and more costly to address.

Developing countries and climate change:

a) Implications for risk management:

Many observers believe that the implications of global warming are go grave that in some fashion, restrictions on green house gases emissions should be considered along with the other numerous and already burdensome restrictions on development, eg. Lack of capital, skilled personnel, and lack of infrastructure.

The best way to protect the poorest groups is to bring them as soon as possible to a minimum level of development at which they can be expected to adequately handle environmental stress. The extra green house emission necessary to accomplish this task are miniscule in the global green house gas picture and thus will not be critical in determining climate change.

b) Environmental stress across the development spectrum:

Climate change is an economic threat in developed areas but, in addition, a threat to life itself in poor areas. This argues that the best approach for

a developing country planner worried about climate change may be to accelerate those aspects of development that will assist their poorest and most vulnerable populations in attaining the levels of health, flexibility, education, and resilience that will allow them to cope with environmental stress of all sorts, including climate change. This may offer a much more effective least-risk development projects on the basis of green house gas emissions.

Conclusion:

It is evident that global climate change is a complex issue and it effects greatly to the delicate balance of the nature and eco-system as a hole. So, to create a healthy atmosphere every nation should try their best to serve the humanity by making drastic efforts. Humans are changing earth and atmosphere condition just to fulfil their greed. Anthropogenic climate change has scientific basis as datas are coming regularly studying different geographic regions. There is scientific consensus that we are already seeing human impacts on our climate. There are many uncertainties for global and local outcomes of climate change. What we are doing now will affect climate for our Grandchildren.

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A review on impact and management of biomedical waste



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Abstract

Human beings are exposed to a huge variety of health risks over their entire life. This review article is an attempt to prove that environmental and health risks are interlinked. Since an important issue of environmental protection process is the biomedical waste management, this study focuses on responsible planning of collecting, storage, transporting, processing and disposing of hazardous and non hazardous biomedical waste, with a special concern on effective management of biomedical waste incorporating with an appropriate waste reduction and neutralization techniques. An attempt has been made to critically review the current biomedical waste management practices followed by some hospitals in Lucknow city (King George Medical university and Vivekanand polyclinic, Fatima Hospital, Balrampur hospital and Integral hospital etc). Following the rules and legislation, methods for segregation, packaging, labeling and the treatment techniques for reduction in volume, neutralization and final disposal of the biomedical waste are analyzed.

Keyword: Biomedical waste, Health care unit, Hospital waste management system, Treatment, Disposal

Introduction

'Bio-medical waste' means any solid or liquid wastes which are generated during diagnosis, treatment or immunization of human beings or animals. Management of biomedical waste is an integral part of infection control and hygiene maintain in healthcare settings. These settings play a major role in contribution to community-acquired infection, as they produce large amounts of biomedical waste. Biomedical waste can be categorized on the basis of risk of causing injury and infection during handling and disposal process. Wastes targeted for precautions during handling and disposal include sharps (scalpel and needles), pathological wastes (Blood samples, anatomical body parts and microbiology cultures) and infectious wastes (items contaminated with body fluids and discharges such as catheters, I.V. lines and dressing,). Other wastes generated in healthcare settings include mercury containing instruments, polyvinyl chloride (PVC) plastics and radioactive wastes etc. These are among the most environmentally sensitive by-products of any healthcare unit (Askarain *et al.*, 2004; Remy, 2001). According to WHO report 85% of hospital wastes are actually non-hazardous, around 10% are infectious and around 5% are non-infectious but come in the category of hazardous wastes. In the USA, about 15% of healthcare waste is regulated as infectious waste. In India this range could vary from 15% to 35% depending on the total amount of waste produced (Chitnis *et al.*, 2005; Glenn & Garwal, 1999; Anonymous, 1998;). There is a lot of confusion with the problems among the generators, operators, decision-makers and the general community about the safe management of healthcare waste due to lack of awareness.

Magnitude of the problem:

Magnitude of biomedical waste problem at International level:

The quantity of Bio-Medical Waste generated will vary depending on the hospital policies and practices and the type of precautions and care being taken. The data provided from developed countries indicate a range from 1-5 Kg/day/bed but the data available from developing countries indicates that the range is almost similar but the figures are lower i.e. 1-2 Kg/day/patient than the developed countries. According to a WHO report, around 85% of the hospital wastes are actually non hazardous, 10% are infective and hazardous, and the remaining 5% are non-infectious but hazardous (Pharmaceutical radioactive and chemical wastes etc).

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Magnitude of problem at National level:

There are no national level studies on quantity of healthcare waste generated per day per bed but studies have been carried out at local and regional levels in different hospitals. Whatever data are available from those hospitals, it can be presumed that in most healthcare units roughly about 1-2 Kg/day/bed of waste is produced. One study claimed that the estimated quantity of the waste generated in the hospitals varies from 2-3 kg/day/bed with a total Bio-Medical Waste produced 10- 15 tons/day in Lucknow city alone (with 184 hospitals, 13 nursing homes, 31 dispensaries and 88 health centers and polyclinics). (Table-1)

Table: 1

Total Hospitals in Lucknow & Quantity of Medical Waste generation

Number of Hospitals	184
Total number of beds	8534
Amount of waste generation	4872.00Kg/day
Amount of waste generation from government hospitals	1513.5 Kg/day
Amount of waste generation from private hospitals	3358.5 Kg/day

Source: Nagar Nigam Lucknow 2004-2005

Sources of Bio-Medical Waste:

While urban solid waste has posed more interest and attention to town planners, civic administrators and environmental activists but there is yet lack of concern and awareness for some special type of waste (biomedical waste) and its management process which is generated primarily from:

Primary source: Health care establishments which includes hospitals, nursing homes, clinics and general practitioners, dispensaries, blood banks, veterinary hospitals, and research institutes etc.

Other sources: Education institutes and research centers, clinical laboratories, health care establishments for humans and animals (Anonymous, 2000; Chitnis et al., 2000). etc.

Environmental and health risks associated with biomedical waste:

There are many evidences and examples which show that indiscriminate management of Bio- Medical Waste could cause serious hazards to health and environment as follows-

1. There are many harmful biological agents in the Biomedical waste which pollute water and food items and cause alimentary infections like typhoid, cholera, infective hepatitis, dysentery, polio, and hook worm diseases etc.
2. Pests and vermin breed on biomedical wastes. Examples are:
 - a. Rats move on refuse and on biomedical waste.
 - b. Mosquitoes that transmit insect borne diseases like filarial and malarial problems.
 - c. Common house flies sit on waste can transmit infections.
 - d. Many other insects and worms can cause nuisance e.g. cockroaches, ants.

3. Infections caused by polluted soil and dust may be rich in Tetanus spores, Tuber bacilli and other germs.
4. Improper management of Biomedical waste cause Nosocomial infections, AIDS, Hepatitis B&C etc.
5. Sludge water and refuse, all create intolerable odor and nuisance of sight.

Biomedical waste is produced in all conventional medical units where treatment of patients is provided, such as hospitals, clinics, dental offices, dialysis facilities, as well as analytical laboratories, blood banks, university laboratories. Health care waste refers to all materials, biological or non biological, that are discarded in any health care facility and are not intended for any other use. Within any health care facility, the main groups submitted to risks are:

1. Doctors, nurses, healthcare unit workers and maintenance staff;
2. Patients
3. Visitors
4. Workers in ancillary services: laundry, medical supplies store, those charged
5. Service workers dealing with waste treatment and disposal of health unit.

Regarding the health care workers, three infections are most commonly transmitted: hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency (HIV) virus. Among the 35 million health care workers worldwide, the estimations show about 3 million receive hard exposures to blood borne pathogens, 2 million of those to HBV, 0.9 million to HCV, and 170,000 to HIV per year. The workers involved in the collection and treatment of the biomedical waste are also exposed to a certain risk.

As a result, around the world there is seriously taken into consideration the implementation of immunization programs, along with a proper biomedical waste management system. Risks generated by the chemical and pharmaceutical waste are associated to the potential traits of characteristics, such as: genotoxic, corrosive, flammable, explosive, teratogenic, mutagenic. When unwanted or expired chemicals and pharmaceutical products are removed can cause poisoning by absorption through the skin or mucous membranes, by inhalation or by ingestion. Chemicals and pharmaceuticals may also determine lesions of skin, eye, and respiratory mucosa. These Chemical waste removed by drainage system may have toxic effects on ecosystems and water where are discharged.

Risks associated to final elimination of biomedical waste should be also considered within a health care and environmental protection program. Incineration of medical waste which containing plastic with chlorine component determines the dioxin production. Dioxin is a known as carcinogen. Once formed, dioxin is linking to organic particles, which are carried by wind, collected in water and on land surface. The half-life of dioxin is estimated at 25-100 years. Dioxin binds to nuclear DNA. It works as a

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potential cancer promoter, weak immune response and is associated with many negative effects both on human health (Low testosterone levels, endometriosis, and birth defects) and on environment.

The Management of Biomedical Pollutants:

The systematic management of biomedical waste can be described as a multistage process that involves effective legislation, training, minimization, proper handling, segregation, storage, transportation, treatment and safe disposal (WHO, 2007; Rao *et al.*, 2003; Pruss *et al.*, 1999; Socunya, Matias & Lapid, 1997).

Safety measures:

1. All the producers of biomedical waste should adopt universal precautions and appropriate safety measures while doing diagnostic, therapeutic activities and while handling of the bio-medical waste.
2. It should be ensured that drivers, collectors and other handlers are aware of the nature and risk of the waste.
3. Protective gears provided and instructions regarding their use are given by health Care units.

Training:

1. In every hospitals all the medical professionals including doctors, nurses, paramedical and administrative staff must be made aware of Bio-medical Waste (Management and Handling) Rules 1998.
2. Training should be conducted to all categories of staff in appropriate medium or language and in an acceptable manner.

Role of Hospital administration in management of biomedical waste:

Heads of every hospital will have to take authorization for generation of waste from appropriate authorities as notified by the concerned State Government, well in time and to get it renewed as per time schedule laid down in the rules. Each hospital should constitute a hospital waste management committee, chaired by the head of the Institute and having wide representation from all major departments. This committee should be responsible for making Hospital specific action plan for hospital waste management and its supervision, monitoring and implementation. The accidental reports, annual reports should be filled in BMW rules format and submitted to the concerned authorities.

Coordination with other agencies:

1. Co-ordination with Pollution Control Boards: Search for better methods technology, provision of facilities for testing, approval of certain models for hospital use in conformity with standards laid down.
2. Co-ordination with Municipal authority: A very large percentage (approximately 85%) of waste generated in Indian hospitals, belong to general category (non-toxic and non-hazardous). So hospital should have constant interaction with municipal authorities so that this category of waste is regularly taken out from the hospital premises for treatment and landfill.

3. Development of non-PVC plastics as a substitute for plastic which is used in the manufacture of disposable items.

4. To search for cost effective and environmental friendly technology for treatment of bio-medical and hazardous waste.

Systematic approach for hospital waste management:

Based on Bio-medical Waste (Management and Handling) Rules 1998, notified under the Environment Protection Act by the Ministry of Environment and Forest (Government of India).

1. Segregation of waste:

Segregation is necessary for waste management and should be done at the source of generation of Bio-medical waste like all patient care activity areas, operation theatres, diagnostic services areas, and labour rooms etc. The responsibility of segregation should be with the producers of biomedical waste i.e. doctors, nurses, technicians etc.

2. Collection of bio-medical waste

Collection of bio-medical waste should be done as per Bio-medical waste (Management and Handling) Rules (Table-2). At ordinary room temperature the collected waste should not be stored for more than 24 hours.

Table-2
Type of container and colour code for collection of bio-medical waste

Category	Waste class	Type of container	Colour
1.	Human anatomical waste	Plastic bag	Yellow
2.	Animal waste	-do-	-do-
3.	Microbiology and Biotechnology waste	-do-	Yellow/Red
4.	Waste sharp	Plastic bag puncture proof containers	Blue/White Translucent
5.	Discarded medicines and Cytotoxic waste	Plastic bags	Black
6.	Solid (biomedical waste)	-do-	Yellow
7.	Solid (plastic)	Plastic bag puncture proof containers	Blue/White Translucent
8.	Incineration waste	Plastic bag	Black
9.	Chemical waste (solid)	-do-	-do-

Source: Biomedical waste management rule 1998

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3. Transportation

Within hospital, waste path must be designed to avoid the route of waste through patient care areas. Separate time should be marked for transportation of bio-medical waste to reduce chances of its mixing with general waste. Desiccated wheeled containers and trolleys should be used to transport the waste plastic bags to the site of storage for treatment. Trolleys should be thoroughly cleaned and disinfected in the event of any spillage. The wheeled containers should be designed in this way that the waste can be easily loaded. Hazardous biomedical waste needing transport to a long distance should be kept in containers and should have proper labels. The transport is done through desiccated vehicles specially constructed for the purpose having fully enclosed body, lined internally with stainless steel to provide smooth and impervious surface which can be cleaned. The driver's compartment should be separated from the load compartment.

4. Treatment of hospital waste:

The purpose of treatment of waste is:

1. To reduce the volume of the waste
2. To disinfect the waste so that it is no longer the source of infection.

4.1 Treatment of General waste:

The 85% of the waste produced in the hospital belongs to this group. The, safe disposal of this waste is the responsibility of the local authority.

4.2 Treatment of bio-medical waste (15% of hospital waste):

Deep burial: The biomedical waste under category 1 and 2 only can be disposed accorded deep burial and only in cities having less than 5 lakh populations.

Autoclave and microwave treatment: Standards for the autoclaving and microwaving are also mentioned in the Biomedical waste (Management and Handling) Rules 1998. All equipment should meet these specifications. The waste under category 3,4,6,7 can be treated by these techniques.

Shredding: The plastic waste (Syringes, IV bottles and catheters etc.), sharps (blades, needles and glass etc) should be shredded but only after chemical treatment or by autoclaving. Needle destroyers can be used for disposal of needles directly.

Secured landfill:: The incinerator ash, discarded medicines, cytotoxic substances and solid chemical waste should be treated by this option.

Incineration: The incinerator should be installed and made operational as per specification under the BMW rules 1998 and a certificate may be taken from CPCB and State Pollution Control Board and emission levels etc should be defined. In case of small hospitals, facilities can be shared. The waste under category 1,2,3,5,6 can be incinerated. The polythene bags made of chlorinated plastics should not be incinerated.

It may be noted that there are options available for disposal of certain category of waste. The individual hospital can choose the best option depending upon the facilities available and its financial resources. However, it may be noted that

depending upon the option chosen, correct colour of the bag needs to be used.

Conclusion:

Hospital wastes should be classified according to their source, type and risk associated with their handling, storage and final disposal. In effective and proper biomedical waste management segregation of waste at source in a priority along with other methods like reduction, reuse and recycling. Incineration techniques are found to be one of the effective methods for management of hazardous waste. Municipal Corporations, Central and State Governments need to plan and construct centralized facilities for recycle, treatment, and disposal of biomedical waste. The final treatment of the waste should be made carefully, on the basis of various factors, many of which depend on local conditions including the quantity and composition of waste generated, available place and cost. Regularly training programs should be conducted for safe handling and disposal of biomedical waste.

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Criminal Liability and Medical Negligence: An Overview



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Abstract

Medical profession is very respectable profession. A doctor is looked upon by common man as the only hope when a person is hanging between life and death. Nowadays there has been commercialization of medical profession which has adversely affected the relationship between the doctor and the patient. Due to decline in the credibility of medical professional and growing patient consciousness for quality healthcare, there is increase in litigation with respect to medical negligence. Practically wrong occurs due to negligence and wrongs may be civil or criminal. A doctor is not criminally responsible for a patient's death unless his negligence or incompetence passed beyond a mere matter of compensation and showed such a disregard for life and safety state. A medical practitioner should not be held negligent only because the treatment resulted in the patient's death. Most allegations of negligence are ill founded and never come to court. Moreover, the courts should not hesitate to give verdict if there appears to be an act of gross negligence on the part of the medical professionals. An endeavour has been made through this paper to appraise the criminal liability of medical professionals under medical negligence.

Keyword: Consumer Protection, Litigation, Status Quo, Criminal, Negligence, Medical Negligence, Judicial Attitude, Frivolous.

Introduction

Medical profession is a very respectable profession. A doctor is looked upon by the common man as the only hope when a person is hanging between life and death. There can be no second opinion that the preservation of human life is of paramount importance. That is so on account of the fact that once life is lost, the *status quo ante* cannot be restored as resurrection is beyond the capacity of human being¹. The commercialization of the medical profession has adversely affected the fiduciary relationship of the patient and the doctor. Declining credibility of medical professional and growing patient consciousness for quality healthcare has resulted in increase in litigation with respect to medical negligence. With the awareness in the society and the people in general gathered consciousness about their rights, measures for damages in tort, civil suits and criminal proceedings are on the augment².

Medical Negligence

Medical negligence is no different in law from any other type of negligence. Negligence medical or otherwise is a civil wrong known as tort. Very rarely medical negligence may be removed from a civil action between doctor and patient to the criminal courts, where the state prosecutes the doctor for a severe degree of slackness and dangerous behavior, amounting to criminal negligence³.

Halsbury Laws of England speaks out the criterion of medical negligence as the practitioner must bring to his task a reasonable degree of skill and knowledge and must exercise a reasonable degree of care and competence judged in the light of particular circumstances of each case, is what law required. A breach of any of these duties will invite an action for negligence by the patient (Halsbury, vol.26,19⁴).

The term medical negligence is used frequently in the practice of medical jurisprudence. What may be negligence in civil law may not necessarily be negligence in criminal law. Generally speaking it is the amount of damages incurred which is determinative of the extent of liability in tort, but in criminal law, it is the amount and degree of negligence that is determinative of liability. In order to fasten liability in criminal law, the degree of negligence has to be higher than that of negligence enough (to fasten liability for damages in civil law. i.e. gross or of very high degree⁵).

Criminal Liability and Medical Negligence

A medical practitioner professes or promises to use reasonably competence, skill and care in the exercise of his act when he accepts a

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patient. In order to hold a medical practitioner liable for negligence, it is not necessary to prove that he expressly professed or promised to use proper skill and care⁶. A doctor is not criminally responsible for patient's death unless his negligence or incompetence passed beyond a mere matter of compensation and showed such disregard for life and safety so as to amount to a crime against the state⁷. A doctor is indebted to his patients as a duty holder in the following ways:

- Duty of care in deciding whether to undertake the case.
- Duty of care in deciding to which treatment to give.
- Duty of care in the administration of Medicine and treatment.

Violations of any of these duties lead towards medical negligence to the patients⁸.

Relevant Legal Provisions and Judicial Attitude

According to Sec. 304 A of the Indian Penal Code whoever causes the death of any person by a rash and negligent act not amounting to culpable homicide shall be j.. punished by imprisonment for up to two years or a fine or both.

According to Sec. 80 of the India Penal Code, nothing is an offence which is done by accident or misfortune and without any criminal intention or knowledge in the doing of a lawful act in a lawful manner, by lawful means and with proper care and caution. In other words, if a person commits an act by accident or misfortune without criminal intention using lawful means and with proper care and caution his action cannot be labelled as criminal offence. According to Sec. 88 of the Indian Penal Code, act not intended to cause death done by consent in good faith for persons benefit⁹.

The liability of a doctor may be civil or criminal or both. One of the essential elements in criminal law is mensrea-the guilty mind or evil intention. As mensrea is essential, it is difficult to argue that doctor had a guilty mind and was negligent intentionally¹⁰. Criminal negligence refers to gross and culpable neglect or failure to exercise or reasonable and proper care and precaution to avoid injury either to the public or to an individual¹¹. The degree of negligence has been variously described as gross, wicked, criminal c-ulpable. It is for the jury in each case to say whether the degree has been reached¹². In *Juggan Khan* case, Supreme Court pronounced doctor guilty under S. 304A IPC. It further held that it is a rash and negligent act to prescribe poisonous medicines without studying their probable effect¹³.

In *Devaki Amma* case, court took the view that simple lack of care will constitute only civil liability. The negligence or rashness must be of a very high degree amounting to recklessness or utter indifference in consequence and not merely negligence in civil law¹⁴. Where a medical practitioner is utterly ignorant of the science of medicine or practice of surgery, then a favourable view of his conduct in giving any treatment prescribed in that science cannot be taken and his ignorance would make his conduct of giving treatment rash and

negligent¹⁵. However, in *Ram Niwas* case¹⁶, the accused who was not a qualified doctor but used to carry on the profession of doctor, had administered an injection to the deceased and the victims body turned blue and he died. The Allahabad High Court held the accused guilty of causing death of the deceased by rash and negligent act. However the rash act cannot be always equated as negligent act. In a famous case, the words, culpable rashness and culpable negligence, were defined as "culpable rashness is acting with the consciousness that the mischievous and illegal consequences may follow but with the belief that the accused has taken sufficient precautions to prevent the happening of the act and culpable negligence is acting without the consciousness that the illegal or mischievous effect will follow but the circumstances shows that the accused failed to exercise the caution"¹⁷. Now it is quite evident that if a person does any act with utter indifference but consciously he is said to be rash and negligent and shall be liable for negligence. In order to impose criminal liability under Sec. 304 A of the Indian Panel Code, it is necessary that the death should have been the result of rash and negligent act of the accused and the act must be the proximate and efficient cause without the intervention of another's negligence"¹⁸.

Before the imputation of the criminal liability, the first and the foremost step is to fix the responsibility and in crimes the responsibility arise where a person neglect to exercise due care and caution, which can be termed as inadvertent negligence. It is also termed as recklessness therefore if crime is committed negligently, it means the crime being committed recklessly¹⁹.

The criminal liability of the medical profession was given a new dimension by the Supreme Court of India in *Jacob Mathew's* case²⁰, where the Hon'ble Supreme Court has ruled that doctors should not be held criminally responsible unless there is prime facie evidence before the court in the form of a credible opinion from another competent doctor, preferably a government doctor in the same field of medicine supporting the charges of a rash and negligent act. Court has opined that occupational negligence is different from professional negligence. A simple lack of care an error of judgment or an accident is not proof of negligence on the part of medical profession. A failure to use special or extraordinary precautions which might have prevented the particular happening cannot be the standard of judging the alleged negligence. However S.C in *Dr. Suresh Gupta*²¹ case held: To fix criminal liability on a doctor or surgeon, the standard of negligence required to be proved should be so high that it can be described as gross negligence or recklessness and not merely lack of necessary care, attention and skill. Every careless act of medical person cannot be termed criminal. It can be termed criminal only when doctor exhibit gross lack of competence or inaction and wanton indifference to their patient's safety as a result of negligence or gross ignorance²².

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In *Nizam Institute of Medical Sciences V Prasanth S. Dhanaka and others*²³, Supreme Court awarded a massive compensation of Rs. One crore to a software engineer who suffered personal disability due to medical negligence at a government owned hospital in Andhra Pradesh.

In *R.P. Dhanda V. Bhurela*²⁴, a qualified doctor performed an operation according to the recognized Indian method of treatment in good faith with the consent and for the benefit of the patient with due care and caution, the doctor is exempted from criminal liability vide section 88, IPC if the operation is unsuccessful and patient dies. In a case²⁵ from New York, the court outlined three significant tests to measure the degree of negligence to determine as to when a doctors negligent treatment of his or her patient should give rise to criminal liability. These are

- i. The defendant's role in creating the risk.
- ii. The proximity of the ultimate harm in relation to the defendant's act and,
- iii. The extent to which the immediate harm was predictable and apparent.

In one more case *State V Warden*²⁶ the court said:

A doctor may be criminally held liable only when the evidence established beyond a reasonable doubt that the doctor's patient would die, that the doctor should have but failed to perceive it constitutes a gross deviation from the standard of care. Given when high standard required for negligent homicide If doctors act with criminal negligence, they should not escape criminal liability merely because the negligence occurred in a professional setting.

In *R.V. Prentice and R.V. Adomako*, court held where death is caused involuntarily by professional negligence, there is breach of that duty amounting to gross negligence, there it is necessary for criminal conviction that there is a duty, there is breach of that duty amounting to gross negligence causing death. The court said, that a gross negligence may be shown by indifference to an obvious risk or by foresight of a risk and a determination to run the risk with such a degree of negligence that a conviction is justified or by failure to advert to a serious risk going beyond mere inadvertence in respect of an obvious and important matter which demanded the accused persons dutyful attention²⁷. However, the test for determining medical negligence was laid down in *Bolam case*²⁸, it was held that if a situation involves the use of some special skill or competence, then the person must exercise the ordinary skill of an ordinary competent man exercising that particular act, where a person commits a dangerous act with the knowledge that it is so and he commits without knowing that it may cause injury, or without the intention of causing it, it will be designated a rash and negligent act²⁹. However, in *Dalbir Singh V State of Haryana*³⁰, Supreme Court observed that all those who are professional must be kept under constant reminder of their duty to adopt utmost care and also of the consequences be falling them in cases of derelictions and one of the most effective ways of keeping such persons under mental vigil is to maintain deterrent

element in sentencing such persons in the form of penalty, therefore any leniency shown to them in that sphere would tempt to commit frivolous and frolic act. Interestingly, in *D' Souza*³¹ case very strongly defended the position of doctors vis-à-vis the patients court made and interesting observation: The law like medicine is an inexact science. One cannot predict with certainty an outcome of many cases. It depends on the particular facts and circumstances of the case, and also the personal notions of the judge concerned who is hearing the case. However, the broad and general principle relating to medical negligence need to be understood. A perusal of these cases make it amply clear that test for criminal liability under the medical negligence is same throughout the world. However, it should not be felt that the medical professionals have been given a free rein to do as they please. At the same time, its time to treat the doctors at par with other human beings instead of giving them special privilege³².

Conclusion and Suggestion

Doctors are human beings, hence can commit an error while examining patient. Doctors should not be frequently called upon to answer charges having criminal or civil consequences as it would frustrate and render ineffective the functioning of the medical profession as a whole and if the medical profession was, hemmed by threat of action, criminal and civil, the consequences will be a loss to the patients and no doctor would take a risk, a justifiable risk in the circumstances of a given case³³. No case of criminal should be registered without a medical opinion from expert committee of doctors and it should be given within a reasonable time. Hon'ble Supreme Court endorsed the same view, as criminal prosecution of doctors without adequate medical opinion would be great disservice to the community as it would shake the very fabric of doctor patient relationship with respect to confidence and faith, the doctors would be more worried about their own safety instead of giving best treatment to their patients³⁴.

A doctor can be held guilty or liable for criminal liability if there is a very high degree of negligence on his part. Medical practitioners must follow medical ethics and code of conduct. Medical practitioner should not commercialize their profession. A doctor should not abuse his superior position in the circumstances and any abuse should be actionable. Sometimes due to the negligence and callous attitude of doctors timely medical treatment is not available to a person in need of such treatment and as a result precious human life is put in jeopardy³⁵.

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Legalization of Homosexual Marriages in India: Challenges and Possibilities



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Abstract

The institution of marriage in Indian society is a sacred and sacrosanct affair & is generally regarded as extended only to male & female relationships. Although most marriage statutes use gender neutral language, same sex relationship, regardless of their duration is not legally recognized in most countries including India. Nowadays some example of acceptance of homosexual marriages has been witnessed by our society as it is gradually becoming more permissive. Still homosexuality remains a taboo by our closely knitted society which is driven and ruled by its morality, culture and core traditional values.

This research paper is intended to analyze the challenges and possibilities of legalizing homosexual marriage in Indian social context. It also explains the various aspects of homosexuality

Keyword: Homosexuality, Gay Activism, Gay marriages, Legalization in India, Challenges, Possibilities.

Introduction

Homosexuality is a sexual orientation characterized by sexual attraction or romantic love exclusively for people who are identified as being of same sex. It also refers to an individual's sense of personal & social identity based on attractions, behavior expressing them & membership in the community of others who share them. Homosexuality in India is generally considered a taboo subject to Indian civil society, morality, customs & traditions. Public discussion of homosexuality in India has been inhibited by the fact that sexuality in any form is rarely discussed openly. Attitude towards homosexuality is overwhelmingly negative, homosexual activities were hidden & spoken in whispers. In our country, gay men were viewed as effeminate, lesbian were portrayed as mannish & both were seen as obsessed with sex, with little self control on morality. Researchers suggest that the Catholic Church, which has been extremely vociferous in its opposition to homosexuality in general, approved of same sex marriages for over 1500 years. The earliest western document concerning homosexual relationship comes from ancient Greece, where same sex relationships were the societal norm. In pre industrial societies also homosexuality was generally accepted by the lower classes while some members of upper classes considered it immoral. The sexual orientation in pre modern era as depicted in love poetry & paintings even in historic figures such as Alexander the great, Plato, Hadrian, Virgil, Leonardo da Vinci, Michelangelo and Christopher Marlowe included or were centered upon relationship with people of their own gender. Homosexuality has not been explicitly mentioned in the religious texts central to Hinduism, the largest religion in India. Hinduism has taken various positions ranging from positive to neutral or antagonistic. Rig Veda one of the canonical sacred texts of Hinduism says "VIKRUTI EVAM PRAKRITI" (what seems unnatural is natural) which some scholars believe recognizes the cyclical constancy of homosexual/transsexual dimensions of human life, like all forms of universal diversities. Historical literary evidence indicates that homosexuality has been prevalent across the Indian sub continent throughout history & that homosexuals were not considered inferior in any way.

Gay Activism- Journey over the Years

Over the years, gay people formed various organizations to further their efforts for equal and fair treatment. Over time, many of these well-meaning efforts went to extremes, often including violence, vandalism, and clandestine efforts to change public opinion and public policy. We refer to these efforts as *gay activism*. Today, a number of highly organized, well-funded organizations attempt to mold public opinion in favor of homosexuality as a normal, alternative sexuality. In the 1960's, they simply wanted the public to leave them alone. They didn't want to be called names

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and didn't want to be arrested for going to gay bars. When dialog and reason didn't get results, they began to form organizations and develop protest strategies. Following the social protest strategies of the era, they turned social issues into political issues. Although homosexual behavior is as old as history itself, there had not previously been a social identity based entirely on sexual behavior. The gay rights movement took the behavioral definition and expands it to become a definition of a class of people. They began to rewrite history to show that ancient Greece had a gay culture. While it is true the ancient Greeks had a more naturalistic view of life including homosexuality, there was no gay identity. In fact, the Greek language had no word meaning *gay*. The concept of a *homosexual person* was created in the nineteenth century. Although homosexual behavior was certainly practiced before that time, it was seen as "something you *did*, and not who you *were*".

Causes of Homosexuality

Why do attraction is a question in dispute .Homosexuality is learned through a complex combination of shaping factors and personal choices .Many same sex attracted people have a sense of being "different" 'from a very early age and consequently they believe that they were 'born gay'". Others believe that some people are gay because they choose to be a gay. Another factor may be what happened during their life time. They may have been hurt emotionally and it may affect what they feel about themselves. They may have been sexually abused or had a broken relationship with one or both of their parents. Generally, it seems that there are number of factors that are of different degrees of importance in different people's lives. These can include: Factors that you are born with (temperament genes), Person's family situation whether good or bad, the kind of moral training a child receive, the choices that were made in response to feelings and attraction, how clear or confused gender roles are in a particular culture. It has been observed that no two people adopt a homosexual self-concept or lifestyle for exactly the same reasons. One may have had a poor family background; another may have an ideal balance of love and discipline in the home. Parents may influence a choice for homosexuality, but they cannot be held entirely responsible. The homosexual is not merely a victim of circumstances. His own personal choices have a lot to-do with the process of becoming gay. However, the interplay between shaping factors and personal choices is so complex and so different for each individual that only god has the knowledge. Not all homosexual are involved to the same extent. A gay person may be involved anywhere along these categories

FANTASY, BEHAVIOUR, IDENTITY, LIFESTYLE

Homosexuality begins at the behavior or fantasy level. A child may experiment with gay sex at an early age, or he may not have gay relations until later in life. (Experimentation does not mean that the child will become homosexual). Others become aware of homosexual attractions at a certain age. They may never act on their feelings or fantasies.

With some people, homosexual fantasy or behavior can lead to the IDENTITY level. At this point person begin to label himself "gay" or homosexual. The person has begun to base his personality upon homosexuality, even if they perhaps have never engaged in homosexual behavior. Some people stay in this identity and adopt gay's lifestyle. Thus fantasy, behavior, identity and lifestyle pattern are also deciding factors for homosexuals.

In many cultures, homosexuals are frequently subjected to prejudice and discrimination. Similar to other minority groups they can also be subject to stereotyping. Negative stereotypes characterize LGBT people as less romantically stable, more promiscuous and more likely to abuse children, but there is no scientific basis to such assertion. Gay men and lesbians also form stable committed relationships that are equivalent to heterosexual relationships in essential respects. Sexual orientation does not affect the likelihood that people will abuse children. Claims that there is scientific evidence to support and association between being gay and being a pedophile is based on misuse of those terms and misrepresentation of the actual evidence.

Homosexual males are often stereotyped as being limp-wristed ,being interested in woman's fashion design or hairdressing, under the influence of alcohol or drugs, having a circle of friends consisting of heterosexual females or unable to be monogamous.

Lesbians are usually stereotyped as being man haters having an overly tough or unattractive appearance, having health problem such as obesity, interested in life risking occupations such as police force and having a preference for short haircuts, tattoos and male attires.

Bisexual men and women are potrayed as being sexually immoral, manipulative, insincere or undecided. Male bisexual are particularly stereotyped living on the down low and female bisexuals are stereotyped as attention-seeking and having bad experience with men.

Experts view says that, just as many heterosexuals control their desires to engage in premarital or extra martial sex, same can be done by homosexuals by curbing homosexual desires and disciplining themselves to abstain from homosexual contact. This way homosexual behavior and attitude can be positively dealt with.

Homosexuality and Religion

As with social attitudes in general, religious attitudes towards homosexuality vary between and among religions and their adherents. Traditionalist among the major religions generally disapproves of homosexuality. The prominent opponents of social acceptance of homosexuality often cite religious arguments to support their views although; liberal currents also exist within most religions. Modern lesbian and gay scholars of religion sometimes point to a place for homosexuality among historical traditions, and emphasis religious teachings of compassion and love .In Hinduism, Buddhism, Jainism teachings regarding homosexuality are less

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clear. Unlike in western religion homosexuality is rarely discussed. However most contemporary religious authorities in the various dharmic traditions view homosexuality negatively. Same sex sexuality and gender transformations are common among the Hindu pantheon of deities.

INDIAN SOCIETY AND HOMOSEXUALITY

Indian Society is a traditional multicultural diversified integrated society where in Hindus dominate and for Hindus, marriage is an enduring heterosexual Sacrament. Other Indian communities have similar opinion that marriage is heterosexual institution. This is supported by Vishwa Hindu Parishad Party whose president says for Hindus, this behavior is not against nature, it is against culture. Even Shiv Sena members attacked theaters in New Delhi and Mumbai where the film 'Fire' (1998) and 'Girlfriend' (2004) was being screened. The party advocated that the film which features the same sex relationship was an attack on India's centuries old Hindu culture. But at the same time Lesbian groups and women's rights organization organized rival protests to demand the film run.

The strong reaction of society is that many people deny the existence of sexual minorities in India, dismissing same sex behavior as a Western, upper class phenomenon. Many others treat it as a disease to be cured, an abnormality to be set right or a crime to be punished. While there are no organized hate groups in India as in west, the persecution of sexual minorities in India is more. In India; so far no such progressive changes have taken place as regard to social and legal recognition of homosexuals. They still remain victims of violence in different forms supported by the state and society.

In India from a scattered group of few hundreds, homosexuals are at present in some lakhs but only handfuls have come out as strong and growing community, leaving rest in their closet. They are weaving their way from metros into semi urban societies both online and offline. This number is gradually increasing with more and more such people coming out of the closet. While Delhi and Mumbai (with five lakhs gays each) and to lesser extent, Bangalore and Calcutta are the hub of the Indian gay movement, people from smaller towns in Gujarat, Maharashtra and Bihar are also coming out. Homosexual relationships are not unheard of in India, but they generally exist in the country's larger cities where people can be more open about their sexuality. A number of cities and larger towns had a number of resources for gays, lesbians and transgender communities that include help lines, publication/newsletter, health resources social spaces and drop in centers. Now a days the homosexual community of metros also host the gay pride march (queer parade) every year in major metro cities. All the above instances show that the homosexual community in India is visible and is gradually becoming vocal in their demands.

But in the last five years, the Indian gay community has moved into and flourished on what has probably been the most accepting space they

could have ever hoped to find THE INTERNET. Thus they are forming NGOs, calling help lines and meeting regularly to evolve strategies for their cause. Above all, they are partying –not just in remote farm house in secret but also in starred hotels and at gatherings where gay fashion designers and diplomats are counted among the star guests.

Even then the ground reality is that sexual minorities in India are largely stigmatized and disempowered socially, culturally, politically and often legally and economically too, says Ashok Row Kavi (editor of "Bombay Dost", the quarterly gay magazine). Due to which isolation become intrinsic to the existence of a large number of lesbian and gay adolescents and this feeling of isolation is often accompanied by self loathing and confusions as to their future. This is so because Section 377 of Indian penal code, 1860 which is used to criminalize and prosecute homosexuals in actual legitimize the abuse of homosexuals.

Section 377 of the Indian penal code (1860) relates to unnatural offences and includes homosexuality within its domain. In India this law relating to homosexuality was adopted from the British penal code dating to 19th century. Section 377 states:

"Whoever voluntarily has carnal intercourse against the order of nature with any man, woman & animal shall be punished with imprisonment for life or with imprisonment of either description for a term which may be extended to ten years and shall also be liable to fine."

Similarly under section 292 of IPC which refers to obscenity, there lies ample scope to include homosexuality under this section. Also section 294 of IPC, which penalize any kind of "obscene behavior in public", is also used against gay men. It is important to note here that in England the act of homosexuality between two consenting partners has been abolished by the Sexual Offenders Act 1967 (that is in the country of origin of this law) where as in India, the consent is quite immaterial for constituting an offence as defined under this law.

"In fact Gays are beaten up and even raped under the cloak of this law", says gay rights activist Rakesh Shaleen of Naaz Foundation India trust (NGO). Rakesh also refers to fact that gays are forced into medication to cure them. This mistreatment included shock and aversion therapy.

Thus Gay right activists and homosexuals has now started demanding social and legal recognition of homosexuality because they have a firm opinion that legal protection is probably the only way by which homosexual community can be guaranteed social rights, rights against exploitation and more importantly, health rights

Homosexual Marriages: The Global Scenario

At different parts of the globe different civil authorities adopt different positions. At times they simply tolerate the phenomenon, at other times they advocate legal recognition of such unions under the pretext of avoiding, with regard to certain rights, discrimination against persons who live with someone of same sex. In other cases, they favor giving

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homosexual unions legal equivalence to marriage properly so called, along with the legal possibility of adopting children .Thus an increasing number of jurisdictions have decriminalized homosexual acts. However, many jurisdictions have retained their statutory prohibition on homosexual acts despite much criticism from groups and individuals who believe that the laws are obsolete and should be removed.

Any how, the last century witnessed major changes in the conception of homosexuality .Since 1974 homosexuality ceased to be considered an abnormal behavior and was removed from the classification of mental disorder .Since then homosexuality has been decriminalized in different countries .There are various states across the globe that enacted anti-discriminatory or equal opportunity laws and policies to protect the right of gays & lesbian. In late 1990s and early 2000s, progress toward the ban on same sex marriages created a topic of debate all over the world. Currently ,same – sex marriages are recognized nationwide in six countries : Netherland (2001), Belgium(2003), Canada (2005), Spain (2005) and South Africa (2006). The state of Massachusetts in the United States also recognizes same sex unions(although these marriages have no legal recognition at the federal level in the US).With this an estimated 155million people worldwide, or approximately 2.5% of the world's total population, will live in places where same sex marriages exists.

Civil unions and other forms of legal recognition for same-sex couples, which offer most if not all the rights accorded in a civil marriage ,exist in Croatia ,Denmark ,France ,Germany, Iceland ,Israel ,Newzealand ,Norway ,Portugal ,Slovenia ,Sweden, Switzerland and the United Kingdom. Regions of Australia and additional territories in the United States offer some rights and responsibilities as civil unions.

Even event such as Mardigras in Sydney, Midsumma in Melbourne, Gay and Lesbian Pride in Johannesburg, Women's Celebration week in Greece, and the Gay and Lesbian film festival in Lisbon express the essence of being homosexual. World over many countries has given social and legal recognition to homosexual marriages. Whereas more than 70 countries, including India, consider homosexuality a crime ,and 30 of these deny homosexuals even basic human rights and the homosexual acts remain punishable by death in Afghanistan ,Mauritius, Iran ,Nigeria ,Pakistan, Saudi Arabia ,Sudan, United Arab Emirates and Yemen and by life in prison in Bangladesh, Bhutan ,Guyana ,India ,Maldives ,Nepal ,Singapore and Uganda.

Thus the legal position of homosexual differs from country to country .In England for example, homosexual relationships involving anal intercourse is not illegal between consenting adults as long as they are 21 or over and conduct themselves in private .In India such activities are still illegal .The age of consent varies according to the country being youngest in Hungary and eldest in Sweden.

An overwhelming amount of research has been done showing that homosexuality has a biological causation; not a genetic one. Secondary sexual characteristics resemble the opposite sex. Homosexual males often have softer voices. Lesbians may have strong cheekbones and a more masculine body shape. It's all affected by those hormone switches.

Putting oneself in someone else's shoes and truly doing so can sometimes be very difficult. Doing so might make us feel uncomfortable, or like it is a waste of time; or sometimes it truly impossible to really know what someone else is experiencing. If we are able to drop our preconceived notions, and simply look at something from someone else's perspective, even if it is just partially experiencing it, we can evolve and progress in communication and interaction. Using deductive and inductive logic, reasoning and examples, coupled with own counter to an anti-thesis, one can hope to understand the tyranny, pain, and anguish of same sex couples, waiting to avail the status of civil marriage.

Civil *marriage* is a legal status that automatically confers over a thousand federal rights and benefits, which include an automatic right to visit a spouse in a hospital or to make medical decisions for an incapacitated spouse. A civil *union* is a separate legal status that provides all the rights and responsibilities of marriage under a different name. Differences between a civil union and a civil marriage include the fact that parties to a civil union are denied all of the 1,138 federally conferred rights, benefits, and responsibilities of marriage. Also, it remains uncertain whether other states will honor civil unions (especially with the passing of the Defense of Marriage Act). The Defense of Marriage Act (DOMA) denies federal recognition of gay marriages and gives each state the right to refuse recognition of same-sex marriage licenses issued by other states. Lastly, a *domestic partnership* refers to a committed relationship between two people who are not married. The rights and responsibilities of a domestic partnership vary, ranging from providing domestic partners with nearly all of the rights and responsibilities of married couples under state law to jurisdictions that have much more limited rights. Also, none of these domestic partnership laws provide any federal rights or benefits. Stipulation of these three "terms" is important because of their connotations, especially when they are juxtaposed; then we are able to see the discrepancies and inequalities between them. This hopefully throes some light on how simply giving same-sex marriage non-recognition and a bad name is still unequal, inhumane and further unconstitutional.

Same-sex marriage issues have been in the court systems for nearly forty years, and although progress has been made, there are very few states that support same-sex marriages. The reasons I believe is centralized around many fundamental ideals and foundational concepts that our nation had in mind during its developmental stages and subsequently its conception. These ideals and concepts also boil down to what is perceived as humane, benevolent,

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compassionate, etc.—basically along the lines of the “Golden Rule” of treating others the way you would like to be treated—and unfortunately, opinions differ on those ideals regarding this subject. Denying someone this basic and fundamental right (or any “universal” right) because of the way they were born, or even just because of their sexual preference (assuming homosexuality is not hereditarily-based in this instance), is an everyday occurrence that needs to be remedied, for this infringes upon equal treatment laws, and what I perceive to be common decency “laws.” Much of the opposition to same-sex marriages is derivative of religion (usually cited from the Bible), which brings up the issue of separation of church and state. Imposing one’s religious beliefs through state or federal law is, in turn, violating the constitutional right to freedom of religion to those affected. Not allowing same-sex couples to marry carries the connotation of inequality. It is virtually punishment for a different life-style: you are not man and wife so you are going to get similar, but a lesser degree of rights. It could also been seen as punishment in the sense that these couples are condemned by constitutional law. This country was founded with the ideals that all people were created equal, and those people also possess inalienable rights, and denying these marriages is the exact opposite of those ideals. It is un-evolutionary in the sense of civil rights and equality; though it is important to recognize the discrepancy and problems that can arise regarding religion in this specific situation—the Bible predates the Constitution, so when people reference the Bible saying that God tells us it is a sin to be homosexual, and people have believed and followed this for thousands of years, in these people’s eyes, the Bible takes precedent over the Constitution.

Gays and lesbians suffer, often unjustly and unfairly. In addition to their difficult internal struggles, they also encounter the ignorance and prejudice of others. Instead of receiving love and support from their families, they are often ostracized. Rather than being involved in supportive church groups, they find themselves on the outside because even good Christians often don’t know how to react to someone with same-sex attraction.

Gay people are sometimes evicted by landlords, fired by employers, and even face violent physical attacks. Hate crimes are increasing and some people use AIDS as an excuse to show their hatred. Less than 2% of the gay population survives to age 65. They are 116 times more likely to be murdered and 24 times more likely to commit suicide than the average person. It is a difficult lifestyle where AIDS and other factors cause suffering and premature death. The collective anger over mistreatment and the frustration caused by their internal struggles are powerful forces behind the gay rights movement.

CHALLENGES AND POSSIBILITIES OF LEGALIZING HOMOSEXUAL MARRIAGE IN INDIA: THE ARGUMENTS

This is true that the conflict between homosexuals and heterosexuals can be witnessed in the institution of marriage not only in India but across

the world where sodomy law is applicable. This conflict is arising on account of the reason given in support as well as against the two different types of marriages which involves very delicate issues for social and legal recognition of sexual minority that is whether the social and legal recognition should be given or not and the same has been tabulated below:

Homosexual Marriages Should Be Legalized	Homosexual Marriages Should Not Be Legalized
1. The institution of marriage is traditionally the union between man and women. Homosexual relations are un-natural, unethical, immoral and against our traditions.	1. There is no moral ground on which to support the tradition of marriage as a heterosexual institution. For e.g. slavery once existed but now abolished on humanitarian ground.
2. Institution of marriage involves procreation and rearing of children. As people of same sex cannot reproduce a child biologically, this specific purpose is defeated.	2. If it was so then there would have been attempt to prohibit unions between a sterile woman and a fertile man or vice versa. Nor does legislation exist which requires a married couple to have children. It is true that homosexuals cannot procreate within their union but there are many options available which enable them to have children including adoption and artificial insemination.
3. Decriminalized homosexual marriages will lead to an increase in homosexuality and this in turn will undermine the whole institution of marriage and family.	3. Sexual orientation is due to genetic factor and it is unlikely that an increase in the incidence of homosexuality will occur as consequence of decriminalization. A person is born gay and does not choose to be gay.
4. Societal attitude is that people oppose it, hate it, and even fear it. That is people are not comfortable with the idea of homosexual marriages.	4. Homosexual marriages have the potential to reject hierarchical concept of gender. They challenge patriarchy and the male supremacy derived from it.
5. Heterosexuality has the advantage of slowing the speed of sexually transmitted disease. Homosexuals are at higher risk of transferring HIV/AIDS.	5..It cannot be ruled out that heterosexuals are not the carriers of HIV/AIDS. Laws regulating and/or penalizing homosexual activity impede public

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<p>6. The human species will be in danger of dying out if homosexuality is legalized due to lack of reproductive power in homosexuals.</p> <p>7. The principle of respect, non discrimination and the people autonomy to support legal recognition of homosexual unions the individual is not responsible to invoke. It is something quite different to hold that activities which do not represent a significant or positive contribution to the development of the human in society can receive specific and categorical legal recognition by the State.</p> <p>8. Sodomy was illegal and was until very recently.</p> <p>9. Homosexuality is a disease, The Indian Psychiatric Society also acknowledges that homosexuality is a kind of mental illness.</p> <p>10. Decriminalization may be a step towards removing some of the stigma associated with homosexuality and may have positive repercussions on relationship between homosexual and their</p>	<p>health programs as it drives underground many people at risk.</p> <p>6. In fact gays are giving big favor by not bringing more hungry mouth into this excessive overpopulated world. At the same time the continuity of species can never be in danger due to sexual minority which represent not even 10% of the total world population.</p> <p>7. Section 377 of IPC violates the right to life and personal liberty, the right to equality and the right to freedom guaranteed to all citizens as fundamental Rights under Chapter III of Indian Constitution. Due to which nearly 25 lakhs homosexuals of our country suffer discrimination many times in their life.</p> <p>8. In countries like United Kingdom, where homosexuality was once illegal, has repealed sodomy law as it is considered obsolete taking into account the social dynamics.</p> <p>9. The American Psychiatric Association has removed homosexuality from its list of mental illnesses in 1973, and the World Health Organization did the same in 1981.</p> <p>10. Criminalization reinforces negative societal attitude regarding homosexuality which in turn results in greater discrimination and thus impact adversely on the self esteem of many homosexuals which often</p>	<p>families.</p> <p>11. The absence of sexual complementarity in these unions creates obstacles in the normal development of children who are placed in the care of such parents. They would be deprived of the experience of either fatherhood or motherhood. Also this is gravely immoral and in open contradiction to the principle, recognized by the United Nations Convention on the rights of children, that the best interest of the children as the weaker and more vulnerable party are to be of paramount consideration in every case.</p> <p>12. Marriage is a sacred institution. The homosexual inclination is however objectively disordered and homosexual partners are sins gravely contrary to chastity.</p> <p>13. Same sex marriages is an untried experiment.</p> <p>14. Same sex marriages would start us down a slippery slope towards legalized incest, bestial marriages, polygamy and all kinds of other horrible consequences.</p>	<p>leads to deception and friction within families.</p> <p>11. Scientific studies and psychologists are of the opinion that the love and commitment of the parents make difference not the gender. The children raised by homosexual partners are just as good as those of straight couples.</p> <p>12. Religion is not an obstacle. Many sects of Buddhism celebrate gay relationship freely. Instances of homosexuality are available in all major religious mythology.</p> <p>13. Homosexual marriages is not an untried experiment. In Denmark since 1989 homosexuality is legally permitted. The result of the experiment suggests that homosexual marriages have actually been civilizing and strengthening, not just the institution of marriage but the society as a whole. So perhaps we should accept the fact that some one else has already done the experiment and accept the result as positive.</p> <p>14. If the argument were true then it would have already happened in countries where legalized gay marriages already exist.</p>
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15. Gay marriages would mean forcing business to provide benefits to homosexual on the same basis as Heterosexual sex couples.	15. There is no contradiction to the argument as all are equal and have equal fundamental rights.
16. Homosexual marriages are unnatural. Hence Sodomy law needs to be more strict.	16. Homosexuality is natural. There is substantial agreement amongst researchers that sexual orientation is due to genetic factor and is determined by age five or six.
17. Homosexual marriages are the outcome of today complex individualized post modern industrial utilitarian society.	17..Instances of homosexuality can be seen even in ancient , medieval and modern India. Its not the development of post modern society.
18. No rights exists that can compel a state to recognize any relationship contrary to the definition of traditional marriages.	18.. Denial of legal recognition infringes the rights of citizens.

Conclusion

In any case the demand for legalizing homosexual marriages is giving birth to new conflict in the institution of marriage family and Law which cannot be denied But at the same time giving social and legal regal recognition is not that easy in this traditional society as it has been in the western societies but in any case to ignore this emerging conflict in the institution of family and marriage will be short sighted and can have fatal results if not handled sensitively.

So, it is high time for the Legislature, Executive, Judiciary and Society at large that they cannot deny the existence of people with same sex desires, They also need to acknowledge that by legalizing homosexual relations they will not permit a mere sexual activity but will also decriminalize the lives of citizens who are connected to such sexual act.

Finally it can be said that if laws are supposed to represent socially acceptable do's and don'ts then a new mindset is the need of the hour. Otherwise, normal human beings will continue to suffer inhuman exploitation just because nature has nourished them with the need to be different.

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Commercial Sexual Exploitation of children



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Abstract

Commercial sexual exploitation is a complex phenomenon fueled by the tremendous growth in the global sex market. Exploitation is driven by poverty, uneven development, official corruption, gender discrimination, harmful traditional and cultural practices, civil unrest, natural disasters and lack of political will to end it. The number of child victims trafficked worldwide for sexual exploitation or cheap labour on an annual basis is 1.2 million.

This article deals with the various activities which exploit children for their commercial value such as prostitution, trafficking and pornography. The term implies that the child is not only sexually abused but that there is a profit arising from the transaction where the child is considered a sexual and commercial object.

Keyword: Exploitation, Victims trafficked, Trafficking, Pornography

Introduction

Many The United Nations' definition of commercial sexual exploitation of children (under 18 years) is 'the use of a child for sexual purposes in exchange for cash or in kind favours between the customer, intermediary or agent and others who profit from the trade in children for these purposes (parent, family member, procurer, teacher, etc)'.

A Child is a person who has not attained the age of 18 years. Any child who is vulnerable to trafficking is considered a "person in need of care and protection" under the Juvenile Justice (Care and Protection of Children) Act, 2000 (JJ Act).

The number of known cases of commercial sexual exploitation of children is growing. Children are being kidnapped and sold into forced labor in the illegal sex industry. Some impoverished families are selling their children to traffickers in the hope of giving the children a better life. There are documented reports of children being held captive in basements and other slavelike conditions where they are beaten, malnourished, threatened, and sexually exploited.

Often, the cycle of exploitation begins when an adult family member or friend sexually abuses a minor child in his or her care. This can escalate to systematic sexual behavior involving multiple children, and to photographing or videotaping sexual abuse and distributing it through the Internet.

Worldwide, untold numbers of children are being systematically deprived of their human rights, dignity, and childhood through child prostitution, child pornography, and other sexploitation. Many of these children are routinely subjected to rape, beatings, displacement, drug addiction, psychological abuse, and other trauma, including exposure to the AIDS virus and a life with no future.

CHILD SEX TRAFFICKING

child trafficking" means "the procurement, recruitment, transportation, transfer, harbouring or receipt of persons, legally or illegally, within or across borders, by means of threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of giving or receiving payments or benefits to achieve the consent of a person having control over another person, for monetary gain or otherwise".

Child trafficking is the third largest international crime, following illegal drugs and arms trafficking, is believed to be worth billions of dollars each year. Driving the trade is the demand for commercial sexual exploitation. Seventy-nine per cent of all global trafficking is for sexual exploitation.

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Approximately 150,000 women and children are trafficked from South Asia every year and most of them from, via and to India. Trafficking in children for commercial sexual exploitation is one of the primary manifestations of commercial sexual exploitation of children in India, which exists on a large scale and in many forms.

Trafficking of Approximately 150,000 women and children are trafficked from South Asia every year and most of them from, via and to India. Trafficking in children for commercial sexual exploitation is one of the primary manifestations of commercial sexual exploitation of children in India, which exists on a large scale and in many forms.

Trafficking of girls for marriage is prevalent, especially in the States of Punjab and Haryana, as highlighted in a study conducted by local organisation Sakti Vahini; another study revealed a well-established market in Uttar Pradesh for 'purchased' Bangladeshi wives. Although the Indian *Child Marriage Restraint Act* set the minimum age of marriage for women at 18, the Department of Health Survey (DHS) stated that 33.8 percent of the girls aged between 15 and 19 are currently married. Lack of legal documents/identification makes trafficking victims highly vulnerable to threats of apprehension by authorities, extortion, detention, prosecution and deportation.

Trafficking is a organized crime which violates all tenets of human dignity and rights. Trafficking can occur for various purposes--labour, commercial sexual exploitation, organ trade etc. Poverty, illiteracy, lack of livelihood options, natural/manmade disasters makes a person vulnerable to trafficking. India faces both In-country and Cross Border trafficking.

Child pornography.

Child pornography is 'the use of visual or audio material which uses children in a sexual context. It consists of the visual depiction of a child engaged in explicit sexual conduct, real or stimulated, or the lewd exhibition of the genitals intended for the sexual gratification of the user, and involves production, distribution and/or use of such material'. Child pornography is a multi-billion dollar international sex trade industry.

The development of child pornography is fuelled by mainly two factors, the inception and availability of home movies, videos, digital cameras, computers and software, which made the making of child pornography relatively cheap and secondly, the development of Internet technology, which has increased ease of production and distribution of this material to amazing heights. There is constant debate as to how the child pornography industry can be stopped. One of the major aspects of the debate is answering seemingly simple question: how does one define the age of a minor? This is because; different countries set different age for "hardcore" pornography and "soft-core" pornography.

Child prostitution

Child prostitution is 'the sexual exploitation of a child for remuneration in cash or in kind usually, but not always, organized by an intermediary'. (UN definition)

Many surveys have been conducted to find out the extent of child prostitution. Dr. Gilada's paper on perspectives and positional problems of social intervention" shows that, "70% of women are forced into prostitution and 20% of these are child prostitutes." Statistics of the survey done show:- City Population Prostitute Population

Bombay 10 million 100,000, Calcutta 9 million 100,000, Delhi 7 million 40,000, Agra 3 million 40,000.

A survey conducted by Indian Health Organization of a red light area of Bombay shows:-

1. 20% of the one lakh prostitutes are children.
2. 25% of the child prostitutes had been abducted and sold.
3. 6% had been raped and sold.
4. 8% had been sold by their fathers after forcing them into incestuous relationships
5. 2 lakh minor girls between ages 9yrs-20yrs were brought every year from Nepal to India and 20,000 of them are in Bombay brothels.
6. 15% to 18% are adolescents between 13 yrs and 18 yrs.
7. 15% of the women in prostitution have been sold by their husbands
8. Of 200m suffering from sexually transmitted diseases in the world 50m alone were in India.
9. 15% of them are devdasis.

It was estimated that in Delhi 50% of the prostitutes are devdasis and in Bombay, Pune, Solapur and Sangli. 15% of them are devdasis,

1. It is also noticed that young and old men prefer young and new girls.
2. Growing poverty, increasing urbanization, and industrialization, migration, and widespread unemployment, breaking up of joint family system etc. are also responsible for the prevalence and perpetuation of the child prostitution.
3. Quick marriages without proper knowledge of the bridegroom's family background leading to a divorce initiates the gravitation of girls to the red light area.
4. The children are not lured into it but are thrust into it. There was a case of a sixteen years old girl who was sold to a brothel owner by her father following incest. 8% of these girls are victims of incest because of the myth-that one of the causes for an STD is intercourse with a virgin.
5. Many a times when a child who has lost both his parents is looked after by the relatives and these relatives too force the child into prostitution.

International Legal Instruments

1. Convention on the Rights of the Child (CRC) and its Optional Protocols (Sale of Children, Child Prostitution and Child Pornography) [Ratified]
2. Convention on Elimination of all forms of Discrimination against Women (CEDAW) [Ratified]

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3. UN Convention Against Transnational Organized Crime [Signed]
4. Protocol to Prevent, Suppress and Punish Trafficking in Persons, Esply. Women and Children supplementing above Convention [Signed]
5. Millennium Development Goals (MDGs).

SAARC

1. SAARC Convention on Preventing and Combating Trafficking in Women and Children for Prostitution [Ratified].
2. SAARC Convention on Regional Arrangements for Promotion of Child Welfare in South Asia [Ratified].
3. SAARC Charter where trafficking issues to be addressed at regional level

National Legal Framework

1. Immoral Traffic Prevention Act, 1956 (being amended)
2. Indian Penal Code (select provisions)
3. Juvenile Justice (Care and Protection of Children) Act 2000
4. Child Marriage Prohibition Act 2006

National Policies and Plans

1. National Child Labour Policy, 1987
2. National Policy for the Empowerment of Women, 2001
3. National Plan of Action to combat trafficking and commercial sexual exploitation of women and children (1998)
4. National Plan of Action for Children, 2004
5. Integrated National Plan of Action to Prevent and Combat Trafficking of Human Beings, with Special focus on Women and Children (being formulated)—will look at trafficking for all purposes

An Integrated Child Protection Scheme: -

1. Provides for improved institutional care, quality non-institutional and alternative care, counselling and family support, training and capacity building, child tracking system and website for missing children.
2. Will focus on street children, trafficked children, children in need of care and protection, children in conflict with law, HIV/AIDS affected children, adoption and foster care issues and any other.
3. Toll free Children's helpline-1098; women's Helpline-1091
4. Missing Children website being developed
5. Swadhar Shelter Homes and Short Stay Homes

CONCLUSION & SUGGESTIONS

While countless women and children trafficked for commercial sexual exploitation (CSE) face the gravest violations of human rights, the response systems are unable to address or redress their grievances and, often, exacerbate the harm and sufferings these women and children endure. This is obvious from the fact that when, on the one side, the traffickers and exploiters are seldom brought to book, on the other side, the victims are frequently criminalized and persecuted. Such violations are mostly due to (a) inadequate knowledge of law, procedure and protocols, (b) inappropriate understanding of the issues and concepts, (c) want of genuine sensitivity to the issues and (d) the mindsets and prejudices which dictate and dominate the decision-making process. Law enforcement agencies are duty bound to rescue such children, produce them before the Child Welfare Committee and extend all care and attention.

The criminal justice system has a significant role to play in addressing commercial child sexual exploitation, especially in its more organized forms: serial victimization of multiple children; networks of adult exploiters; and the kidnapping, smuggling, and sale of children as commodities. As technology and communication become more advanced and global travel becomes easier, the effort to prevent CSEC must become more sophisticated.

suggestion

Alarmed at the rising number of cases related to sexual abuse and human trafficking in the country, the ministry of women and child development has issued an advisory on measures to be taken by states and union territories to combat the menace. The advisory gains importance in the backdrop of Kerala being haunted by a series of sexual abuse scams involving young girls, some of which are directly being linked to powers-that-be. Keep pace with new technologies, such as those that create "virtual" images of children in pornographic situations.

1. Educate potential victims about the tactics used by recruiters.
2. Educate the public about the great harm caused by CSEC.
3. Improve parental supervision of vulnerable children.
4. Enhance the role of women and children in societies where they are treated as sex objects.
5. Formation of community vigilance groups in source areas and disaster prone areas.
6. Involvement of local level institutions for tracking outbound movements of children.
7. Child Help Lines to be established and widely publicised at the village level.
8. Strengthening regional and overseas initiatives to prevent cross-border trafficking

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Counting Footprint – Growth of India and China



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Abstract

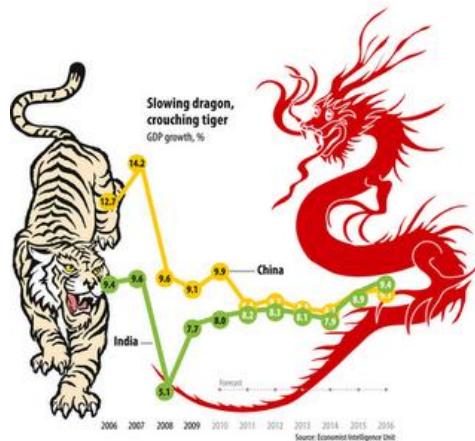
This article aims to analyse comparative strength of one element viz. Political Environment against various other environmental factors that affect the growth of a country. A country's prosperity measurement depends on various environmental factors like Economic, Political, Social, Legal, Technological, Natural etc, but, if we analyse that, which of these factors has more affect on it's growth, it is tough to answer, or the answer may be that 'it varies from country to country'. Here, two countries, India and China, have been selected for study because these two countries share similarity in various environmental factors and basic conditions other than political ideology. The study has been confined to three criteria, namely Condition of Economy at the time of Independence; Political Ideology; and Economic Policies. The study revealed that leadership takes the country to its growth path, and leadership affects other environmental factor also.

Keyword: India China Comparision, Growth Factors, Effect of Environment on Economic Growth

Introduction

India gained independence in 1947 and People's Republic of China was formed in 1949. Both have different political ideologies with one thing in common, which is the state dominance in economic affairs. Both of the nations adopted liberalization around same time India (1980), China (1978).

Today, both are among the fastest growing economies of the world, but still present different growth status. On the one hand, China has already realized the dream of becoming the strongest emerging economy while India is on this path with a good pace. In many aspects China is far ahead of India, while in few aspect, India has upper hand. Here, we will discuss possible reasons and factors for present economic scenario of India and China.



(Picture showing growth projection of India and China)

The above picture (as per prediction made in 2009), shows that by 2011 China's growth rate will be more than India but after that India may go ahead. But the table below shows some different picture all together. It shows that in year 2010 -2011 China is far ahead of India, which is not easy to compete.

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India China comparison		
	India	China
Rank	9th (nominal), 4th (PPP)	2nd(nominal), 2nd (PPP)
Trade Organisations	WTO, SAFTA, G- 20 and others	WTO, APEC, G-20 and others
GDP	\$1.632 trillion (nominal: 9th; 2010), \$4.057 trillion(PPP: 4th; 2010)	\$5.883 trillion (nominal: 2nd; 2010), \$10.1 trillion(PPP: 2nd; 2010)
GDP per capita	\$1,371 (nominal: 138th; 2010), \$3,408(PPP: 129th; 2010)	\$4,382 (nominal: 91st; 2010), \$7,544(PPP: 94th; 2010)
Average Gross Salary	\$1,371 yearly(2010)	\$4,260 yearly(2010)
Ease of Doing Business Rank	132 nd (2011)	91 st
Exports	\$225.6 billion (2010 est.)	US\$1.581 trillion (2010)
Imports	\$357.7 billion (2010 est.)	US\$1.327 trillion (2010)
FDI stock	\$35.6 billion (2009–10)	\$100 billion (2010)
Gross external debt	\$238 billion (31 Dec. 2010 est.)	\$406.6 billion (22nd; 2010)
<u>Credit rating</u>	BBB- (Domestic), BBB- (Foreign), BBB+ (T&C Assessment: Outlook: Stable (Standard & Poor's)	AA- (Domestic), AA- (Foreign), AA- (T&C Assessment), (Standard & Poor's)
Foreign reserves	\$319 billion (July 2011)	3.20 trillion (1st; 2011)

(Source: - Wikipedia as on 1 -1 -2012 Main data source: CIA World Fact Book)

[Table above shows that, in 2010, various economic indicators were comparatively better for China than India.]

The above given two different scenario pose a dilemma about the growth of these two countries. The data given in the table is a fact, so it is more authentic than the projections of the diagram. Our analysis in this article is an attempt to solve this dilemma.

Objectives

The following objectives are to analyse for this study: -

- Does the intensity of all factors that affect growth, varies?
- Is there any factor which affects growth more as compared to other factors?
- Role of leadership in economic growth.

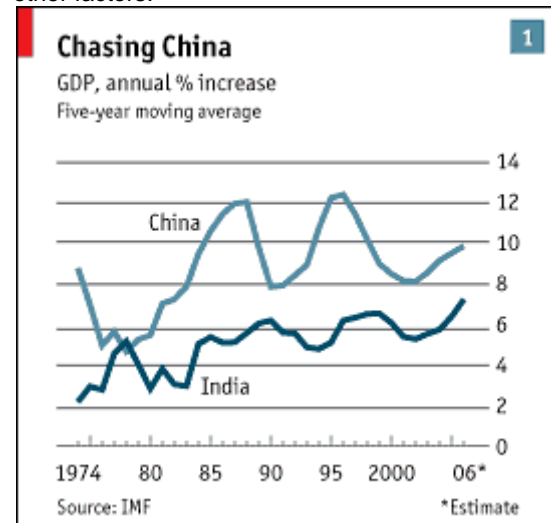
➤ Economic growth history of India and China.

Hypothesis

As we can see that in this global recessionary scenario only few countries are able to maintain a good growth rate and India and China are among them. But China's growth and development is certainly better than India. Here question arises that what are the factors that are contributing towards it and where India lacks. It is the general observation that leadership of a country takes it to the highest of achievements. Leadership has a greater role than all other factors. Hypothesis below is based on the same idea.

Alternative Hypothesis H1: Better growth of a Nation can be attributed more to the Political Ideology than other factors.

Null Hypothesis H0: Better growth of a Nation can not be attributed more to the Political Ideology than other factors.



(Source: IMF, Figure showing GDP growth trend of India and China, 1974 to 2006.)

The figure above shows that between 1974 & 2006, India and China, both, augmented their GDP growth rate. But India's graph mostly remained beneath that of China's graph.



(GDP growth of different countries in 2009 and 2010)

Figure shows that in 2009 -2010, GDP growth of India and China was way ahead than that of other developed and developing countries like US, Euro zone, Japan, Russia and Brazil.

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Analysis and Discussion

We are starting the discussion covering some of those environmental factors which mostly affect the economic growth. These factors are very close to economic aspect while other factors like social & legal factors have been left. But it doesn't mean that social or legal factor's do not affect economic performance. We have tried to keep the discussion strictly within the mainstream of economics.

We will confine our discussion to following points.

- Condition of Economy at the time of Independence
- Political Ideology
- Economic Policies

Condition of Indian Economy at the time of Independence

In 1947, when India got her freedom from British rule, Economic condition here was pathetic. Britishers left this country as an absolutely instable, weak & deprived economy totally dependent on England for selling product, Foreign Currency, even for eatables. Starting from food, condition of farmers, status of land, Industries, Infrastructure, Development and Foreign Trade, economic position of India was very bad on all the fronts India could not even fulfill its basic needs.

Even after being agriculture dominate region, it was not growing enough eatables to provide for its own people. The condition of farmers was very weak financially and economically. They did not have their own land holding, or many had very small land holding. The equipments they were using for agriculture were old fashioned, even the condition of livestock was not good. The crops they grew, like jute, tea, cotton etc. were mainly to provide cheap raw material to industries of England and finished goods produced there were sold in India at higher prices. Industrial production system, as developed in European factories, was unknown to India until the 1850s and British cotton export reach 55% of the Indian market by 1875.

At the time of independence Indian economy had many structural problems, and adding to these problems unexpected events like partition resulted in 2 to 4 million refugees fleeing past each other across the new borders between India and Pakistan. The settlement of these refugees was a considerable financial strain. Partition also divided India into complementary economic zones. Under the British rule, jute and cotton were grown in the eastern part of Bengal, the area that later became East Pakistan (after Bangladesh, 1971), but the processing units were mostly located in the western part of Bengal, which became the Indian state of West Bengal in 1947. As a result, after independence, India had to employ land, previously used for food production, to cultivate cotton and jute for its mills. India was a flourishing village economy till 17th century, but 200 years of colonial rule after that exploited India of its much valued economic prosperity & independence.

Condition of Chinese Economy at the time of formation of Peoples Republic of China

In 1949, after the Chinese Civil War, and at the time of formation of Peoples Republic of China, the condition of Chinese economy was quite well, as compared to India. China had good number of industries particularly related to military equipments; It also had very good presence in foreign market with good exports.

After Qing dynasty (1911), despite turmoil in Chinese politics, domestic industries developed rapidly. During First World War, demand of Chinese goods increased and the development of industries was at its peak:

Table showing machine in Chinese textile industry between 1913 – 1918.

	In 1913	In 1918
No. of needle machine in Chinese Textile industry	482,192	647,570
No. of Bread Factories	57	131

(Table showing example of development in industries during First World War)

Similarly Chinese industries also benefited and developed with decrease in imports during 'Europe Total War' and 'The May 4th movement', when Chinese students called their countrymen to boycott foreign goods. This resulted in flourishing indigenous industry.

China got a shock after the fall of Qing dynasty in 1911 but in the period 1927 - 1937 (Nanjing decade), some industries thrived specially related to military. And after that, china engaged herself in war one after one first with Japan during World War – II and third China's Civil War. In 1949, Chinese economy was suffering from the debilitating effects of decades of *warfare*. Several mines and factories had been damaged or destroyed. Transportation, communication, and power systems had been destroyed or had deteriorated because of the lack of maintenance. Agriculture was disrupted and china was facing one of the most virulent *inflations* in world history.

Political Ideology (India)

"Socialist Economy" was the slogan for growth in India, just after independence when Pt.Jawahar Lal Nehru was the prime minister of India. Government opted to play the lead role in economic affairs of state and private sector was allocated its own segments to operate, as described in the Schedule released for Classification of Industrial Distribution in 1948 and 1956.

The idea behind opting slogan 'Socialist Economy' or 'Socialist Pattern of Society' was to work for the benefit of masses, poor people or public at large in order to maximize the benefit to the nation.

The initial Governments ran the nation leniently in a manner that provided conducive platform for corruption, non-performance, inefficiency and losses to flourish. As a result, in 1980, after a review of economy, the status revealed was a trembling economy. Politician realized that drastic improvement was needed, yet half hearted efforts were carried out to deal with the situation. As a result, in 1991, we

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were forced to take emergency measures to avoid bankruptcy of the nation.

Since the beginning politicians like Pt. Jawahar Lal Nehru, Indira Gandhi, Rajeev Gandhi's own ideology towards economic improvement, did not show 'Do or Die' mindset. In India, we had had 'Green Revolution' Telecom Revolution of India, 'Operation flood' or 'White Revolution of India' which strengthened our economy, but non-govt. people were behind it like M.S. Swaminathan for Green Revolution, Sam Pitroda for Telecom revolution and Varghese Kurien for White revolution of India. These movements were also adopted at the verge of crisis.

Politicians had very casual attitude towards economic development of India as compared to other developed countries, like America, where economic prosperity is a major issue in politics.

In recent years during the tenure of Dr. Manmohan Singh as Prime Minister, we saw the implementation of FRBM Act. (Fiscal Responsibility and Budgetary Management Act), which was introduced to bring down the budget deficit within tolerable limits and a deadline was also set for it. But every time the deadline was extended the govt. kept on taking loans. As far as the usefulness of these loan is considered, this loan immolate to poor implementation of socio-economic policies like MGNREGA. Schemes like MGNREGA are quite huge and require hefty resources allocation (1% of GDP as per planning commission estimates) and administrative time and efforts.

Since last one decade or so, India is being ruled by a coalition govt. of various political parties and the situation is same in opposition as well. This makes the existing situation more complex. If some minister wants to implement some good policies, he is stuck in an political impasse, which obstructs the growth. Moreover, on the positive note some policies which are not so good also could not go through.

These alliances are made for gaining political benefits generally, so they don't have common ideology as such. In absence of this, many a times they lack consensus over many issues. These parties want to be in power, they leave the 'Apple of Discord'. (We may attribute it to alliance ideology but it does not have much affinity always.)

Alliance of political parties in India is some what of opportunist type at some places. They are in alliance, more for their own benefits rather than serving the nation. On one hand it leads to corruption by political parties as we have seen in case of 2G Scam, on the other hand nation's benefits are sacrificed.

One more aspect of alliance parties is that they may change the alliance for their own sake. There are many regional parties that keep shifting their alliance and negotiate their support for large sum of money. This amount, on one hand is borne by people of country in many multiple figures, on the other hand, it starts one more regime of corruption in society. Eventually economy of the nation suffers partially or wholly.

Many beneficial policies are lying in cold bag waiting to be worked upon, like 'Linking of the Rivers' that was meant for providing water for irrigation, 'Wind and Solar energy projects' for generation of electricity, etc.

Political Ideology (China)

(Here by China we mean 'People's Republic of China') Political Ideology and its effect on economic growth can be vividly seen in china's economic history. As it has been a totalitarian political system, policies once planned are implemented fully without much hindrance. Since 1949, China has been ruled by 'Communist Party of China (CPC)', in leadership of 'Mao-Ze-Dong' who ruled till his death in 1976. Mao led the entire nation with his own ideology (Commonly referred as Maoism). After the 'Long March', Mao-Ze-Dong emerged as undisputed national leader who could not be opposed easily. Since it is a communist country, policy formulation is one sided affair of ruling party once the policy is formulated it is implemented with a 'Do or Die' spirit and delivers it's maximum effect whether positive or negative.

At the initial stage Mao-Ze-Dong followed the growth pattern of Russia (erstwhile USSR) for growth of China. China started with larger role of state in economic affairs. But this role was not always positive in the adversely character as far as with social perspective is concerned. Several times, it played a negative role affecting masses can be quoted as example. 'The Great Leap Forward' and 'Great Proletarian Cultural Revolution'.

In Communist ideology benefit of the masses is taken care in such a manner that capitalist outlook is completely sidelined. But ideology of Mao was in many ways way ahead of this. His thought process did not look for consensus with other people for any socio-economic issue nor did he bothered for response from general public. What he thought right was the only way and once he decided what he thought right, it forcibly implemented.

The ideology of Deng Xiaoping led China on a phenomenal growth trajectory as can be easily seen in China's economic history. For the growth of nation, he followed all the possible paths including sending experts to different capitalist countries, to learn the different growth fundamentals, and entertaining China's long time rival Japan as associate in mutual growth.

Deng Xiaoping followed the theory of 'Four Modernization' given by Zhou Enlai, which emphasized on development in the field of Agriculture, Industry, National Defense and Science and Technology and stressed on economic self reliance. And by following these policies China started export led growth.

Ziang Zemin also continued the growth path when he announced 'Three Represents' that is "Economic Production", "Cultural Development" and "Political Consensus". By this, government came closer to people at large.

After Ziang Zemin, Hu Jintao gave the "Scientific Development Concept". This was indeed the need of the hour for growth in China. The ideology

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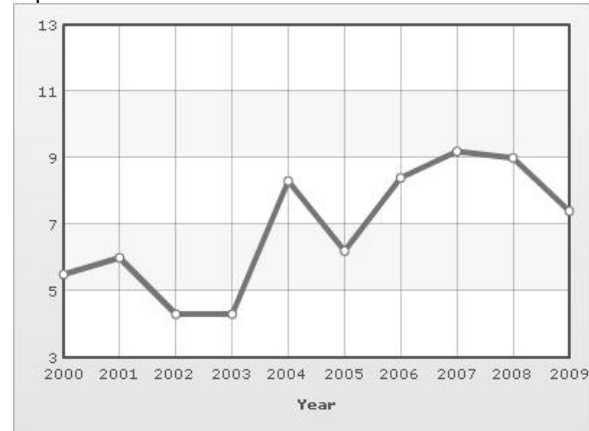
stands on the basic premise that it is possible for the government to "design" sustainable development through tested and proven methodologies of governance. Such a scientific approach is said to minimize conflict amongst different interest groups in society in order to maintain stability on the national level, in turn fostering economic and cultural advancement. Hence it is obvious that political ideology in china towards economic development has been very good hitherto.

Economic Policies (India)

In India number of economic policies were announced time to time for economic growth, comprising policies like adoption of Planning, making Capital Industry as growth engine, New Agriculture Policy(with Green Revolution), Nationalisation of Banks, Prime Minister 20 Point Program to eradicate poverty, Emphasis on Small Scale Industry, reform in 1991, MNREGA, budget deficit and devaluation.

A glance over the analysis of these policies shows that 'Planning in India (1951)' initiated with high morale and great ambition, and it gave results also, but after third plan period (1961-66) it lost its edge, and by 11th plan period it almost lost its relevance. India planned a lot, but ended up with worse conditions. At the end of every plan period economy of India experienced more debt burden, increased poverty & unemployment, and greater corruption scams in the name of development. In 1956, India opted for capital industry as growth engine for economy and later it got double bounce back, first we lagged behind in consumer industry as we see a large share of consumer goods market is owned by foreign companies like HUL, P&G, Colgate – Palmolive, & others. Secondly among capital goods industry established by India many became loss making units, which were either sold out or disinvested at cheaper prices. Green Revolution proved its worth in its first avatar but now people are talking about the need of another green revolution, while the ground reality is that agriculture is suffering from poor monsoon, debt burden, colonization on agriculture land and deforestation for infrastructure & other reasons. Similarly, even after 40 years of nationalization of banks, many villages are deprived of banking facilities. This may be attributed to complex banking formalities or non availability of banks at all. 20 Point Prime Minister Program was initiated to eradicate poverty and since last 35 years this program is running, but India still has got largest no. of people living below poverty line in the world. Emphasis on small scale industry was made in Industrial Policy 1977 to enhance employment. Initially 500, & later 800 items, were reserved for small scale industries, but now the figure is less than 25 items reserved for small scale, and even in this list demand for many items is decreasing day by day due to the higher living standards or advanced technology or availability of other substitutes. Globalisation and Liberalisation Reforms, in 1991 were not initiated as part of a strategy or in a planned manner, but actually it was the compulsion of economic weakness & adverse environmental conditions. MNREGA is infamous for

wastage of public money and a thoroughly poor policy vested with corruption. Like wise many policies were announced and implemented which are now resulting in poor returns.



(Figure showing GDP growth of India 2000 to 2009)

Since 1950, India ran into trade deficits that increased in magnitude in the 1960s. The Government of India opted to live out of means, so had a budget deficit problem and therefore could not borrow money from abroad. As a result, the government issued bonds to the RBI, which increased the money supply, leading to inflation in economy. In 1966, foreign aid, which was hitherto a key factor in preventing devaluation of the Indian rupee was finally cut off and India was told it had to liberalise its restrictions on trade before foreign aid would again materialise. The response was the politically unpopular step of devaluation accompanied by liberalisation. The *Indo-Pakistan War of 1965* led the US and other countries to show friendship towards Pakistan and to withdraw foreign aid to India, which further necessitated devaluation. Defense spending in 1965/1966 was 24.06% of total expenditure, the highest in the period from 1965 to 1989. This, accompanied by the drought of 1965/1966, led to a severe devaluation of the rupee. Current GDP per capita grew 33% in the Sixties reaching a peak growth of 142% in the Seventies, decelerating sharply back to 41% in the Eighties and 20% in the Nineties.

Economic Policies (China)

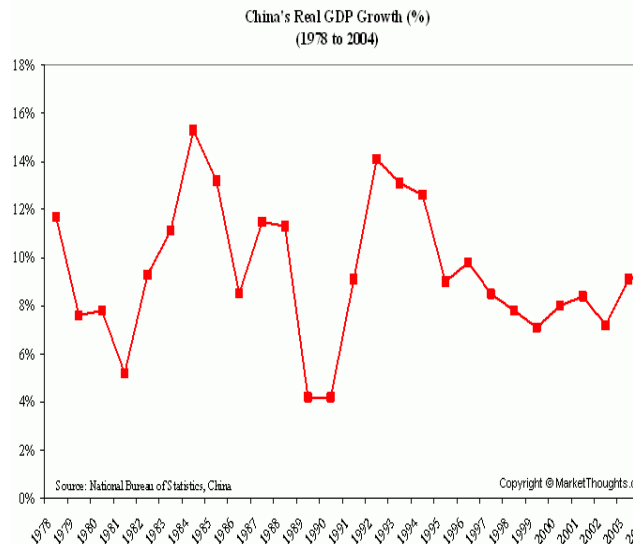
Economic policies in China can be classified in two phases; one is, the time of Mao-Ze-Dong, second after Mao or at the time of Deng Xiaoping, Ziang Zemin and Hu Zintao. Policies at the time of Mao had a touch of Maoism a blend of Communism & Dictatorship. He was actually against Market Economy System. On the other end Deng Xiaoping who was supporter of market economy brought comprehensive change in national policies of china.

One of the regimes carried out by Mao was "Collectivisation of Land" in which private agriculture landholding were brought under collective farming. It could be considered as a good policy because larger lands could grow more crops comparatively, but it should have been done after taking general public in confidence, which was actually not the case.

China also started on its growth path by adoption of planning in 1953. Following the growth

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track of Russia, larger role of state in economic affairs become the main policy. As it was implemented under Mao Ze Dong, who followed communism very harshly, by 1956, approximately 67.5% of all modern industrial enterprises were state owned and rest were in public – private joint venture. No private enterprises were left that time. Similarly, as in Soviet economy, main emphasis was on industries at the expense of agriculture, China also gave emphasis to industries and ignored agriculture, which later leads to 'Great Leap Forward' and deaths of millions of people due to starvation.



(China's nominal GDP trend from 1952 to 2005.)

The banking system was nationalized and centralized under the *People's Bank of China*. To bring inflation under control by 1951, privately owned enterprises were gradually brought under government control. Adopted on the *Soviet* economic model based on *state ownership* in the modern sector, large *collective* units in *agriculture*, and *centralized economic planning*, several entire plants and pieces of equipment were purchased from the Soviet Union. Key industries, including iron and steel, manufacturing, coal mining, cement production, electricity generation, and machine building were greatly expanded and were put on a firm, modern technological footing.

In 1957 the government adopted measures to shift a great deal of the authority for economic decision making to the provincial-level; county, and local administration. Leadership adopted an approach that relied on spontaneous heroic efforts by the entire population to produce a dramatic "great leap" in production for all sectors of the economy at once. Rural labor also was to be employed to support the industrial sector by setting up thousands of small-scale, low-technology, "backyard" industrial projects in farm units. The result of the Great Leap Forward was a severe economic crisis and, the government sharply revised its existing policies and introduced a set of economic policies to replace those of the Great Leap Forward.

The Cultural Revolution was set in motion by Mao Zedong in 1966. Agricultural production led to stagnation the political activity of students and workers in the mines and factories, decline in industrial production between 1967 to 1969, shortage of highly educated personnel caused by the closing of the universities. China's ability to develop new technology and absorb imported technology would be limited for years by the resulting hiatus in higher education.

This condition reversed, and balanced development was set in motion under the leadership of Premier Zhou Enlai Universities began to reopen, and foreign contacts were expanded.

Deng Xiaoping—further strengthened the modernization program espoused by Zhou Enlai in 1975. They also set forth a battery of new policies for the purpose of accomplishing the Four Modernizations, strengthened the authority of managers and economic decision makers at the expense of party officials

The Asian financial crisis affected China marginally; China had huge reserves, a currency that was not freely convertible, and capital inflows that consisted overwhelmingly of long-term investment. For these reasons it remained largely insulated from the regional crisis and its commitment not to devalue had been a major stabilizing factor for the region

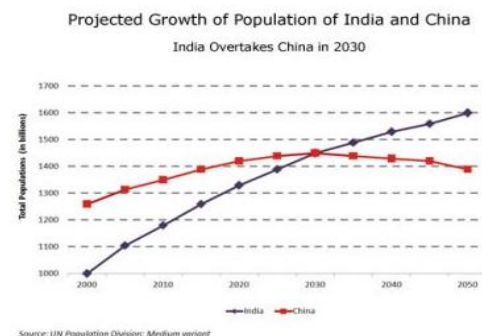
Chinese legislators unveiled several proposed amendments to the state constitution. One of the most significant was a proposal to provide protection for private property rights

The Fifth Plenum in October 2005 approved the 11th Five-Year Economic Program (2006–2010) aimed at building a "harmonious society" through more balanced wealth distribution and improved education, medical care, and social security

China launched its Economic Stimulus Plan to specifically deal with the Global financial crisis of 2008–2009. It has primarily focused on increasing affordable housing, easing credit restrictions for mortgage and SMEs, lower taxes such as those on real estate sales and commodities, pumping more public investment into infrastructure development.

Other Factors

If we talk of other factors like global factors or natural factors both the countries have almost same environmental conditions, like both countries have faced few wars, India joined WTO before China, both have large FDI, both countries have large population.



(Source: UN Population Division, Figure showing – Projected Growth of Population of India and China for 2030)

[Figure above showing that by 2030 population of India may over shoot population of china]

cheap labour force, both have suffered Draughts, Famines etc. Both have large land acquisition with diverse natural conditions, strong military positioning, advanced Science and Research & Development status. Both have rich culture and developed social systems China has strict law and order conditions and Indians also have also suffered from Emergency.

Findings

The findings of above analysis are very fruitful and can be used in other cases also. Here we find that:

- It is obvious that among various environmental factors the intensity to affect a nation's growth, varies significantly.
- India and China have similarity in many of the environmental factors. But China's economic growth status is much advanced than India and growth potential is much stronger too.
- The reason for this clearly comes out to be the leadership of the nation. Hence leadership is the factor which affects maximum growth.

Conclusion

The above study concludes that among various environmental factors, like social, economic, political, global, natural etc, the political factor affects the growth maximum of a country especially its political ideology.

Hence we reject the null hypothesis and can say that Political Factor is the most influential factor among various environmental factors.

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Periodic Research

Corporate Social Reporting A Pragmatic Approach For B.C.C.L



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Abstract

In this backdrop the present paper is designed with the objective of defining the need of social reporting by the Bharat Coking Coal Ltd and suggests a system and taxonomy of social reporting in the Dhanbad context.

Bharat Coking Coal Ltd one of the subsidiaries of Coal India Ltd is the major coal producing belt. Its collieries situate in the district Dhanbad.

Apart from welfare of employees, BCCL has embarked on programme of community development with the sole intent to improving the lot of needy and down-trodden people living near and around the coalfields. Apart from development work like augmenting drinking water facilities, health care, education etc.

The region in which BCCL operates consists mainly of SC/ST and Other backward communities. To give a particular thrust to the community development activities mainly directed towards upliftment of the above communities a tribal sub plan and special component plan for the welfare of SC/ST communities was initiated.

BCCL has already generated baseline data in respect of air, water and noise pollution in different coalfields in order to monitor the need of environmental protection. True to the concept of the Public sectors BCCL has also played its role as an agent of socio economics change in the region of its operation. The socio economics fallout as a result of its expending activities in Dhanbad is very tangible.

Jharia is one of the most important parts of BCCL. It is important coal mines in India and one of the largest in Asia. Once a treasure trove of high – quality coking coal , uncontrollable coal fire have turned the mine into a slow burning inferno , but this is a place of smoldering land and noxious fumes that make breathing difficult . Yet thousands of inhabitants cling to this collapsing town, eking out a living. The problem is made worse by the fact that most mine workers including shovel drivers do not wear masks, boots or overalls. According to BCCL, there are 67 active fire zones in Jharia today. Despite the obvious evidence to the contrary. When asked about safety provisions. It's completely denied the fact that workers suffer from respiratory disorders. The solution provide the same level of energy 'services' while phasing out reliance on coal. This is possible because decades of technological progress have moved renewable energy technologies into the mainstream technologies like wind turbines, solar photovoltaic panels, biomass power plant and solar thermal collectors.

Keyword: Social report, Community development, Environmental protection, Socio economics fallout, Turn Around Year, Solar thermal, Solar photovoltaic panels, Biomass power plant, Inclusive Growths,

Introduction

"In a Free enterprise the community is not just another stakeholder in business but is in fact the very purpose of its existence". This is a statement of the founder of the Indian Public Sector. The existing practice or accounting and reporting in the Indian Public Sector lies stress on highlighting financial performance measured by accounting Profit or Loss which is computed on the basis of financial accounting principles and standards . As a result the social performance aspect does not find appropriate coverage in annual report and thus the totality of the performance of the Public Sector Enterprises is not completely disclosed. Over looking social performance in the annual reports lead to the possibility that managerial attention be diverted from the social performance of the undertaking.

In this backdrop the present paper is designed with the objective of defining the need of social reporting by the Bharat Coking Coal Ltd and

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suggests a system and taxonomy of social reporting in the Dhanbad context.

Inevitability of Social Reporting

At a broader level the philosophical justification for corporate social performance is explained by shocker. They state any social institution and business is no exception operated in social via. a social contract expressed or implied where its survival and growth are based on :-

- (i) The delivery of some socially desirable end to society in general.
- (ii) The distribution of economic social or political groups from which it derives power.

The poor financial performance is many a time depended increased social responsibilities undertaken by them. But the questions that arise are what they do? For whom they are doing? Is there any better way to do? Whether exacting of social responsibilities is the sole cause of poor financial result or some other reasons are hidden deliberately under the blanket of social goals. The system of social reporting answers to some of the questions. Mainly three important issued at macro level. The social performance dimension nature of social performance and the measurement and evaluation criteria for such performance.

Historical saga of B.C.C.L.

BCCL was incorporated in January 1972 to manage and operate the taken over coking coal mines. Its nationalization of the 214 coking coal mines followed soon after in May 1973 and 182 non coking coal units located adjacent to coking coal mines were also put under the control of BCCL. The BCCL become a subsidiary of Coal India Ltd when the later was incorporated in November 1975.

No. of mines taken over at the time of nationalization:-

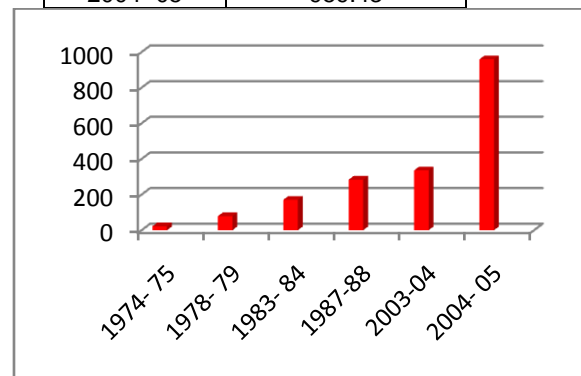
Bharat Coking Coal Ltd one of the subsidiaries of Coal India Ltd is the major coal producing belt. Its collieries situate in the district Dhanbad. During 1st couple of years BCCL did well, but soon headed towards the period of huge losses beginning from 1974 year after year in increasing trend. This happiness due to sudden manifold increase in man power, ghost employees, increase in salaries and wages under National Coal Wage Agreement increase in cost of power. Huge coal theft and absenteeism put fire to the fuel of net losses. Besides increased revenue expenditure on social amenities and perquisite were among other factor which declared BCCL as white elephant and for this it was subject to control of BIFR. After the year 2005-06 BCCL become again raised like a diamond. The profit earning bright from this period as Turn Around Basis. The net losses in several corrores a year even after receipt of Govt. subsidy under coal price retention scheme were reversed

mines under 12 administrative areas. In which no. of Underground Mines – 23, No. of Opencast Mines – 15, No. of Mixed Mines – 25 out of total 63 coal mines. The Company also runs 6 Coking Coal Washeries and 2 Non Coking Coal Washeries.

BCCL is the major coal producer in its mines in Mohuda and Barakar areas in addition to production of hard coke. BCCL operates a number of sand gathering plant, a network of aerial ropeways for transport of sand and nine coal washeries namely Dugda, Mohuda, Bhojudih, Patherdih, Lodna, Sudamdih, Barora, Moonidih and Modhuban.

Losses period of BCCL

Year	Losses (In crores)
1974- 75	22.23
1978- 79	79.11
1983- 84	170.84
1987-88	283.79
2003-04	336.11
2004- 05	959.43



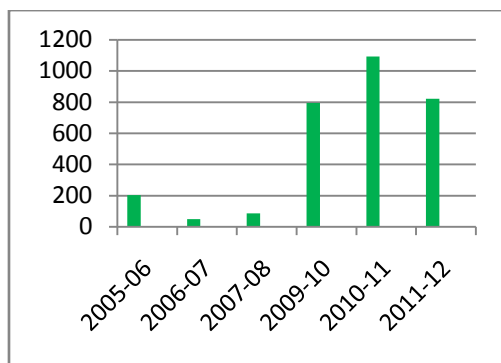
The losses of 22.33 crores in 1974-75 increased to 79.11 crores in 1978-79 due to drop in production of coal increase in wage cost D.A. and under- ground allowances, Again the losses rose to 170.84 crores in 1983- 84 and further to 283.79 in 87.88, 336.11 crores in 2003-04 and at highest 959.43 crores in 2004-05.

Profitability

The below table speaks of the fact of continued profit earn by BCCL.

Year	Profit (in crores)
2005-06	202.67
2006-07	49.58
2007-08	86.06
2009-10	794.19
2010-11	1093.69
2011-12	822.36

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So after decade of huge losses BCCL starts recovering from the financial year 2005-06 by earning a profit 202.67 crores. This sustainable development marched ahead during the year 2006-07, 2007-08 and has started jumping from the year 2009-10 and 2010-11 by crossing the period of losses seems to be cover and boom period has began to stay as sustainable development of Coal Industry as whole.

Community Development

Apart from welfare of employees, BCCL has embarked on programme of community development with the sole intent to improving the lot of needy is downtrodden people living near and around the coalfields. Apart from development work like augmenting drinking water facilities, health care, education etc. The major thrust of the programme is on promoting such simple village trades as tailoring can basket weaving, shoe making, food processing etc. Which have the potential to generate self employment?

The region in which BCCL operates consists mainly of SC/ST and Other backward communities. To give a particular thrust to the community development activities mainly directed towards uplift men of the above communities a tribal sub plan and special component plan for the welfare of SC/ST communities was initiated.

The inclusive growths of the Dhanbad district are closely related with economic prosperity of BCCL. It's one of the important life bloods which provide economical strength for individual living here. BCCL makes reserve some part of his profits every year for development of this district. In Mine and Mineral Development Regulation Act BCCL create Mineral Development fund to be constituted and equal amount of fund as that of royalty paid to the State Govt. BCCL provided 26% share in profit for regional development. This fund utilized for the development of this district.

Environment

Ecology and environment from an integrate part of the total development plan of all new project. Right from planning stage itself, environment protection measures both at the macro and micro level are taken into consideration.

BCCL has already generated baseline data in respect of air, water and noise pollution in different coalfields in order to monitor the need of environmental protection.

Reclamation of land after mining operation and tree plantation on a massive scale have been taken up to contain any damage to ecology and environment due to mining operation steps have been taken to contain pollution caused by dust, noise, and water.

Socio Economic Fallout

True to the concept of the Public sectors BCCL has also played its role as an agent of socio economics change in the region of its operation. The socio economics fallout as a result of its expending activities in Dhanbad is very tangible.

Jharia is one of the most important parts of BCCL. It is important coal mines in India and one of the largest in Asia. Once a treasure troupe of high – quality coking coal, uncontrollable coal fire have turned the mine into a slow burning inferno, but this is a place of smoldering land and noxious fumes that make breathing difficult. Yet thousands of inhabitants cling to this collapsing town, eking out a living. The problem is made worse by the fact that most mine workers including shovel drivers do not wear masks, boots or overalls. According to BCCL, there are 67 active fire zones in Jharia today. Despite the obvious evidence to the contrary. When asked about safety provisions. It's completely denied the fact that workers suffer from respiratory disorders.

The calculation for the true cost of coal examined the following factors:-

- * Cost for society attributable to climate change.
- * Human health impact that result from air pollution.
- * Fatalities due to major accident resulting from mining operations.

BCCL exposed the destruction caused by mining from blank lung disease to coal fires and acid mine drainage.

The solution provide the same level of energy 'services' while phasing out reliance on coal. This is possible because decades of technological progress have moved renewable energy technologies into the mainstream technologies like wind turbines, solar photovoltaic panels, biomass power plant and solar thermal collectors.

Welfare Amenities (Present Status)

- 1) Housing – 99.68% employees covered by housing facility. Almost 78436 houses provided by Company to employees in which 52419 houses is standard residences and 26017 houses is non standard residences. 41 colonies with 18000 quarters have been identified for repaired with their maintenance for 3 years. Action is also being taken for repair and maintenance of roads, drains, culverts in and around the colonies.
- 2) Medical - Almost 169261 beneficiaries taking benefit of BCCL medical plans. Some of the important medical activities and performances of BCCL are given bellow:-

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Company's Initiatives towards community Health, Hygiene and Safety	No. of beneficiary in 2011-12
Medical Mobile Van (MMVs)	1,03,213
CSR clinic	43,349
Health camps	20,450
Mission Mitwa	771
Eye camps	639
F.W. camps	828
Artificial limb center	11
Total beneficiaries	1,69,261

- 3) **Water Supply-** 99.53% population covered by water supply. Under the project Surplus Mine Water," almost 25000 populations will be benefited. This will not only serve the population in solving drinking water problem and water for irrigation but will also help in artificial aquifer recharging which turn will help in raising water to the zone at appropriate level. 25 nos Pressure filter plant of 5000gph to 15000gph capacity have been installation in different Area of BCCL.
- 4) **Education-** Totally 94 tutorial centers operated by BCCL. In which 54 Primary School, 20 Middle School, 07 High School, 02 Girls High School, 08 DAV Public School, 02 Vidya Vikas Samity, 01 Delhi Public School running in BCCL area.
- 5) **Recreation-** The following Sports and Cultural activities were organized by company during the year 2011-12 as per sports calendar:-
 - i) Chess Inter Area
 - ii) Bridge Inter Area
 - iii) Badminton Inter Area
 - iv) Volleyball Inter Area
 - v) Kabaddi Inter Area
 - vi) Football Inter Area
 - vii) Cricket Inter Area
 - viii) Zonal Athletic Meet
 - ix) Carom Inter Area
- 6) **Lighting-** Company providing in totally 53 villages solar lighting facilities.
- 7) **Blanket & Sweater distribution** – Totally 10400 Blankets and 4000 Sweaters have been provided by company to needy peoples.

Capital Expenditure to Community Development:-

Year	Expenditure (in laces)
2008-09	215.78
2009-10	275.88
2010-11	315.00
2011-12	550.00

During the year 2011-12 the approx expenditure on CSR/CD works was 550.00 laces which is higher at 74.60% than last year expenditure. The Budget provision for the year 2011-12 was Rs. 1450.00 laces out of which Rs. 115.00 laces was exclusively earmarked for medical services under CSR.

Suggestions

BCCL should make Social Income Statement as given format:-

- 1) Social Benefits and cost to staff
- A) Social Benefits to staff
- i) Medical and Hospital facilities

- ii) Educational facilities
- iii) Canteen facilities
- iv) Recreation, entertainment and cultural activities
- v) Housing and Township facilities
- vi) Water supply , Conductional electricity
- vii) Training and career development
- viii) Provident fund , Gratuity, Bonus, Insurance benefit
- ix) Holidays leave , encashment & LIC
- x) Other benefits
- B) Social cost to staff:-
- i) Lay off and involuntary termination.
- ii) Extra house put in officers voluntarily.etc.

Total cost of staff

Net Social Income to staff (A-B)

2. Social Benefits and cost to community:-

A) Social Benefits to community:-

- i) Local taxes paid to Panchayat Municipality
- ii) Environmental improvements
- iii) Generation of Job potential
- iv) Generation of business. etc
- B) Social costs to community:-

Increase in cost of living in the vicinity on account of the comment plants.

Total cost of staff:-

Net Social Income to community (A-B)

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Periodic Research

Social relevance and modernity in the historical plays of Girish Karnad

Abstract

Girish Karnad is probably the most active playwright of contemporary drama. He is an actor as well as director. He is connected with theatre, films, documentaries and TV Serials. His unique command over his dramatic material has made him one of the outstanding playwrights of India. He is one of the most prolific writers in India writing in Kannada and translating his own works himself into English later on. His plays are full innovations and deep insight into human mind. He is a good social thinker. He threw due light on the dark side of society. Every aspect of the society is dealt by Karnad. So social relevance and modernity is one of the characteristics of his plays. His plays have mostly a remarkable contemporary social relevance which establishes him as a thinker playwright. He has carefully and distinctively selected the themes of his plays which have the social contexts and meanings. He treats history as myths and instead of writing factual historical plays he reshapes the situation symbolically and comments on the contemporary issues. His Tughlaq, Tale-Danda and the Dreams of Tipu Sultan are best examples in this regard.

Keyword: Playwright, Contemporary, Outstanding, Innovations, Remarkable

Introduction

Karnad's Tughlaq a historical play deals with the complex and paradoxical character of mohammed-bin Tughlaq who ruled over India for about twenty six years. Although Karnad based Tughlaq's character, administration, politics, barbarity and savagery, he made some deviations from history, which he thinks essential for dramatic purpose. Karnad ingeniously creates the atmosphere of Tughlaq's days- an atmosphere of mutual distrust, frustrated idealism, communal intolerance, religious bigotry, treachery and sedition, rampant corruption and Tughlaq's unmitigated blood thirstiness and his final disillusionment. The play is the play of the sixties and reflects the political mood of disillusionment which were spread over the country after the death of Nehru who was an idealist and a visionary like Tughlaq. Karnad writes-

What struck me absolutely about Tughlaq's history was that it was contemporary. The fact that here was the most idealistic, the most intelligent king to come on the throne of Delhi....and one of the greatest failures also. And within a span of twenty years this tremendously capable man had gone to pieces. This seemed both due to his idealism as well as the shortcomings within him, such as his impatience, his cruelty, his feeling that he had the only correct answer, and I felt in the early sixties India had also come very far in the same direction-the twenty year period seemed to me very much a striking parallel.(8)

Tughlaq is a historical play but while writing it Karnad himself was struck by the parallelism between the reign of Tughlaq and contemporary history. The political chaos, which Karnad depicts in Tughlaq reminded many readers of the Nehru era in Indian history. Karnad finds this similarity a coincidence. He affirms, "I did not consciously write about the Nehru era I am always flattered when people tell me that it was about the Nehru era and equally applies to development of politics since then. But I think, well, that is a compliment that any playwright would be thrilled to get but it was not intended to be a contemporary play about contemporary situation."(8)

At every step the play reflects the chaos, disillusionment and corruption that followed the Nehru era, and this is one of the most important reasons of the popularity of the play. Tughlaq ruled in the 14th century and Nehru in the 1950s and 1960s. Striking parallels can easily be drawn between the two ages. This makes Tughlaq a great political allegory. An allegory is apparently a story but it carries within it a hidden moral lesson for the more discerning readers. It tells the story of the reign of



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Tughlaq and the rapid disintegration of his personality. It also tells of the shattering of ideals after the death of Nehru and the frustration and corruption that followed.

Despite the best efforts of Muhammad to bring the Hindus and Muslims together, he failed. This fact of fourteenth century still holds good. Gandhi, the idealist, made attempts to unite the Hindus and the Muslims. Nehru followed in Gandhi's footsteps. As a Prime Minister, he wanted to unite the two but he failed. There were Hindu-Muslim riots and deep rooted suspicion.

The double facedness of Muhammed very much resembles the two faces of the politicians of today. The craftiness of Tughlaq is parallel in the arch trickery and meanness adopted by those in power to wipe out the opposition and also that of the opposition to throw out the rulers in India after independence and also in the eighties, the longing to rule by all means is as true as it was during the reign of Tughlaq. Gandhi was murdered by a mad Hindu. Pandit Nehru had to give up Tughlaq's method of curbing the opposition. The rulers and politicians of our democracy adopted subtle methods which remain unseen by common eyes. In this, the rulers of the twentieth century are in no way different from the monarch of fourteenth century India.

In Tughlaq, Karnad puts forward some of the historical facts: the burning of Kanpur, the revolt of the Nawab of Avadh, Fakr-ud-din's revolt in Bengal, the uprising in Deccan and in Malabar. Ehsansha's declaration of independence and Bahal-ud-din Gashtasps collecting the army against the sultan, the revolt of Ain-ul-Mulk and Shihab-ud-din. All these incidents look like similar fissiparous tendencies in India today. The people in the south wanted a linguistic state, it was given to them, in the North the Punjabis demanding Khalistan are vocal from without and within and have been the cause of the murder of our beloved Prime Minister, Indira Gandhi. Who does not know that a cold war is going on between the rulers of Maharashtra and Bihar and those at the Centre? How is the India of today different from that of Tughlaq's days? Only the people and personages have changed, the forces and the causes haven't. The struggle to gain power and to perpetuate it is basic fact that remains unaltered.

What Karnad shows in Tughlaq is that the idealist and his idealism do not go hand in hand with a politician and his politics. The idealist politician is a misnomer in any age. There are many idealists today who have to face challenges which they try to curb down in their own crafty manner. They are trying to make history not only in their statecraft but by producing lasting results. In this the attempt of Tughlaq failed. He could not produce any lasting results. Hence he was called mad. His idealism had become a mockery. Every act, sane or foolish, he wanted to justify. This is done by our modern rulers also. Even wars which cost innumerable lives and cause greatest of havoc are justified. Nobody calls these rulers mad as the historians called Tughlaq, though they are no less mad than Tughlaq.

The play thus very substantially captures the Nehruvian era and the many ideological planning by government when people were dying of starvation and thereafter their ruined failing. The lurking threat to the new nation state-India for its survival, its political failure in diplomacy, and many political murders in the Indian sub-continent, and strike for division of many Indian states etc., are the appropriate parallelism with their contradictions and irony.

Tale- Danda is also a historical play. Tughlaq "confronts the problems of minority and majority religions (Hindusim and Islam) turning against each other, Tale-Danda goes further back in time to uncover the history of the majority religions turning against itself." (7) It deals with the social issues which confronted India during the twelfth century and which are relevant even today. The play centres on the Virasaiva movement of religious reform and protest, pioneered by Basavanna, the poet-saint in the twelfth century. It flourished for a time in Kalyan, now in Karnataka, under the patronage of king Bijjala. It aimed at abolishing the caste system and arranging intercaste marriages. This movement failed. Caste system is the fundamental cause of disunity and disintegration in Hinduism. "To focus on the hierarchical disunity of Hinduism," writes Dharwadkar, Karnad foregrounds the problem of caste and relegates the devotional, mystical and poetical features of the movement to the background." (11)

In the preface to the English translation of Tale-Danda Karnad wrote that the play was written in 1989 when the 'Mandir' and 'Mandal' movements were beginning to show again how relevant the questions posed by these thinkers (the Virasaivas) were for our age. The horror or subsequent events and the religious fanaticism that has gripped our national life today have only proved how dangerous it is to ignore the solutions they offered." (11)

Tale-Danda is a journey into history that brings forth issues equally relevant to our own times. It gives us a lesson loud and clear that unless we are ready to rise above parochial religions and social consideration we are doomed to suffer inhuman atrocities and bloodshed again and again.

The Dreams of Tipu Sultan closely follows the pattern of the history play established in Tughlaq and Tale-Danda. It deals with British colonialism in "its crucial early stages of military expansion. Karnad derived its theme from various historical sources in order to portray major characters convincingly. He has also created an imaginative plot and resonant dialogue in order to reveal their experiences. He has successfully created historical realism as he did in Tughlaq and Tale-Danda." (20) Its main theme is crisis in national polity due to internal dissensions and the presence of powerful foreign adversary. The Dreams of Tipu Sultan is relevant to contemporary India where internal dissensions on almost all national issues and the presence of alien terrorists are disturbing national harmony and peace.

Tipu is a representative of modernity and his modern outlook throws light on contemporaneity. Tipu is aware of the value of education. When Tipu is

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about to send a delegation to France for commercial and political purpose, his son Fath Haider wishes to join it. At that time, Tipu advises him that he should concentrate on his studies in order to get new and latest knowledge of the world and asks his son to concentrate on his studies instead of going on France tour. Tipu is a far-sighted ruler and father, who took his children with him while administrating. He wants to teach them the practical things of administration, therefore, involved children in the important decision-making process. This shows that he wants to develop his children mind with progressive and enlightened thoughts with the experience of practical things. He wants them to be a strong, knowledgeable, experienced and powerful ruler for future. Tipu is a devotee of new, scientific and innovative ideas. He readily accepts the novel ideas for the public welfare. His goals and ideals are high. He encourages industry, agriculture, trade and commerce for the said object, which gave Mysore State the glory, sound economy, prosperity and respectable place in Indian history. He tries to make his state modern on the basis of European model. Ban on the use of liquor, reform of the calendar, experiments in commerce, changing names of cities and towns, novel revenue and judicial regulations are some remarkable deeds of Tipu Sultan. He is an apostle of modernity, who had modern sensibility and has a great interest in trade. He encourages people to export many goods like pepper, chillies, sandalwood, cardamom and rice. He establishes factories in foreign countries at Muscat, Pegu, Cutch and Jiddah. He makes trade relations with China, France, Turkey and Iran. Things display that Tipu had a commercial view like Britishers.

Tipu has modern sensibility. He knows that to depend on other nation for goods is nothing but slavery. In fact, he wants to become his state as self-sufficient state. When he is sending a delegation to France, orders them to bring everything including new techniques, inventions, machines etc.

He knows that his land is rich and full of ivory, sandalwood and forests and we do not get anything if we sell these things to an individual trader. He is an ambitious ruler whose desire was to change the face of India. He was interested in business, trade, industry and soldiers. He knows that Europe makes herself wonderful due to new ideas, inventions and machines. The scientific approach of Europeans has resulted in rapid progress in every field. That's why he wants to observe these entire things in India in order to make India like Europe. And it is possible only when India would possess them. He (Tipu) wanted to open the doors of Mysore to new inventions, trade and commerce but without compromising on his independence and sovereignty of his state. He made growth and dynamism the foundation of his economic and commercial policies. In addition to heavy industries Tipu saw the value of luxury such as pearl culture, silkworms and import of fine asses from Arabia. Tipu is the Indian ruler who tried to make his state a Republic, his vision is to make his people progressive and prosperous.

It was not Tipu's dreams but his predictions that came true. The treachery and deceit of his own nobles which led to the Seringapatam Fort and Tipu's subsequent death certainly add the element of tragedy that surrounds the legend of Tipu Sultan. It is the tragedy of an Indian hero, though he was conscious about the encroachment of the colonists. The tragedy takes place not due to the English people only but the treachery committed by the Indians is responsible for the fall of Tipu Sultan.

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Periodic Research

Acceptance/Existence: A Postcolonial Study of Bapsi Sidhwa's *Ice CandyMan* (*Cracking India*)

Abstract

Fiction portrays the society as it sees. It continuously influences and is influenced by the life style of that society in which it is born. A writer portrays an ideal world and does not ignore the changes in the society, synchronic or diachronic, instead focuses on the improvement of the existing circumstances. Through this process the fiction writer is able to penetrate into the soul of society. The representation of women has been the most challenged aspect as women had been a subdued and subaltern group. The present paper will study the problem faced by women in patriarchal setup and their forced acceptance to exist.

Keyword: Postcolonial, Feminism, Partition, Hegemony, Patriarchy, Political Conflict.

Introduction

Postcolonial literature attempts to uncover the colonial ideologies by feminizing, marginalizing and dehumanizing the natives as 'the other'. Their representation relies upon a series of binary opposition as White/ Black, Mature/Immature, Progressive / Primitive, Civilized / Barbaric and European/ Native. The Postcolonial studies analyze the link between this representation and political practices in general. Such studies of 1980s and 1990s specially question the nationalist resistance to colonialism and seek to understand how oppression, resistance and adaptation have occurred during colonial times. With a passage of time, issues of modernization, development, democracy, displacement, gender, and even race have been stressed upon.

The voice of feminism is more perceptible and prominent in Pakistani fiction. The writers belonging to this branch have tried to portray women and their issues. Third world women are depicted as victims of male control. According to Mohanty, Third world women, like western women, are produced as subjects in historically and culturally specific ways by the societies in which they live and act as agents. Postcolonial fiction portrays the injustice, oppression, and exploitation by the colonizers and how the lives of women were doubly affected by the process of colonizing. Young says, 'Postcolonial Feminism is certainly concerned to analyze the nervous conditions of being a woman in a post colonial environment, whether in the social oppression of the post colony or the metropolis. Its concern is not in the first place with individual problems but with those that affect the whole communities' (115). Pakistani fiction is the continuation and extension of the fiction produced under the colonial rulers in India. As such it has inherited all the pros and cons of the fiction in India before the end of the colonial rule in Indo-Pak. The writers have portrayed the lives of Pakistani women under the imposing role of religious, social, and economic parameters. These roles are partly traditional and partly modern day realities that women face. They are portrayed mostly as round characters, which are initially bound and restrained by the chain of customs and tradition, constantly developing and changing. They are also possessed by the demons of the social taboos which are man-made and used to control the lives of the women. Writers show that women find themselves on the many horned dilemma while going through such circumstances. They are colonized and declared to be the 'others' and silent majority (subalterns). The Muslim and Hindu religion further contributed in making these taboos even stronger. The postcolonial men re-colonized the bodies and minds of their women as a reaction and in an effort to preserve their cultural values. Women, as in the past, were supposed to carry the burden of cultural values as an offshoot of post colonialism. But the same has brought also modern day realities to the forefront along with a new consciousness for



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women. But all this ignited the process of mental freedom though the bodies were still colonized by men.

Bapsi Sidhwa's novel *Ice Candy Man* (*Cracking India* as named abroad) depicts a broad cross-section of Lahore society both before and after the city became a part of Pakistan. This approach to the novel, one that treats it as a quasi-historical record, necessitates an acknowledgment of arguments about Partition historiography. *Cracking India* as a piece of fiction that seeks to represent the psychological and social realities of a specific place at a specific time (Lahore in 1942–1948), and an attention to the representational strategies that allow the text to accrue meaning. Further one can find here a story about love lost, trust deceived and the subjugation of the mind by deliberately subjugating the body. The novel is also about redemption, intolerance, shrugging of passivity duplicity of colonialism.

This paper will analyze the impact of colonization on *Ayah* also named as Shanta, in a South Asian native created by Bapsi Sidhwa in her *Ice Candy Man* (1988). Sidhwa portrays the traumatic events of partition through the eyes of an eight years old Parsi girl, Lenny, from Lahore, who is the uninvolved observer of the systemic violence of nation making. She belongs to the minority Zoroastrian community, neither Hindu nor Muslim nor Sikh but a wealthy Parsi family suffering the trauma in the most sensational way, through the loss of friends, neighbors, and servants. Lenny is specially privileged by her household due to a crippled leg from the after effects of Polio. She cherishes herself for this profuse separation from all other children and is looked after from morning to night by her Ayah (Shanta), named only once in passing but referred through the narrative by her function i.e. of servant. Ayah is a young woman beautiful in body and spirit generating a group of men of all persuasions and occupations, flocking around her hoping to be meted a favor or glance from her. During the riots Lenny's ayah is abducted and sold by her so called lover Ice candy man also called Dilnawaj, her Muslim suitor. Later she is married to the same person and gets her name changed as Mumtaz. Such a portrayal by Sidhwa has pushed her female character leading to a treatment like a pawn under the rampant patriarchal hegemony. Sidhwa effectively portrays women as a commodity used as per convenience of the man.

The portrayal of women by Sidhwa can be seen as a reaction against the negative portrayals of the local culture by the colonizers. Exploring the themes of struggles for independence, cultural conflict, displacement and feminism in their local settings was not accidental but a deliberate phenomenon. Before British colonialism, for example, life of Indian Muslim women was segregated and limited to the small world in which they lived and died, usually without making any significant mark in the society. The story of Ayah is exemplary: like her, thousands of women were abducted and/or raped by men of the "enemy" community during the chaotic

months before and after Partition. The colonial British state was turning into postcolonial nation-states having its own borders, structures of order and power hierarchies. Ayah was raped during the ontological condition of the newly divided territories: bodies committing crimes upon other bodies, and body of Ayah does not speak. The violence practiced upon her body eludes the story. Ayah, as the subaltern female figure of Sidhwa's narrative, leads us directly to Spivak's path-breaking question, "Can the Subaltern Speak?" Focusing on the figure of Ayah, the writer analyzes the ways she inhabits the subaltern subject position and how her abduction and recovery participate in the contested ideologies of Partition history. The canvas of the novel is expansive whereas Ayah's story is symbolic of the power that cannot be questioned. It gives us a multi-contextual dimension of Ayah's abduction with a layered view of Lahore society.

She is -- not unlike India itself -- a symbol of larger-than-life reality, truly 'perplexing'. Lenny also notices that, 'beggars, holy men, hawkers, cart-drivers, cooks, coolies and cyclists' lust after her. Says she:

"The covetous glances Ayah draws educate me. Up and down, they look at her. Stub-handed twisted beggars and dusty old beggars on crutches drop their poses and stare at her with hard, alert eyes. Holy men, masked in piety, shove aside their pretenses to ogle her with lust. Hawkers, cart-drivers, cooks, coolies and cyclists turn their heads as she passes, pushing my pram with the unconcern of the Hindu goddess she worships." (195)

Ayah, who at the outset is just a maid at the Sethi residence looking after infant Lenny, all of a sudden is swept off her cozy corner into a whirlpool of political upheaval. She is forced to change from being an ordinary domestic help to a public entertainer in a matter of few months. What shocks and saddens the reader is the coarse treatment she meets for no fault of hers. Here's someone who was till now secure, in the next minute rendered helpless. She becomes just a puppet in the hands of a fate worse than death. She is just an example of the several millions of displaced, looted and raped Hindu and Muslim women during one of the harshest political phases in the history of the subcontinent. In the course of the novel it seems apparent that Ayah, as she is sobbing to masseur's proposal to marry her, says, "I'm already yours," (201) thus echoing its more radical poignant undercurrent that she was already lost.

Lenny herself is a privileged child and is thus a doubly "neutral" narrator, by virtue of her age and ethno-religious affiliation. While her perspective is that of the upper-class child, her attachment, both physical and mental, to her Ayah allows her (and the reader) access to the working-class world of cooks, gardeners, masseurs and ice-cream sellers. Thus, the novel belies its own opening statement that Lenny's "world is compressed" (11) for Lenny roams well beyond the boundaries of her own Parsi family and community. She is engaged socially with a wide variety of people, and one striking theme is the

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pervasiveness of sexual predation and violence. The patterns of Lenny's life reveal the physical and psychological aggression motivated by male sexual dominance. The society during pre-Partition – untainted by communal conflict—was still immersed with violence, particularly directed against women. Thus what occurred during the partition was not an anomaly but merely a re-creation of an already familiar phenomenon. Even Lenny is not safe from the condition of being 'the second sex' (Beauvoir). She finds herself fending off the unwanted attentions of her older cousin who fumbles with her despite all prohibitions and succeeds on occasion to touch her private parts. Lenny, clearly a mimic of Ayah, learns lessons and sees the world through her maidservant's eyes, experiencing a similar fate. As the child's body turns into a woman, she finds about her position of being the 'other'.

Sudhir Kakar, perhaps the most well known psychoanalyst in *India Today*, has noted the connection between social mores and sexual violence in his book *The Colours of Violence*. He discusses the empirical evidences to suggest that the greater the legitimization of violence in some approved areas of life, the more is the likelihood that force will also be used in other spheres where it may not be approved. Kakar's analysis details neatly with the patriarchal world that Sidhwa depicts, a world in which male aggression, especially against women, is ever-present. The ruptures or cracks are evident in the examples of violence given in the text. The novel highlights that external events can unleash the animalistic characteristics in humans, so much so that they are blinded by prejudice and selfishness and even use religion to justify their beastly activities. Almost all the males are apathetic and indulged in destructive violence.

Ayah's story focuses attention on the abductions of women as the symbolic epicenter of communal violence and various episodes clearly describe how sexual objectification and exploitation of women was an accepted and routine affair in the society. In the beginning Ayah is a sexually empowered woman, deploying her sensuality to rule over a circle of religiously-diverse suitors. But later on she is overpowered. It is precisely the pervasiveness and habitual acceptance of sexual violence that eventually leads to the proliferation of violent acts enacted on the bodies of women. Ayah is, presumably, coerced into accepting Ice candy man as husband once the kidnapping and rapes have left her no option. After Ayah's abduction in February 1948, the Sethi family tracks her down and when they have "arranged to have her sent to Amritsar" where she has family (262), Ice-candy man marries her in order to install her as a "dancing girl" in Lahore's red-light district. Ice candy man by his sexual control over Ayah exposes a man's desire to subjugate a woman thus suggesting another way of proving the superiority of one religion over the other. The woman's body is reduced to the token status of a tool in man's articulation of identity and assertion. When Godmother and Lenny finally meet Ayah/Shanta/Mumtaz, she declares that she is "not alive" (274), and begs them to "get [her] away from" her husband (275). Instead of becoming the nexus for a diverse community the body is decorated and marched in public, or in a place like Hira Mandi where the distance between public and private sphere collapses. Shanta wants to flee

from here to there, but where. There also she is not sure of her future. Shanta's eyes too are symbolic as they have a dual function: marking both the dead and the exiled from this massacre of history called the partition of British India. Dead while living and exiled from the familiar in terms of home, labor and love, Shanta's eyes provide the 'unsayable' alternate history, the 'dead' writing history with their absence.

The account of Sidhwa's fiction regarding feminism is never complete unless we refer to the feminism portrayed in the novel *The Ice-Candy Man* (1988). Women's bodies were twice colonized, first by the British and then by the men in the Indo-Pak subcontinent, as suggested by Sara Suleri (1989). Gayatri Chakravorty Spivak also claims that women in the subcontinent were simply a silent majority whom she termed as subalterns. According to her, this aspect of women in India had become even stronger because of the impact of colonialism (Morton 2000). Pre-partition-Shanta is the object of attraction for many Muslim and non-Muslim men, especially masseur. But post-partition-Shanta is only a ravaged and molested woman who has nothing to fall back upon other than selling her body as a dancing woman. None of her lovers could save her from becoming so. Shanta is not one woman but a representative of thousands of Hindu, Muslim and other minority women who were raped, killed, and cut to pieces because of the aftermaths of partition. But with her courage and determination she survives and ultimately reaches her family in Amritsar. Women are the ones who have to bear the impact of the wrong doings done by the males. These men are seen violating the rights of women throughout the novel.

Sidhwa pays particular attention to the severe price paid by women in absolute patriarchy, as is her stated goal by writing a novel in which a woman, in the figure of the Ayah, pays the highest price for men's wars and nationalistic endeavors. On the whole, the women are a disenfranchised class. Although women do inhabit a sisterhood, but it remains unnoticed by the social system. Only in the brutal dehumanization after death are they allowed to exist freely. Is it existence or acceptance of the fate of subservient class i.e. women?

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Arnold Wesker and the New Wave British Theatre

Abstract

Arnold Wesker belongs to the New Wave of the British theatre of the late 1950s heralded by John Osborne's *Look Back in Anger* performed at the Royal Court theatre on May 8, 1956. This New Wave theatre was the result of dissatisfied, frustrated and angry mood of the young generation in the wake of the Second World War. All the idealized good causes for meaningful action had vanished with the failure of the Spanish Civil War, the Hungarian Revolution and the Suez fiasco. The middle class realistic themes of the well made plays did not satisfy the new generation, and the poetic drama failed to synthesize dialogue and action in the wake of the crisis of the times. The New Wave drama cleared the debris of the artificial comedies, sterile well made plays and vacant pseudo Elizabethan dramas. Mention may be made of John Osborne, Harold Pinter, John Arden and Arnold Wesker, who came out with new themes representing the mood of the youth of the times. While most of the New Wave dramatists were sensational, Arnold Wesker wrote his plays deriving themes from the 'lived experience' of his life and is almost autobiographical and positive in his approach. He is the perfect example of the new working class dramatist. Most of his contemporaries were led by the European influence of Beckett, Sartre, Ionesco and Brecht, Wesker maintains his original stand of being simple and direct. He is the most consistent playwright given to constant experiment in form and technique and defies categorization. His plays can not be straight jacketed into any set formula like Absurd Drama, Comedy of Menace, Theatre of Cruelty and Epic theatre. He is a writer, actor, director, producer—all welded into one. With his immense knowledge of stage-craft, he is unique and is a living prodigy in the British theatre today.

Keyword: Orthodox, Revolution, Autobiography

Introduction

Arnold Wesker belongs to the New Wave of British Theatre of the late 1950s heralded by John Osborne's *Look Back in Anger* performed at the Royal Court Theatre on May 8, 1956. The other members of this New Wave are John Osborne, Harold Pinter, John Arden, David Storey, Edward Bond, Bernard Kops, Shelagh Delaney, Robert Bolt, Peter Shaffer, John Mortimer etc. This sudden resurgence of a new generation of the young dramatists has been termed as the Renaissance of the British Drama. John Russell Brown calls this period the New Elizabethan Age and draws parallels with the age of Shakespeare. (Brown, John Russell. 5-7). This is the time when like the Elizabethan Age 'everyone seems to be writing plays'. (Brown, John Russell. 1). Writers of all ages from Owen Wymark, a housewife with four children to Shelagh Delaney, a girl of nineteen years wrote plays.

There are several reasons to this sudden spurt of New Wave British Drama. First, it was a revolt against orthodox middle class realistic drama of writers like N.C. Hunter, J.B. Priestley, Ustinov and Rattigan and the poetic drama of T.S. Eliot and Christopher Fry of the times. It was a rejection of versions of theatre reality made habitual by the Middle class drama. The orthodox middle class drama, observes Raymond Williams:

'starts and ends in appearances. It is concerned on the stage a real looking room, a real looking people making real sounding conversations. This is all right as far as it goes, but invariably it is not far. The whole world of inner and normally inarticulate experience, the whole world of social process, which makes history yet is never clearly presented on the surface, are alike excluded. The more real all it looks, the less real it may actually be.' (Williams, Raymond 28)

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and didn't want to be arrested for going to gay bars.

New Wave Dramatists broke away from these conventions and appearances and used new kinds of dramatic effect for communicating this underlying reality.

Similarly the poetic drama too failed to communicate this underlying reality. The verse drama started as a reaction to the metallic and reiterative prose utterance (Nicholl, A 328) of the realistic drama and offered musical dramatic speech. But in spite of Eliot's and Fry's best efforts it ended in mannered dialogues and failed to touch the inner and normally inarticulate experience of the audience. As long as religious and historical themes were concerned, it could appeal to the audience's taste with its poetic eloquence. But when confronted with the modern themes especially after the Second World War, it fell short off synthesizing dialogue and action with its poetry. It was difficult for a character to order a servant to bring a pack of cigarette and attend the telephone call simultaneously in poetry. Its theatricality was lost. The New Wave drama rejected it and strode upon new themes of common life experience hitherto unexplored. For them the general state of feelings mattered more than any precise social setting.

The major noticeable feature of this New Wave dramatists is that they were all young. Most of them were born around 1930 and had undergone harrowing experience of the political events of their times like the Spanish Civil War, the Second World War and the suppression of the Hungarian Revolution of 1956 by Russia. The impact of the Second World War was the most damaging one. The war had dealt a crushing blow leading to fractured beliefs and convictions everywhere. It bewildered them and made them disillusioned about their existing values and their faith in Christian God. It created a chaotic situation, nothing left to lean upon. It broke all shibboleth, especially the British class system. They experienced general restlessness, disorganization, and frustration. This structure of feeling or the new wave of feeling compelled them to talk in a new voice.

The year 1956 when the New Wave drama emerged, has a special significance in the British history. By now the British Empire was reduced to its minimum, its economy was in tattered condition and England was termed as the 'sick man of Europe'. (Ford. Boris 54.) The Suez fiasco has a demoralising effect on the psyche of the average English man. The ten years efforts from 1945 to 1955 by the subsequent governments in the reconstruction and rebuilding of the shattered economy of the nation were not up to the mark and many eye brows were lifted to question their efficacy. The young people, especially with working class background having the full benefit of the Education Act of 1944 were restless. The monster of unemployment gazed into their eyes. They blamed their older generation for their ills and questioned almost everything of the establishment. Getting no convincing answer they grew angry. Because of their angry mood, the image of angry young man emerged. This mood gave birth to the New Wave Drama.

Before 1956, the British Theatre was dominated by foreign productions especially those of Beckett, Ionesco, Anouilh, Brecht, Sartre Giradoux etc. The New Wave dramatists were open to this European theatre influence. Its techniques and themes influenced the British young dramatists. For example, Pinter was much influenced by Beckett's use of language of existential themes. Brecht's influence is clearly perceptible in Arden, Osborne and Robert Bolt. This exposure to varied experiments in form and technique emboldened the New Wave Dramatists to exploit their own vision in a broader perspective with the current and popular themes of their times. They came with their low- life drama with new themes involving the ordinary man's ordinary experience including the physical ones which were thought the themes incompatible to the theatre before.

This New Wave drama has been termed as 'Interrogatory drama' or drama of revolt. (Rabey, David Ian.30), that assumes a confrontational attitude towards the platitudes of the older generation, with particular attention to the question of social purpose in the wake of Second World War. The New Wave dramatists thought that Britain was not rebuilding as promised, there was stagnation in every field and the conventional life offered little excitement. The same was true in the cultural field, especially in the theatre. The audiences were what Rathigan calls 'Aunt Edna' or conditioned audience 'timid playgoers in search of reassurances'. (Brown.J.R. ed. 71). There was still a middle class Britain debating liberal values and philosophical concepts or concerned about traditional family and domestic values. The New Wave theatre broke away from the middle class inhibitions and spread out to adopt themes which were hitherto unexplored. It differed in matters of themes, characters and attitudes and dealt themes with freedom. This new freedom enabled them to tackle the subjects which really concerned them, and which have increasingly concerned the British people as a whole, in a natural and realistic way. Traditional rules of sexual morality and conventions of marriage and family life have been questioned and overthrown. It has also mocked and abused leading figures of the political, social and religious establishment.

John Russell Brown comments that these New Wave dramatists are:

Creatively involved with society and seek a full revelations in their plays of what they find in the worlds around them and within them. They write for the theatre because this is the art form which allows them to show the complexity of those worlds: the permanent and frightening forces that lie behind each explosive crisis and each boring, dehumanizing routine, the limitations, dangers and experiments of personal, subjective view: the impossibility of judging any except in relation to other, the strength of truth and permanence of idealism. They write youthful plays, logical, sensational, theatrical, exploratory,

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complicated and hence, responsible medium. (Brown J.R. 14)

The best specimen of the New Wave drama is Osborne's *Look Back in Anger*. This single play shattered the myth and philosophy of the British System and advocated for the complete overhaul of the British society with all its settled establishment. This was like Chekhov's ironic tragedies which sympathetically observe:

'Lost chance, missed opportunity, the sterility of self defeating, self preconception and the irreversible decline of system, in which energy exists only residually and is lost for the purpose of doing work, a situation in which both fixity and fluidity imply a sense of everything running down into inertia. (Rabey David Ian. 1-2)

Jimmy Porter with his 'burning virility of mind and spirit' and 'blistering honesty' is a university graduate, married to a middle class girl named Alison. After trying unsuccessfully various jobs, is a frustrated man who finds himself misfit and malcontent one and directs his anger against those who are responsible for creating the irreversible circumstances in which he is caught. His 'Verbal Cannibalism' (Elson, John. 72) spares none; and has 'the iconoclast peculiar to that monstrous type, the frustrated Messiah, who because he can not save the world, comes to feel the desire to destroy it instead.' (A.E. Dyson in Brown's J.R. Modern British Dramatist. 52)

Osborne's 'Look Back in Anger' kicked the door open for virulent attack on vicariousness of British society and a large number of plays dealing with themes and topics hitherto unexplored, brought a revolution in the British theatre. In themes, characters, settings, real life behaviour, dialogue, the new dramatists are obviously responding to the society in which they live. (Brown, John Russell. 9) Kenneth Tynan's significant review of 'Look Back in Anger' associated it with youth and vitality and directness of feeling. 'I doubt if I could believe anymore who did not wish to see 'Look Back in Anger'. It is the best young play of the decade'. (Rabey, David Ian, 31).

Most of the New Wave dramatists liked to be sensational, to surprise and shock, to be fantastic, unlikely outrageous, choosing themes like homosexuality, prostitution and abortion, nymphomania, violent or casual deaths, disfigurement and callow humour. In Edward Bond's play *Saved*, a baby is stoned to death in its perambulator on the open stage, in John Arden's *Sergeant Mushgrave's Dance*, Mushgrave prepares for the killing of twenty five persons, Jimmy Porter, in Osborne's *Look Back in Anger* is highly vociferous against almost all aspects of the establishment, and in Pinter's *The Birthday Party* Stanley is bashed and brain washed and made completely dazed.

But in the plays of Arnold Wesker such sensationalism is not found. He draws materials for his plays from 'experienced reality' (<http://www.arnoldwesker.com>) of his life and is almost autobiographical in his plays. His first five plays – *Chicken Soup with Barley* (1958), *Roots* (1959), *The*

Kitchen (1959), *I'm Talking About Jerusalem*, (1960) and *Chips with Everything* (1962) are recreations of his family life and his experience as a conscript in R.A.F. rendered dramatically. Initially, the critics reared on Shaw and Galsworthy, could not fathom their significance. Because of much importance to domesticity, tea and food, these were termed as 'Kitchen Sink Drama'. When these plays were performed at the West End, Wesker received universal acclaim and though, not yet thirty years of age, he was hailed as 'the most promising young dramatist to come into the English Theatre since the end of war' (Taylor, John Russell. . 143). These plays display Wesker's 'emotional maturity and his command of action in depth'. (Kitchin Laurence. Drama with a message – Arnold Wesker page no. 73).

Wesker's trilogy (*Chicken Soup with Barley*, *Roots*, *I'm Talking About Jerusalem*) is one of the first serious and successful political plays to be written in England. In these plays Wesker's instinct has worked admirably in leading him to concern himself with the changing orientation of his characters towards communism over a twenty year period, from 1936 to 1956. *The Kitchen* was written earlier but performed in 1959. It is a 'tour de force' as Wesker demonstrates the working of a large kitchen of a large restaurant catering to some two thousand customers at a time. The activity of the chefs, waitresses etc. build up into a complex image of a man as a working animal (Hayman, Ronald page no. 16), *Chips with Everything* is a factual demonstration of the conscripts in R.A.F. and the harsh mode of so called discipline practised there. These five plays impressed the audience profoundly and made John Russell Taylor hailed these plays as the result of Wesker's 'bold conception' of social realities.

Arnold Wesker is the perfect example of the new working class dramatists. He was born in the East End, London in 1932 in a working class family. His father was a refugee from Russia, his mother from Hungary. The anti-semitic 'pogrom' in Eastern Europe brought many such refugees to the East End, London. Wesker seemed in the first place a highly unlikely candidate for literary distinction. His father was a poor tailor and his mother had to supplement the family income by doing domestic service in other people's houses. Wesker makes no secret of his early life. He tells:

'I find in myself a compulsion to try as much as possible not to cheat and let people know me personally' (Hayman, Ronald. Contemporary Playwright- Arnold Wesker. page no. 1).

In an interview with Ronald Hayman, Wesker confirmed it that in order to be faithful to his materials, he has modelled most of his characters on the members of his family. (Contemporary playwright – Arnold Wesker page no. 2-4). Wesker adopted the technique of 'basic realism' and recreated scenes and situations factual to his personal life. He told Ronald Hayman that he did so 'to disarm as much criticism as possible', and let them see 'this is what I have been

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through. This is how I have seen it or feel about, or suffered about it or been happy about it and I think you ought to know just in case you can beware of it or share it. But I have both been through it also dared to go through it.' (Hayman, Ronald. Contemporary playwright Arnold Wesker. page no. 1)

Plays written by Wesker after he became the artistic director of Centre 42 in 1961, markedly differ from his early five plays. He now seems to be deviating from his 'basic realism' and trying to find out a new idiom for his artistic expression. His plays *Four Seasons* 1965 and *Their Very Own Golden City* (1966) are illustrations of this point. As an artistic director of Centre 42, he tried his best to make it a cultural movement for popularizing the arts. Regarding arts and its relation with society he wrote and spoke in detail. His views regarding Centre 42, its aims and objectives have been collected and published in a book called *Fears of Fragmentation* (1970). But the Centre 42 failed as Wesker could not get proper support from the trade unions which had been the source of Centre 42's emergence.

The plays which follow have varieties of interest and show Wesker as an untiring dramatic genius. *The Friends* (1970) deals with the theme of death and the confrontation of the characters with their own mortality. *The Old Ones* (1970) is related with the conflict between the optimistic and pessimistic ritual, a 'quotation competition' in which the main characters confront each other with the ultimate, the irrefutable quotations from the classics to prove that life is neither good nor bad. Wesker's next play *The Journalists* (1972) covers six days in six different weeks and offers realistic picture of reporting. The play is lauded for its originality of form and richness of content. *Shylock* (1976) is a play where Wesker rewrites Shakespeare's *The Merchant of Venice* to remove the stigma from Shylock, the Jew as a blood sucker. *Love Letters on a Blue Paper* (1978) shows Wesker's insight into psychology of a wife who writes love letters to her dying husband. While *One More Ride on the Merry Go Round* (1978) deals with a comic plot, *Caritas* (1980) satirizes the religious dogma, dogma of any kind as a dehumanizing agent. Christina in this play is doomed by the church authorities as her natural instincts are crushed. The decade 1970 to 1980 has been a prolific one for Wesker as he ventured into untouched materials for the subjects of his plays.

Wesker made a leap forward in 1980s by working on a major project of a series of *Six One Woman Plays*- *Annie Wobler* (1982), *Four Portraits-of Mothers* (1982), *Yardsale* (1983), *Whatever Happened to Betty Lemon* (1986), *The Mistress* (1988) and *Letter to a Daughter* (1990). This project of a series of six one woman plays stands apart in the New Wave of British drama as no other contemporary writer has ever attempted a thing like this. In *Annie Wobler*, we see Annie in three different *avatars*- Annie as an old tramp cum char- lady who reminisces her old life (It is pointed out by Wesker that Annie Wobler is the real name of a childhood memory). The second is of Anna, a working class student who has done her

B.A. with first class honours and is preparing for her first date with her boyfriend. The third is Annabella, a writer whose third novel is a success and is now preparing to meet three interviewers. *Four Portraits-of Mothers* was written for a festival in Japan of one act plays on the subject of the Mother. These portraits are of Ruth, as an unmarried mother, Naomi a mother who never was, Miriam, as a failed mother, Deborah, as mother earth. *Yardsale* is about Stephanie, a middle aged school teacher who is deserted by her husband after twenty four years of married life. *Whatever Happened to Betty Lemon* tells about a widow of a Labour peer, crippled by old age. She is adjudged as the 'handicapped woman of the year' and is preparing her speech for the occasion. Wesker calls it 'a self portrait of defiance and despair' (<http://www.arnoldwesker.com>). *The Mistress* is about Samantha who waits for her 'that phone call' while deciding where to send her charities. *Letter to a Daughter* is about Melanie, an established chansonnier writing a letter of advice to her eleven year old daughter, the letter turns out to be her confession. These *Six One Woman* plays display woman in various spheres of life as defiant, supportive, frustrated, mean, suffering and joyous. About these plays Wesker tells 'the best of whatever is my talent and intelligence has gone into these plays' (Arnold Wesker *Plays 2, One Woman Plays*. Methuen 2001 page no. IX).

Wesker's experiment with form and content continued in the 1990s. The plays which he wrote in this period include *Men Die Women Survive* (1990), *Wild Spring* (1994), *Bluey* (1993), *Denial* (1997), *Break My Heart* (1997), *Groupie* (2001) and *Longitude* (2002). In these plays Wesker deals with various current themes of national and international importance. In *Denial* he deals with the theme of 'False memory syndrome' and the issue of child abuse by her own parents and relatives. It is a provocative play of ideas in contemporary British Theatre. (<http://www.arnoldwesker.com>). Similarly *Wild Spring* deals with acting as a metaphor for the false images with which we fall in love. *Groupie* is about an old woman of sixty one of East End Street, London who meets the man she admires but is shocked to see his condition.

A cursory reading of Wesker's plays reveals his profound concern for women. His women characters outnumber their male counterparts. He is different in this respect from his contemporary playwrights like Osborne, David Storey, Edward Bond, John Arden, Harold Pinter, John Whiting, Bernard Kops, Robert Bolt, Peter Shaffer, Shelagh Delaney and John Mortimer. Wesker is the only writer of the contemporary British Theatre who has always delineated women with sympathy and understanding (<http://www.arnoldwesker.com>). Women in all their *avatars* – daughter, sister, fiancée, wife, mother, aunt, grandmother etc. find full expression in his plays. Wesker's women mostly belong to the working class. He places them in various day to day situations, allows them time and space to grow and then records

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their idealism, their frustration and their disillusionment. Mention may be made of Monique of *The Kitchen* (1957), Sarah Kahn of *Chicken Soup With Barley* (1958) Beatie Bryant of *Roots* (1959) Beatrice of *The Four Seasons* (1965), Mary Mortimer of *The Journalists* (1972), Sonia of *Love Letters on a Blue Paper* (1976), Nita of *One More Ride on the Merry Go Round* (1978), Annie of *Annie Wobler* (1982), Stephanie of *Yardsale* (1983), Maratha of *When God Wanted a Son* (1986), Lady Betty Lemon of *Whatever Happened to Betty Lemon* (1986), Rosie of *Lady Othello* (1987), Samantha of *The Mistress* (1988), Melanie of *Letter to a Daughter* (1990), The three women of *Men Die Women Survive* (1990), Jenny of *Denial* (1997), Maeve of *Break My Heart* (1997), Mattie Beaucourt of *Grouper* (2001)

Much work has been done on Wesker. Writers like Glenda Leeming, Robert Wilcher, Reade W. Dorman have documented many aspects of his plays. Reviewers like John Peter, Kate Bassatt, Tom Phillips, Gerry Parker, Bathesba, and Richrad Cottle have written favourably about Wesker's plays in general and his women characters in particular. However, my attention has been drawn to the exclusive portrayal of women in his Six One Woman Plays namely, *Annie Wobler*, *Four Portraits- of Mothers*, *YardSale*, *Whatever Happened to Betty Lemon*, *The Mistress*, and *Letter to a Daughter*. These plays have not been adequately dealt with by critics. The women in these plays break the fetters that restrict them and breathe freely. In my study I will pay special emphasis to his One Woman Plays because none of his contemporaries have given so much emphasis to women.

Arnold Wesker's concern for women seems to be influenced by the Feminist Movement of his time. The Feminist Movement in England is associated with Virginia Woolf (1882-1941) whose *A Room of One's Own* (1929) and numerous other essays on Women authors heralded a new era in Feminist Writers.

At the time when Wesker was writing, the Feminist Movement was already established. The feminist critics derided the literature written by men for its depiction of women as marginal, docile and subservient to men's interest and emotional needs and fears. However, they appreciated Chaucer, Shakespeare, Samuel Richardson, Henrik, Ibsen and G.B. Shaw for rising above the sexual prejudices of their times. 1970s and 1980s saw an upsurge in feministic writings. *The Female Imagination* (1975) of Patricia Meyer Spacks, *Ellen Moer's Literary Women* (1976), Elaine Showalter's *A Literature of their Own* (1977), Jane Gallop's *The Daughter's Seduction: Feminism and Psycho Analysis* (1982) and Helene Cixous and Catherine Clement's *The Newly Born Woman* (1986) boosted the morale of feminist writings. I will study whether current feminist thought and practices influenced Arnold Wesker's writings.

Most of Wesker's women belong to the working classes. In Wesker's time there was much talk about unemployment and economic depression. Different trade unions were formed and labour classes

were demanding better deals. Women workers were especially more loud in their demands. There was maximum number of strikes in 1970s and 1980s. In search of work the marginal working classes moved from place to place and devised ways and means for self-employment. This aspect has attracted Wesker's attention and has been dramatised in his plays. His women characters have Wesker's sympathy because inspite of economic hardship they never lose their intrinsic values.

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Endangered Femininity- Intensity and Magnitude of Crime Against Girl Child

Abstract

Violence against Woman is one of the most serious breach of human rights that everyone is privileged of due to her being born as an Individual. In recent years there has been alarming increase in the crimes against girl children that cuts across cultures, norms and society. Girls are being killed, sexually abused, assaulted, hacked, being burnt into ashes. With the inception of Feminist discourse at the National and International Forums, the intensity and magnitude of violence against girl children has been widely focused. The focus is mainly upon their socio-legal status, education, malnutrition, female feticide, female infanticide, physical, emotional, psychological violence that ravages the dignity,, modesty, integrity and sanctity of woman of different age groups. The traumatic episode of 'Damini' a Para- Medical student on 16th Dec, 2012 in the NCR Delhi reveals the nightmare for the girls in a so called civil society so far as their mobility and security is concerned. The traumatic episode not only reveals the ugly face of the society but also the inhuman nature of crimes against girls. The Mass mobilization & unprecedented agitation against the system and the sympathy for the deceased undoubtedly gave impetus to the media and the Government to take initiative to curb the menace. The question of debate is- How can the inhuman treatment with the girls be curbed? How to frame the law or to devise a system that may prove an effective deterrence to the crime against girls?

Keyword: Incestuous behaviour, Obscurantism, subservient role, docility, Psycho-somatic disorder

Introduction

The Problem- Crimes against Girls and Woman is found in myriad forms that can be attributed mainly to widespread violence, tolerance of it, ignoring it either in the name of social reputation, stereotyped notions of honour or the loss of social prestige. This constitutes the major violation of human rights of girls and woman. Surprisingly such incidents are largely been ignored and unacknowledged as human rights issue. Studies conducted by United Nations reveal-" Woman in great numbers around the world are Murdered, assaulted, sexually abused, humiliated within their own homes and that this behavior does not seem to be uncommon or unusual¹". The 'Damini' episode got the coverage of the media and the public not only for its nature of being very heinous and inhuman but because of the mass agitation against the Government Machinery. The Media and the News papers focused on hundreds of cases of sexual abuse of minor girls (04-12 years age group) since the heinous incident took place on 16th of Dec 2013. There is an alarming increase in crimes against minor girls who are being victimized by the monsters of humanity. The issue of current discourse is- 'how to frame a system to ensure the equal status to girls ensuring their basic human rights to survive and to live with dignity'?

The research paper intends to focus the intensity and magnitude of crimes against the minor girls that is being witnessed in the form of incest and other types of sexual abuse. **The objectives** of the research paper are-

- To explore the intensity and magnitude of crimes against girl children, its causes & consequences
- To analyse the problems of girl children who have been victims of incestuous behavior.
- To investigate the level of legal & society's response towards the problems of girl children

Methodology- The research paper is based on the data available from secondary sources. For this purpose the reports of different studies on incest and the reports of NCRB from 2006 onward has been widely



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explored. The data available in the Internet, the news papers and magazines has been widely used.

Description

The crimes against girls and woman is one of the serious threats subjected to obscurantism & neglect by it's being purely a private discourse. This most often leads to policy or system failure in dealing with the matter effectively. The worst aspect of the gendered nature of violence is-

- The family members ignore if the nature of crime is sexual and inflicted by known persons, in the name of family reputation. In most of the cases the victims of such types of violence do not assert.
- The victim ignores if the nature of crime is domestic violence and inflicted by the intimate relatives, driven by the fear of in-secured future of the girls.
- The victim and her kins ignore if the crime is committed outside the premises of the house in the nature of simple sexual harassment like eve-teasing, using abusive language and so on considering it of trivial nature. This may provoke further violence of severe nature.
- Some times crimes of severe nature, committed inside the premises of the household or outside too is ignored, either in the name of honour or by the very consideration of not getting adequate redressal or remedy for the grievances.

These are some of the presumptions that shows the ugly face of the crime and human rights violation of girls & women. This pattern sometimes increases the possibility of crime

In September 1998 "an NGO working with victims of incest revealed that almost 76% of women in India have suffered from of sexual abuse and 40% of them at the hands of males in the extended family setting²".

Noeleen Heyzer Quotes – " Globally one in three women will be raped, beaten coerced into sex or otherwise abused in her life time. Violence against women has become as much a pandemic as HIV/AIDS or Malaria³".

Incest (Rape), is the least discussed sexual violence of all the discourse regarding violence against Girls & women. It is the most secret of all the crimes yet more common than imagined⁴. It is one of the most ghastly and indecent crime. The statistical data regarding incest is not an easy task to collect, all the information available in this regard have been collected from the news papers, NCRB Reports, Internet and journals. The tendency of putting restrictions on girl's movement is found not only in rural areas but also in urban metros. In a survey conducted by India today-AC NELSEN- ORG MARG, it was revealed that- 'Over 50% single women feel unsafe in the city they live in⁵'. The survey reported that 'In the capital city Delhi only 4% of the single women feel it safe to go out unescorted after 10 p.m.⁶'. One in every three women in the city of Chennai felt unsafe. The survey reported- '85% married women do not feel safe about going out unescorted after 10 P.M. Meanwhile '71% woman feel they cannot wear what they'd like to⁷'. It seems that- 'For women across

India, fear is a constant companion and rape is a stranger they may have to confront at every corner, on any road, in any public place, at any hour⁸. Being a single women is not an easy task for the women in the mega cities. To quote Kavita Arora, a business executive Chennai- 'I had trouble finding a place to stay. People weren't comfortable that I was living alone⁹'. In a survey conducted by an NGO Saheli in Lucknow and Delhi reveals- "All the woman interviewed said that they were at the receiving end of some form of sexual abuse, be it stalking, physical assault or obscene phone calls¹⁰". The prevailing social insecurity curtail the possibility of woman to exercise to exercise the individual rights they are entitled. The laws or the police are no deterrence in protecting the women from this inbuilt terror. 69% female in urban areas reported that – "the current law is no deterrence to rape whereas 62% male were of the same opinion¹¹".

According to a study of an **NGO RAHI** (recovering and healing from incest) under the title "voices from the silent zone" in July 1997 conducted on 600 women from middle and upper class families in Delhi, Mumbai, Chennai, Kolkata and Goa reveals that 76% of women were sexually abused as children. The study also reveals that – "the cases of incest takes place in highly educated elite society not only in slums¹²".

Incest is defined as sexual violation of a girl by an intimate persons, close relatives, guests, neighbours and other known persons to the victim. According to the findings of a study of BBC one out of every 10 women reported some kind of sexual abuse during childhood by known persons ranging from father, uncles to doctors and counsellors¹³.

Incest is a traumatic and a heinous crime against girls in the sense, it is committed behind the curtain by the people who are expected to be more secure, more pious and descent. The sensational stories of sexual abuses by the family members and intimate relatives are covered by the different news papers, some of the cases of incest (rape) are given for reference.

- April 27,1995, Hindustan times covered a news of an under secretary in union home ministry sexually abusing his 8 years old daughter with his colleagues at Noida. A sixteen year old daughter being raped by her father at Mangolepuri, New Delhi¹⁴". A manager in Iron foundry resident of Preet Vihar charged with raping his 10 year old daughter for last 3 years¹⁵.
- A self proclaimed, shastri, an incarnation was charged with raping his daughter. A 12 year daughter was being raped by a father in Gandhi Nagar Juhggis. A 16 year daughter was being raped by a father continuously for 3 years¹⁶.
- A leader of Samajvadi Party, resident of Noida was arrested on 'charge of raping and murdering his eight year old daughter on 24 July 1992¹⁷
- 'A 13 year old daughter raped her father became pregnant at 14 years of age with her father's son¹⁸.

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- A mother filed a complaint against her husband a Govt. officer for sexually abusing her three daughters and including her 8 year old daughter for oral sex with a group of adults in a hotel at can naught place¹⁹.
- A case was filed against a father having sexual relationship with his daughter before marriage who attempted to outrage her even after marriage²⁰.
- The most astonishing and indecent news of a son having incestuous relationship with his mother at her consent even after marriage²¹.
- A mother filed a report against her husband for raping her three daughters.
- A father charged with abusing his daughter, who brought her from boarding school for the purpose.
- In most of the incidents women had to suffer if they filed any complaint against the in human and indecent sexual abuse by the dominant male members of the family.

A girl aged 8 years was brought to a shelter home and a counseling centre after being brutally raped by her father who was alleged with already having raped her two daughters. The mother kept quite in the earlier instances, driven by the fear of being thrown out of her husband's family; but in case of her third daughter she took bold steps and reported to the counseling centre²².

Similar instance of incest rape was covered by the news paper in which a 20 year girl was raped by her maternal uncle (her mother's brother) at knife point. Her mother lodged an FIR but turned hostile during the trail²³. Turning hostile is a matter of routine in Indian judicial set-up. This is a serious matter of concern for the legal experts in India.

In an incident, A girl of 23 years of age was being regularly raped by her father for the past four years. The father did not marry his daughter, the mother of the girl fully knew the situation but couldn't dare to protest as she was entirely dependent upon her husband²⁴.

A sixteen year girl of Loni village Ghaziabad filed an FIR against her father for raping her at knife point and making her pregnant. Her mother got her two months foetus aborted; when her father attempted to rape her again, her mother resisted; she was beaten and thrown out of her house²⁵.

In other case a man was alleged with having raped her daughter in law in the name of the performance of Tantra Vidya to rescue his son from the evil effects of Mangali²⁶.

A case of molestation was registered by Gosaiganj Police at Lucknow in which a father molested his daughter of 9 years of age²⁷.

A girl student of Jawahar Navodaya vidyalaya of district Faizabad U.P. gave birth to a child who had been sexually abused by her real brother²⁸.

A police constable was reported for having raped his 17 years old daughter who became pregnant, the trauma continued even after her abortion even more traumatic was the involvement of her mother who forced her into the indecent sexual relationship with her father²⁹.

These are the few evidence of incestuous behavior which is supposed to occur in every society and in a large no but only a least no of cases reported, most of the cases are subsided in the premises of the household. A mother or the member of the family rarely talks about the serious act of sexual abuse by a father, a sibling or the close relatives. A sense of shame and derision prevails in the minds of the victim; thus the chances of incest being reported in the police succumbs. Members of voluntary organizations said that a mother suppress or wish away the event not only because of the shame and outrage, but also out of fear of reprisals from her husband, son or other relatives. Interestingly husbands filing the case against them would be unheard of³⁰.

The evidence collected in several studies by most of the experts shows that 85 to 95% of all sexual crimes against children under 18 years of age are committed by someone whom the child knew. 80 to 90% are intra-familial. The perpetrator may be a parent, sibling, grand parent, aunt, uncle and cousin or some one close to the child like the step parents³¹.

A Delhi based NGO Sakshi, a violence intervention centre concluded in an interview of 357 school children that 63% of them have suffered some or the other kinds of sexual abuse, 22% of them suffered serious sexual abuse, 26% of abused were between one and 12 years of age at the time of sexual abuse³². The most traumatic experience of rapes that the media and the News papers have covered in the last few years were the incidents of the minor girls of 4 to 10 years of age, and the crime inflicted against them was of very heinous nature. Incidents of murders of most of the victims after being raped have been the highlights of the News papers in the recent years. World Health Organization has also reported that one in every 10 children is sexually abused. The obscurity of the incidents of incest intensifies the problem of the violation of dignity and sanctity of a girl child. National Crime Reports Bureau (NCRB) 2010 has revealed the no. of cases of incest in India.

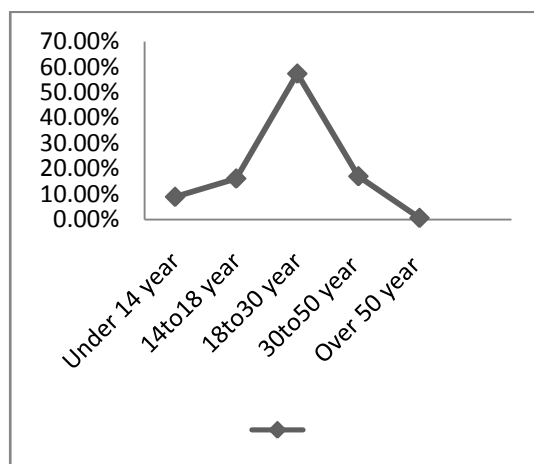
According to NCRB 2010 – "The total cases of rape committed against women were 22,193 in the year 2010 out of which 1,975 (8.9%) were the girls under 14 years of age, 2.57% girl victims of rape were under 10 years of age, which is an evidence of heinous and inhuman treatment towards the girls. 3,570 (16.1%) were teenage girls (14-18 years of age), 12,749 (57.4%) were women in age group 30-50 years, 136 (0.6%) were above 50 years³³.

Age group wise incidence of rape victims (2010)

Age-group wise victims	Incidents	Percentage
Under 14 years	1,975	8.9
14-18 years	3,570	16.1
18-30 years	12,749	57.4
30-50 years	3,763	17.0
Over 50	136	0.6
TOTAL	22,193	100

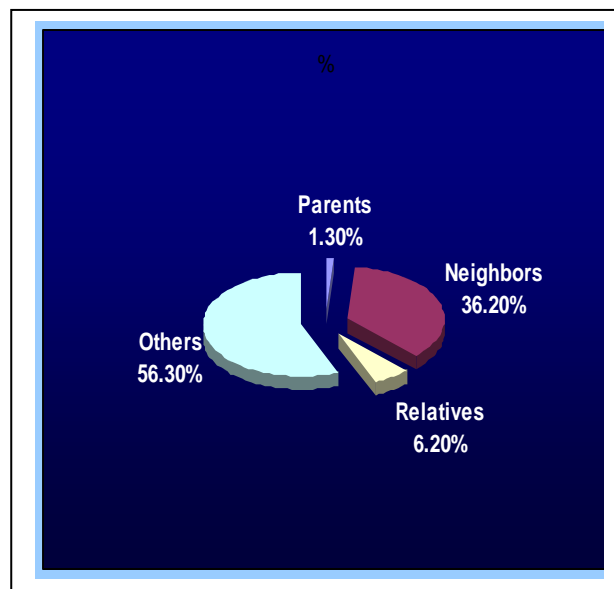
The records of NCRB are an evidence that the women in the age group 18-30 are the prime target for the perpetrators committing rape crimes. The teenage girls are the another target and are often subjected to the crimes of rape. In the total 22,193 cases of sexual abuse including incest reported all over India by NCRB 2010, 8.9% victims were up to 0-14 years of age group, 16.1% were in the age group of 14-18 years, 57.4% were 18-30 years of age, 17.0% were 30-50 years of age & 0.6% victims were of 50+ years of age. In the year 2010 Maharashtra reported the highest no. of cases of incest with 15.27% followed by Odisha with the crime % of 12.84 and Rajasthan with 8.3% cases of Incest rapes according to reports of NCRB 2010. UT Delhi reported 7.2% cases of incest. Age group wise distribution of incest is shown in the following diagram-

Graph Showing Age group wise victims of Rape NCRB 2010



Offenders known to the victims

According to NCRB report 2010—"In as many as 21,566 (97.3%) offenders were known to the victims. In 288 cases (1.3%) parents and close family members were involved in the incident. Where as 7,816 (36.2%) cases were committed by the neighbors and in 1,344 cases (6.2%) the offenders were close relatives³⁴. This is the dark side of the coin. The increasing cases of incest puts in question the security mechanism of the girl child and also the poor response of the civil society towards the girls. The most astonishing aspect of the crimes of sexual nature towards the girls is that- In most of the cases the victims were minor girls of 0-05 years of age and the perpetrators were from 18 to more than 50 years of age.

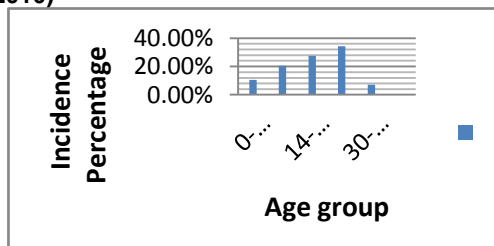


% Of Offenders Of Incest Known To The Victims

Incest is one of the most hidden crimes which is not much reported. The perception behind it is that making such incident public may harm the prestige and may also cause emotional disaster to the victim. Most of the victims consider that they will gain least and loose more in the form of neglect and derision. It has been observed that the victims of incest do not get public sympathy except in few case in which crime committed is too inhuman and barbarious as it was in Damini episode. The victims are questioned about their character & modesty. This is why that the reported cases of incest in NCRB reports are very few in the official records of the states. An analysis of magnitude and intensity of victims of incest and rape in the states are being given in the following table.

In the total 288 cases of incest reported all over India by NCRB 2010, 10.41% victims were up to 0-10 years of age group, 20.49% were in the age group of 10-14 years, 27.43% were in the age group of 14-18 years, 34.37% were 18-30 years of age, 6.94% were 30-50 years of age. A few victims were of 50+ years of age. Maharashtra reported the highest no. of cases of incest with 15.27% followed by Odisha with the crime % of 12.84 and Rajasthan with 8.3% cases of Incest rapes according to reports of NCRB 2010. UT Delhi reported 7.2% cases of incest.

Age group wise victims of incest (NCRB 2010)



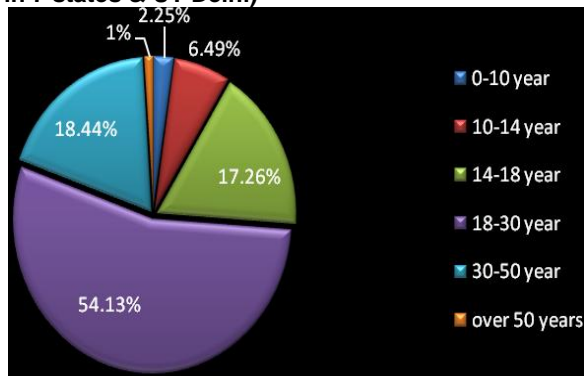
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In the total cases of rapes other than incest 2.25% victims were in the age group of 0-10 years, 6.49% victims were in the age group of 10-14 years, 17.26% were in the age group of 14-18 years, 54.13% victims were in the age group of 18-30 years, 18.44% were in the age group of 30-50 years, 1% of all victims were above 50 years. The following table shows the intensity and magnitude of crimes of rape in the 7 major states and UT Delhi, that accounted for 62.64% of total rape crimes committed at the National level. Incest rape is the most traumatic experience for the victims that some times causes psychological disorder and emotional disaster. Specially the victims who are minors and emotionally attached to the offenders suffer emotional breakdown and sometimes they become isolated from the rest of the world. The enigma is that such type of incidents are rarely reported.

Age group wise victims of other Rape cases NCRB 2010

S no.	States	Total cases	Up to 10 years	10-14 year	14-18 year	18-30 year	30-50 year	Above 50
1	Andhra Pradesh	1362	30	133	283	749	1	1
2	Assam	1798	1	9	29	1106	5	5
3	Madhya Pradesh	3115	51	303	816	1360	5	5
4	Maharastra	1555	104	126	502	657	1	1
5	Rajasthan	1547	35	70	271	795	3	3
6	Uttar Pradesh	1559	43	161	244	861	2	2
7	West Bengal	2307	0	21	51	1777	4	4
8	Delhi (UT)	486	45	68	171	167	34	01
All India Total		21884	541	1345	3491	19650	3743	135

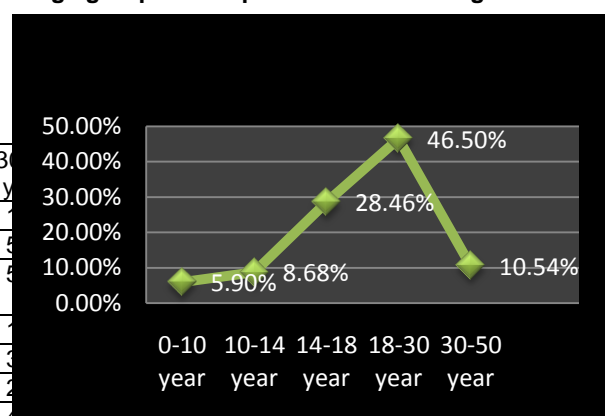
The age-group wise rape victims (NCRB 2010 data in 7 states & UT Delhi)



Age group wise rape victims (other than Incest) in the cities

S.n o.	City	Total cases	Up to 10 years	10-14 years	14-18 years	18-30 years	30-50 years	Above 50
1	Benguluru	65	-	-	-	30	35	0
2	Bhopal	73	4	10	49	7	3	-
3	Delhi(city)	400	40	53	142	140	24	01
4	Indore	69	-	-	03	65	01	-
5	Jabalpur	81	-	-	19	38	24	-
6	Jaipur	69	3	3	16	33	14	-
7	Mumbai	199	21	11	112	43	10	-
8	Pune	91	8	6	38	32	7	-
9	Nagpur	53	2	6	18	17	9	01
10	Lucknow	52	1	6	2	39	4	-
Total		1143	79	95	399	444	131	02
Overall total		1774	106	154	505	825	187	05

Age group wise rape victims in the Mega cities



In the city-wise analysis total 1774 cases were reported, out of which top ten mega cities (Benguluru, Bhopal, Dilli, Indore, Jabalpur, Jaipur, Mumbai, Pune, Nagpur, Lucknow) accounted for the maximum no. of 1143 (64.43%) incidents of rapes (other than incest) according to NCRB 2010. Delhi ranked 1st with 400 (22.54%) cases of such victims, followed by Mumbai with 11.10% cases. In Madhya Pradesh, Jabalpur ranked 1st with 81 (4.5%) of such cases followed by Bhopal with 4.11% cases and Indore with 3.8% cases of such nature. The ten mega cities are notorious so far as the atrocities against women regarding sexual violation of their rights is concerned. It is also revealed that the maximum no. of victims who were subjected to sexual violence were the women in the age-group of 18-30 years followed by the girls of 14-18 years who were the target next to the women in the age group of 18-30.

The worst and the most heinous aspect of sexual violence against is the involvement of those who are considered to be in a very pious relation to the victim, like father, brother, uncle and most intimate friends. The most astonishing and traumatic fact about the crimes committed against woman and girls are the crimes against minor girls of 5 to 10 years of age. It is perceived that the minor girls are the soft targets for the victims to seduce and lure them. Most of the girls cannot guess what the intention of the perpetrator is? even after the heinous crime against her has taken place. It is not more than a psychological disorder of the perpetrator who commits

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such crimes. It has also been revealed that the mega cities have reported the more no. of cases against minor girls. In such the perpetrators easily escape the crimes as In most of the cases these victim minor cannot reveal in the court about the heinous incident against her. The data regarding the offenders in intimate relations is being given in the following table.

The traumatic effect of Incest

Incest (Rape) is a heinous type of violence that ravages the sprite, moral, dignity and inner, confidence of a victim specially the girls of minor age or teenage. They may be overshadowed by deep depression or isolation may cause hatred to their own body. In actual sense they can not over come the trauma throughout the rest of their life.

The NGO RAHI (Recovering and healing from incest), revealed in it's study that "survivors of incest who came for counseling suffered from depression, frustration, low self-esteem, sexual mal adjustment, feeling isolation, anxiety and so on. These incidents have long lasting impact on their personal life; their inter-personal relations, They may suffer with personality disorder. The behavioural scientists have identified it as a state of 'Post-traumatic disorder that can cripple a person emotionally and become almost permanent if not dealt with³⁵". Such incidents are curse to the dignity of a girl child or a woman. In most of the cases molested girl feels that it was sheer bad luck that brought her the distress-

The probable consequence of this trauma may be-

- Permanent fear of insecurity and helplessness,
- Mental distress and psychological disorder,
- Depression and low self-esteem,
- Traumatic effect on conjugal life,
- Hatred to their own life that may enforce them sometimes to suicide,
- Obscurantism and isolation,
- Psychological deprivation.

In most of the cases the victims conceals the incident of sexual assault, and thus becomes cursed to suffer the repeated threats of the incident. She is left with no option except to accept the incident as a nightmare. Such incidents shake the confidence of the victims badly. Ashwini Ailawadi of RAHI reveals that-"guilt and confusion are powerful emotions that engulf the child owing to the dichotomy between the biological response of the body and mental conflict³⁶". In cases of sexual abuse, depression overcomes a victim and often results in hatred for conjugal or marital relations when they grow up. Minor victims upto 7 years of age become emotionally wreck for entire life and remain under 'obsessive compulsive neurosis'- a state where they even hate their own bodies and fail in normal marital life.

"There is a suicidal risk and lack of confidence due to depression, which restricts them to express their trauma after they have to get hypnotized to get the facts says Dr. Tulsi centre for mentally disturbed children³⁷". Victims of sexual violence suffer from a sense of shame, self-guilt, fear and feel humiliated, abandoned, traumatized and stigmatized.

In case of domestic violence offences were committed in the premises of home by a person on whom the woman was emotionally and economically dependent. Moreover even though she was a victim she was compelled to live with the assaulter as she had no other alternative. Thus the victim's agony and torture is multiplied, there is no other way except to live in anticipation of a constant fear or repeated threats sexual exploitation. This is like dying several times before their death. The crucial societal mechanism enforces women to be in sub-ordinate position and gives impetus to perpetual violence against women.

"The trauma often restricts the girls and the family to make the incidents public causing psychological deprivation. The victim who requires sympathy and support is kept isolated in the family³⁸".

The enigma of sexual violence against children and women is –

- The poor reporting of offences for fear of harassment, shame and social disapproval.
- Poor judicial representation, the changes of sexual assault, molestation, obscene gestures, indecent representation is not proved and dropped without prosecution.

The crime against girls and woman is a greater social enigma and the institutional have proved a poor deterrence in such cases. The mass agitation on "Damini" reveals the society's concern on the menace of such nature but fails to check the increasing intensity of crimes in the society. The question is- How can law and the Police prove to be an effective deterrence to the menace of sexual violence against girl children. To quote Martin Luther King- Law can change the heart but not the heartless. The Damini episode witnessed mass agitation and mobilization of the society but the monsters of humanity didn't restrain from committing the heinous crimes against the minor girls. A number of crimes were reported by the News papers and the Media and they didn't get the same focus as the "Damini" episode. For instance a few cases can be mentioned. In a case an eleven year girl was sexually abused by the two youths of Sekar, Rajasthan on Aug, 20 2012, who is still on the death bed in a nursing home³⁹. A 19 year girl was abducted, drugged from Bilaspur passenger train between Jabalpur and Katni Railway Station on 22nd Dec⁴⁰. In a remote village of Patiala Distt. of Punjab, a gang rape minor victim ends her life due to police apathy. The police was reported of having taken 14 days in registering the case, it was also reported that the police pressurized to withdraw the case⁴¹. A minor dalit girl was gang raped in Patna⁴². In the Chincholi Taluka of Distt. Gulbarga an 11 year girl was raped by two youths on 20 Dec⁴³. A 17 year class 10 student immolated herself being constantly harassed by a few boys in Ranchi⁴⁴. A man was arrested in Mohammadi town Lakhimpur Khiri on sunday 23rd Dec⁴⁵. An 11 year old girl child, a student of class 4 was raped by two teenaged Neighbours in Nagapattanam Distt. on 23rd Dec. 2012⁴⁶. Two minors gang raped a minor girl in Jabalpur region on 22nd Dec 2012⁴⁷. On Dec. 20

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2012 A woman was gang raped at the bus stand in Distt. Mau, U.P.⁴⁸.

According to NCRB 2011, Madhya Pradesh registered 3406 rape cases accounting for 14.1% of total crimes of such nature in all over India, whereas 15.5% cases of eve teasing were reported in M.P. Since last two years 3176 female children were raped in Madhya Pradesh (Dainik Bhaskar 23 Dec. 2012) M.P. ranked 1st in sexual abuse against minor girls. The deplorable situation of girl child in India is alarming, and a question mark on the civil society that is in need of gender sensitization. The enforcement mechanism of law needs a review & the police should be trained in efficient delivery of service. In maximum no. of cases the perpetrators escape punishment due to weak enforcement of law and the indifferent attitude of the police.

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A Study of Self-concept among Physically Disabled and Normal Students



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Abstract

The goal of education is to enable the child to enter the world after formal education is over as an active participant in society and a responsible contributor to it, capable of achieving as much independence as possible. For the normal children, the road they have to travel towards these goals is rather smooth and easy, for the disabled, it is fraught with obstacles. Nevertheless for them too, progress will be possible as they gradually overcome one obstacle after another on the way to success. The self concept plays a very important role in achievement of life goals. Therefore, an attempt was made to study the self-concept among physically (sensorily) disabled and normal students. For this purpose, a multi-stage stratified random sample of 800 students was obtained. The data collected on self constructed scale on the self-concept was analyzed by the techniques of Analysis of Variance and the t- test. Results revealed a significant difference between the two population, and the most suffered group was that of disabled girls. The disability becomes the focus of an individual's life, his whole identity. Since these disabled children have to satisfy their educational, social, emotional needs under exceptional circumstances, they need special help from their parents, their teachers and their community. Disability to not a tragedy but something to be coped with.

Keyword: Self - concept (Physical, Moral, Social, Emotional, Intellectual, Educational dimensions), hysically disabled(Senserorily)

Introduction

Self concept is an image which an individual has of himself (Burns 1982). It is of paramount importance in learning process of social interaction, building of self esteem and the achievement of life goals. Since, physical component is such an important factor in the development of an individual, it could be argued that physical disability affects self-concept formation most profoundly (Cohen, 1977). Students with the disabilities may be isolated or rejected by their peers, and in general, the more visible the handicap, the more rejection and isolation (Yucker 1987, Lumbana 1982). Avoidance by peers and teachers, coupled with lower expectations by adults about them all hamper motivation to achieve and participate (Barbara1985, Gerstein 1988, Landrum & Kauffman 1992).

Many individuals with disabilities learn early in life that they have negative role in this society. Their response is often passive, rigid thinking and failure to take part in life- because the expectation placed on the individual with disability are negative (Warfield 1948), Young people with physical disabilities have much to contribute to society, although society has so far too often failed to recognize this. An empirical study of the physically disabled in comparison with normal might provide useful insights for making welfare activities for the disabled more effective and worthwhile. Therefore the present investigation was taken up to find the effect of physical disability on the self concept of the students.

Objectives of the Study

following objectives were laid down for the study-

1. To study the effect of physical disability on the self concept of the students.
2. To study the effect of sex difference on self concept of the students.
3. To measure the interaction effect of the two factors on self concept of the population to be studied.

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Method

Sample

A multi-stage stratified random sample of 800 students were obtained for the study, the details of which are given below-

Table No. 1- sample plan

Sex	Hearing Disabled	Visually Disabled	Total Disabled	Normal Urban	Normal Rural	Total Normal
Boys	100	100	200	100	100	200
Girls	100	100	200	100	100	200
Total	200	200	400	200	200	400

Total= 800

Tool :

A self concept scale constructed by the investigator was administered on normal and sensorily disabled students. It measures self-concept in total as well as in six areas, i.e. physical, moral, social, emotional, intellectual and educational areas. The reliability and validity recorded were 0.98 and 0.97 respectively. The scale was standardized on normal as well as on disabled students. High scores indicate good self concept while individuals scoring low tend to have poor self-concept.

Results and Discussion

Keeping in view the objectives of the study, the scores obtained on the self concept scale were subjected to analyses by using statistical techniques of Analysis of variance and the critical Difference. The variable wise results and their interpretations are being presented below-

1. Total self concept

The self-concept is taken here as the individual's view of himself that results from the interaction of the person with other people. The scores obtained by analysis of variance on total self concept are entered in the following table:-

Table No. 2- Anova Total Self-concept

Source of Variation	df.	SS	MSS	F
Physical Status (A)	3	77706.67	25902.22	150.71 ***
Sex (B)	1	2964.50	2964.50	17.25 ***
Interaction (AxB)	3	4970.49	1656.83	9.64 **
Error	792	136124.02	171.88	
Total	799			

GM = 51.77

S.D. = 13.11

Note:

A= Physical Status

A₁= Normal Urban A₂= Normal Rural

A₃= Hearing Disabled A₄= Visually Disabled

B= Sex (B₁= Boys B₂= Girls)

*** = Significant at 0.001 Level of Significance

** = Significant at 0.01 Level of Significance

* = Significant at 0.05 Level of Significance

NS= Not Significant

ANOVA Table No. 2 shows that the F ratio for the physical status (A) was significant at 0.001 level which shows significant differences among four

groups of physical status mentioned above. Normal Students scored significantly higher (M= 61.40) than the disabled students (M= 42.14). F ratio for the sex (F=17.25) was also significant beyond 0.001 level of significance. Boys felt themselves better than girls (D= 3.85) in respect of self-concept. F ratio of 9.64 for the interaction effect between physical status and sex was also significant at 0.01 level of significance. It shows that the effect of physical status on the self concept was not independent of the effect of sex. A study of the mean scores of physical status x sex would be helpful in drawing out the conclusion-

Table No. 3- Physical Status x Sex Means

Groups	Boys (B ₁)	Girls (B ₂)	Diff. (B ₁ - B ₂)
Normal Urban (A ₁)	63.66	63.38	0.28 NS
Normal Rural (A ₂)	58.40	60.17	1.77 NS
Hearing Disabled (A ₃)	43.04	37.13	5.91 *
Visually Disabled (A ₄)	49.08	38.70	10.98 *

SE_D = 1.85

C.D._{5%} = 3.64

As can be observed from the above table, there was no significant difference between the boys and girls in urban as well as in rural regions. But among the groups of disabled students, the hearing and visually disabled girls had lower self-concept than their counterparts. Thus it can be said with 95% confidence that though physical disability does affect the formation of self-concept, the girls suffered most.

Result on Areas of Self-Concept.

The Extract of F-test on all the six areas of self- concept i.e., Physical, Moral, Social, emotional, intellectual and educational is given in the following table:-

Table No. 4- Extract of the F-test on Areas of Self-Concept

Source	Physical	Moral	Social	Emotional	Intellectual	Educational
Physical Status (A)	166.64 ***	18.68 ***	120.64 ***	97.15 ***	113.54 ***	101.70 ***
Sex (B)	4.21*	25.24* **	19.95***	20.81***	2.41 (NS)	5.11*
Interaction (AxB)	9.71**	13.87* **	7.34**	6.85**	5.55**	1.35 (NS)

Physical Dimension of self-concept

This area of self-concept represents an individual's body image created largely through his/her interaction with others. The results given in table No. 4 show that F ratio of 166.46 for physical status was significant beyond 0.001 level of significance. It shows significant difference between normal and the physically disabled groups (M Diff.= 8.76). The effect of sex (F= 4.21) was significant at 0.05 level of significance suggesting that boys (M= 8.52) had more favorable attitude towards their physical status than the girls (M= 8.11). F ratio for the interaction effect was also significant at 0.01

level implying that the joint interplay of the two variables contributed significantly to this aspect of the self concept. The mean scores of physical status x sex are given in the following table:-

Table No. 5- Physical Status x Sex Mean

Groups	Boys (B ₁)	Girls (B ₂)	Diff. (B ₁ - B ₂)
Normal Urban (A ₁)	10.88	11.16	0.28 (NS)
Normal Rural (A ₂)	9.50	10.47	0.97*
Hearing Disabled (A ₃)	6.63	5.41	1.22*
Visually Disabled (A ₄)	7.06	5.40	1.66*

SE_D = 0.3974

C.D._{.5%} = 0.78

It is clear from the above table that normal boys and girls in urban region were statistically at par, but in rural region the girls scored significantly higher than boys, indicating that they perceived their physical condition better than the boys. But among the groups of disabled, the girls scored significantly lower than the boys. This shows that though entire disabled group was significantly more poor than the normal group on physical aspect of the self concept, the disabled girls were more sensitive towards their disability and that the disability was responsible for deterioration of their physical self image.

Moral Dimension of self-concept

Moral aspect of the self-concept represents individual's view of his moral values. The results given in table No. 4 show that F ratio (F= 18.64) for the physical status was significant at 0.001 level of significance, indicating significant differences between the two groups of physical status, i.e. normal and physically disabled (Mean diff. = 1.19). The effect of sex (F= 25.24) was significant at 0.001 level of significance suggesting that the boys (M= 10.97) perceived themselves morally higher than the girls (M= 10.05). The interaction effect between physical status and sex (F= 13.87) was also significant beyond 0.001 level of significance implying that the effect of physical status on moral aspect of the self concept was not independent of the effect of sex. A summary of the means of physical status x sex is shown in the following table:-

Table No. 6- Physical Status x Sex Means

Groups	Boys (B ₁)	Girls (B ₂)	Diff. (B ₁ - B ₂)
Normal Urban (A ₁)	11.06	11.43	0.37 (NS)
Normal Rural (A ₂)	11.01	10.93	0.08 (NS)
Hearing Disabled (A ₃)	10.10	8.80	1.30 *
Visually Disabled (A ₄)	11.73	9.05	2.68 *

SE_D = 0.37

C.D._{.5%} = 0.72

It is clear from the above table that there was no significant difference between means of normal boys and girls in both the regions. But hearing and visually disabled students scored significantly lower than the normal students, and among the disabled, the girls suffered most.

Social Dimension of Self concept:

This aspect of self-concept represents a person's view about his/her social status in the society. As can be seen from Table No. 4, the F ratio of 120.64 in case of physical status was significant at 0.001 level of significance. It shows significant difference between normal (M= 9.67) and physically disabled (M=6.15) students. The F ratio (F= 19.95) for the sex difference was also significant at 0.001 level indicating that the boys (M= 8.33) perceived themselves better than the girls (M= 7.49) on social interaction. The F ratio of 7.34 for the interaction effect between physical status and sex was significant at 0.01 level of significance. It shows that physical status X sex interaction contributed significantly to the self concept regarding an individual's judgments and values of his social abilities and qualities. The mean scores for the combination of physical status and sex are given in the following table-

Table No. 7- Physical Status x Sex Means

Groups	Boys (B ₁)	Girls (B ₂)	Diff. (B ₁ - B ₂)
Normal Urban (A ₁)	10.21	10.03	0.18(NS)
Normal Rural (A ₂)	9.09	9.33	0.24 (NS)
Hearing Disabled (A ₃)	6.88	5.16	1.72*
Visually Disabled (A ₄)	7.13	5.43	1.70*

SE_D = 0.367

C.D._{.5%} = 0.74

The above table shows that there was no significant sex difference among normal students in both the regions. Though the disabled students scored significantly lower than the normal students, hearing and visually disabled girls perceived themselves as deficient more frequently in social interaction than the boys with similar physical status.

Emotional Dimension of the self- concept

It is evident from table No. 4 that F ratios for physical status, sex difference and the interaction effect were highly significant. It shows that disabled students (M= 6.31) showed comparatively more poor self concept on emotional aspect than the normal students (M= 9.74). In the same way boys (M= 8.49) had significantly better self concept regarding their emotions than the girls (M= 7.56). The significant interaction effect suggests that the two variables contributed significantly to the emotional aspect of the self concept. The mean scores are given below-

Table No. 8- Physical Status x Sex Means

Groups	Boys (B ₁)	Girls (B ₂)	Diff. (B ₁ - B ₂)
Normal Urban (A ₁)	10.40	9.81	0.59 (NS)
Normal Rural (A ₂)	9.31	9.46	0.15 (NS)
Hearing Disabled (A ₃)	6.59	5.70	0.89*
Visually Disabled (A ₄)	7.67	5.28	2.39*

SE_D = 0.41

C.D._{.5%} = 0.80

As can be observed from the above table that normal boys and girls in both the regions were statistically at par. The disabled students and specially the disabled girls perceived themselves comparatively

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more poor than the normal students on emotional dimension of the self-concept.

Intellectual Dimension of Self- concept

Intellectual dimension of the self concept represents an individual's view about his intellectual abilities conceptualized by the feedback he/she received from others. As can be observed from table No. 4, all the four groups of physical status differed significantly from one another. It shows that disabled students ($M= 6.52$) perceived themselves less intelligent than the normal students ($M= 9.95$). It is interesting to note that boys and girls were statistically at par on this dimension. But the significant interaction effect shows that the effect of physical status on intellectual aspect of the self concept was not independent of the effect of sex. The table below shows the mean scores for this interaction:-

Table No. 9- Physical Status x Sex Means

Groups	Boys (B1)	Girls (B2)	Diff. (B1- B2)
Normal Urban (A1)	10.33	10.36	0.03 (NS)
Normal Rural (A2)	9.19	9.92	0.73 (NS)
Hearing Disabled (A3)	6.35	5.80	0.55 (NS)
Visually Disabled (A4)	7.66	6.26	1.40*

$SE_D = 0.38$

$C.D.5\% = 0.75$

It can be concluded from the above table that disabled students and specially the disabled girls perceived themselves as less intelligent and devaluated their worths and intellectual abilities.

Educational Dimension of self-concept:

Educational self-concept is created largely through the information an individual receives from the interaction with his peers, teachers and other people around him. The extract of scores obtained on educational aspect are entered in table No. 4. It is observed that F ratio ($F= 101.70$) for the physical status was highly significant indicating significant difference between normal and disabled students on educational aspect. Though both the groups of disabled students scored significantly lower ($M= 7.12$) than normal students in both the regions, ($M= 10.43$), the hearing disabled ($M= 6.75$) received more negative feedback by the people around them about their worth than the visually disabled students ($M= 7.86$) and this led them to devalue their abilities in the field of education. A significant F ratio for the sex ($F= 5.11$) shows significant sex difference. Boys ($M= 9.00$) were more confident in their educational activities than the girls ($M= 8.55$). The F ratio for the interaction effect was insignificant on this aspect. The perusal of the result in table No. 10 will help in finding the conclusion-

Table No. 10- Physical Status x Sex Means

Groups	Boys (B1)	Girls (B2)	Diff. (B1- B2)
Normal Urban (A1)	10.78	10.59	0.19 (NS)
Normal Rural (A2)	10.30	10.06	0.24 (NS)
Hearing Disabled (A3)	6.49	6.26	0.23 (NS)
Visually Disabled (A4)	8.43	7.28	1.15*

$SE_D = 0.40$

$C.D.5\% = 0.79$

It is observed from the above table that hearing disabled boys and girls scored significantly lower than their counterparts, i.e., visually disabled boys and girls to the extent of 1.94 and 1.02 respectively. It can be concluded with 95% confidence that though disabled students had comparatively lower self concept than the normal students about their educational worths and abilities, the hearing disabled boys and girls suffered most.

Thus, the disabled group had shown lower self concept than the normal group on total as well as on physical, moral, social, emotional, intellectual, and educational aspects of the self concept. Unfavorable experiences in different crisis points may signify a sense of incompetence. The hearing and visually disabled child, therefore, feels inadequate, inferior and socially unacceptable. He is likely to exhibit characteristics of absence of inner control, impulsiveness and lack of empathy. This may affect social relationships in school as well as in social environment and may lead them to have a greater tendency to develop negative self concept (Lawrance 1991, Kadalac et.al.2004). The negative psychological impact conceals the disabled child's real potential. There may be an under estimation of oneself and the self concept formed may not be appropriate to the real self (Trychin 1991).

Therefore, Parents and teachers are required to be sensitive to how children see themselves and their abilities because it can be more destructive than a physical disability or an acknowledged learning disability.

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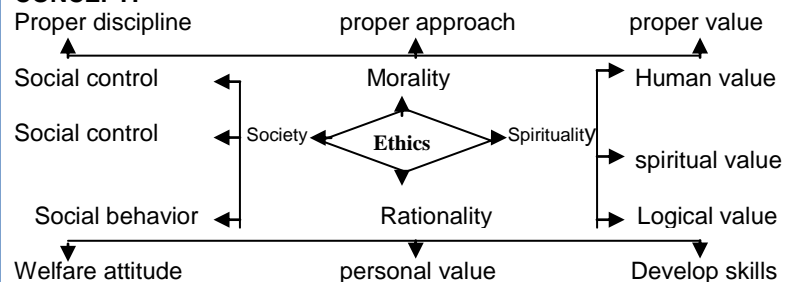
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A study of educational thoughts of Indian thinkers with reference to ethical education

Abstract

The aim of education is the complete development, if the child in which moral development who inculcates humanity is the student. Its not only trains the intellectual power but also influence the hearts and refine the spirit of man. Education as information teaching, schooling, training, instruction, literacy and science and an art community has an impact not only on the physical and mental development of the individual but also on his moral and character development of society has it own ethics.

CONCEPT:-



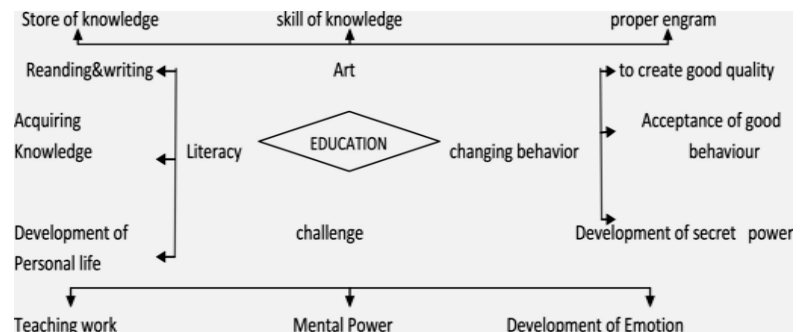
Keyword: Education, Aim, Development, Indian thinkers, Ethics, Thoughts, Medium, Values, Action, Engram, Commitment

Introduction

The aim of education is the complete development of the child, a development in which moral development occupies an important man greatest characteristic. Man is made by his thoughts. One finds that child develops character according to the ideas presented to them during their growth for their reason they should be initiated into ideas and sacrifice hard work and contemplation. Good thoughts leads to a sound determination and this in turn the path of a man to the path of good life he is filled with the strength of soul which inspire him to another to this path. In order to form character it is necessary to pay attention to subtle of small thing for the character manifested through habit of the character, can therefore only improved by the habits of individual for this both determination, courage are required.



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The education is complete education which include humanity is. The standard not only trains the intellectual power but also influence the hearts of refiner the spirit of mans. The intellectual training of the student is complete unless it has an impact of the heart and spirit.

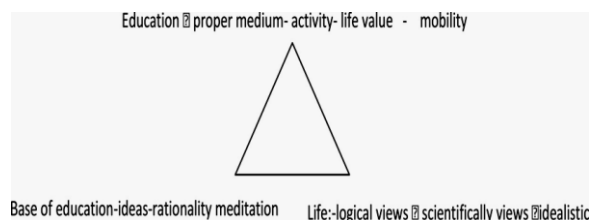
In this education compassion and kindness will figure as they relates to the need of those in distress and suffering the welfare of human being needs to be primary concern in education of the people. Education should trains us to control ourselves and to exercises reasoning and judgment in our action. So education is self realization and service of the people. (Guru Nanak)

Education is the development all those capacities in the individual which we enable him to control his environment of fulfill his possibilities. (Dr. John Dew)

Education of information, teaching, schooling, training, instructions. Literacy of Science of and arts.

Objective

1. To review the educational thoughts of Indian educationist with reference to the ethical education.
2. To find out whether educational thought of educationist related to ethical educations which are present in an Epic?
3. To develop liberal and utilitarian approach through the ethical education.
4. To develop moral values in the mind of disciple through ethical education.
5. To find out ethics in education through educational thoughts of educationists.



Ethics in Education

Community has an impact not only on the physical and mental development of the individual but also on his moral and character development. Every society has its own code of ethics which differ in some degree from that of other societies and this difference is reflected in the behavior of its citizen I this respect of ethical thought of educationists.

1. Swami Vivekanand

In the Neo-vedanta humanistic tradition of contemporary Indian thought, Vivekanand presented a philosophy of education for man making with ethics of man should make a self development, swadharma growth, character formation, hard work, moral & spiritual value , good habits, love help, guidance , concentration, bhrmacharya contemplation science and art, Vivekanand elaborately discussed the teaching method physical moral religious of high

ideas, courage, devotion, self confidence realization of truth achievement of power study of scripture, weaker section society.

2. Shri Aurobindo Ghosh

Education should aim at a recovery of the old spiritual knowledge and experience in its entire splendor, depth of fullness, primarily. The flowing of this spirituality into new forms of success of education will be measure of its help to the future of humanity. The instrument of the educator is the mind which consists of four layers: memory, experience, searching & training.

The attempt is to take to the students as a whole & to give a through training of all faculties; the student should not only have an idea of the various capacities of power but also be able to put a true & progressive interaction to the utmost use in his individual/collective.

3. Dr. S. Radhakrishnan

A study of great religious works, mediation & discussion can open ones mind & had to a desire of explore the essential Devine spark within us. The purpose of all education is to help student to look within themselves & religious study of meditation can stir them to view them & to discover their latest spiritual nature. a close & reverent study of all religious reaching of great book discover with noble and learned men meditation & humanity can lead to discovery of man true spirit of man which is the divinity within.

4. M.K. Gandhi

Education is an all round drawing out of the best in the child & man – body , mind, & spirit Gandhiji has given us two sets of aims, the immediate & the ultimate. The bread and butter aim, the cultural, moral aim, comprise the first category, the ultimate aim is the realization of the ultimate reality, a knowledge of truth (God), it is self realization which the summon bonum of life & education his scheme of education the ideal and self realization as the highest aim of education combines both the development of individuality & social progress.

5. Rabindranath Tagore

The priest had certain experience in his early year which let to the formation of certain ideas in his mind. The priest made up his mind to put them into practice. He believed that God is the source of both man & nature. Thus in him & through him we find unity (i) between man & man (ii) between man and nature. He believed that every human being had the right to shape his life in his own way, his individualism. He believed in the fundamental unity of whole universe of nature and man. In his lifetime every individual tries to realize God in his own way, the important fact is that inspire of his diversity there is unity as all of us including nature have a common source of origin.

6. Education Commission

1. The Kothari Commission (64-66)

- A) Special study of all religions be made in school to develop tolerance, understanding & thereby friendliness to all narrowness & bigotry be discouraged in the study of religions.

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B) Moral instructions are given to children in school, during periods, specially set aside for this purpose.

C) A wider outlook, tolerance & mutual understanding are encouraged among students through secular education.

2. Ramamurthi Committee (National Policy On Education 1986)

The committee considered view is that NPE 1986, as a whole reflects that education development was constructed in the backward of human resource development for availing of the unprecedented opportunities that would be thrown up by the ensuing decades. In the view of the committee the human being is to be valued as more than resources utilitarian aspect s is important, the human being has to be developed with accent on character building dignity of labour & value to the society at the national & international levels.

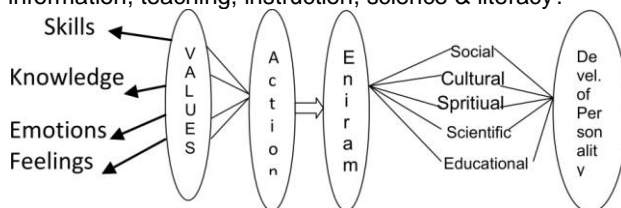
3. Swami Dayanand

Dayanand favored diversified education combining general education with religious as well as professional training. The need for religious is felt in the sphere of character building can not be developed without it. His education philosophy is asking to Vedic philosophy, although his interpretation of vedik philosophy is unique. The ultimate aim of education is to get Liberation. Liberation by achieving freedom from ignorance from the cycle of birth & re-birth. He laid special emphasis upon education as a means of character development, development of character cannot be formed knowledge brings happiness in the present world.

Conclusion

The aim of education is the complete development of the child development, the ideas and sacrifice of hard work & completion good thoughts. He is filled with strength of soul which inspires him to a hope to his path.

In his education compassion of kindness will figure as they relate to the needs education should to train us & to control ourselves, education as information, teaching, instruction, science & literacy?



From the below Figure Education means expansion of mind by skill, knowledge emotion & feelings not morely worldly information but releated to values, action, engram and development of personality for spritual information as well.

Ethical education is an important aspect of the entire educational system. It has to represent the aspiration of nation in alml its aspects. Curriculum has represent the national values and social goal of our country and all the cultural, social, tradional aspect of society are to be make known to the ethical education

Recents changes in science & Technology , information & communication technology leading to

knowledge exploision environmental learner human rights have brought in different areas of internet in to teacher education & that it should possible by values and ethical education only.

By to take the stand of ethical education in respect of professional commitment overall competencies, quality and development, practically and systematic programme and increase in substand institution of teacher education.

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The Employment Problem in India: Its Nature, Causes and Possible Solutions

Abstract

The development policy of India has always emphasized on employment generation. The attention and importance that it has received varied during different Five Year Plans. When India embarked on a strategy of industrialization-based development in 1950's, employment was not perceived to be a major issue in so far as a relatively faster growth of economy as envisaged in the consecutive Five Year Plans was expected to generate enough employment, particularly in industry, to take care of a small backlog of unemployment at the time and increase in labour force that was expected to be relatively modest. It was assumed that maintaining a regular supply of workforce to the ever-expanding industrial sector would, in itself, be a big challenge. Public sector, which was considered as a "model employer", was promoted continuously for over four decades.

But despite these efforts, growth of employment emerged as an important concern in development planning around the middle of 1970's, when it realized that economic and demographic performance of the economy had fallen short of earlier expectations and as a result unemployment has been on an increase. This problem was tried to be tackled by following the twin strategy of making development more employment oriented by encouraging growth of employment intensive sectors and on the other hand, introducing special employment programmes for creating both short term wage employment and self employment.

Keyword: Industriatisation, Economy, Employment

Introduction

With the introduction of new economic policy, the employment opportunities in public sector has declined tremendously although the economic growth rate has accelerated. And most new jobs were located in the informal sector with low earnings and no social protection. The start of the new Millennium, however, generated some optimism regarding growth in employment opportunities and it was well supported by NSSO estimates 2004-05. But the results of the last NSSO Round (2009-10) suggest a virtual stagnation in employment during 2004-05/2009-10.

The present paper describes the growth and structural changes in employment in the long and short periods, with special focus on the post reform period. It assesses the employment challenge in quantitative and qualitative dimensions and examines the prospects of generating productive employment in adequate quantity and quality. The paper concludes with some broad policy measures for increasing productive employment.

The Employment Scenario

According to ILO data, most of the developed countries saw an increase of less than 1% per annum in their employment during 1990s (0.45% in US, 0.18% in UK, 0.32% in France, 0.41% in Germany and -0.15% in Japan). In the case of developing countries, strictly comparable data are not available, but broad assessment reveals an average growth rate of 1.5% per annum during the period. During the past decade, 2001-10, employment is estimated to have grown globally to about 1.5% per annum. South Asia recorded a steady growth rate of employment at 2.4% in which India had a major contribution. India's record employment growth, however, has not been adequate in view of the faster growth of the labour force. Further, sectors with higher employment potential had registered relatively slower growth. Agriculture still continued to be the largest employer as non-agricultural sectors have not generated enough employment to effect a shift of workforce. Most of the employment growth has been contributed by the unorganized, informal sector which is characterized by poor incomes.



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and conditions of work. Workers could manage to get employment in organized sectors only as casual and contract labour.

Table-1
Growth of Employment (UPSS)

Sector	1972-73/77-78	1977-78/83	1983/87-88	1987-88/93-94	1993-94/99-2000	1999-00/2004-05	2004-05/2009-10
Primary Sector	1.78	1.56	0.28	2.16	0.05	1.40	-1.63
Mining & quarrying	4.36	7.14	5.34	1.69	-2.11	2.41	3.00
Manufacturing	5.43	3.08	4.66	0.05	1.62	5.06	-1.06
Utilities	2.78	12.39	7.21	4.37	-5.89	3.22	1.02
Construction	1.67	6.84	13.91	-0.11	6.38	8.18	11.29
Secondary Sector	4.78	3.95	6.44	0.19	2.44	5.83	3.46
Trade, Hotelling etc.	6.40	2.87	3.96	3.62	6.28	4.01	1.10
Transport & Communication etc.	6.21	5.36	3.02	3.67	5.09	5.23	2.14
Financing, Insurance, Real estate & business services	6.84	7.68	1.41	5.24	5.28	9.62	5.77
Community, social and personal services	3.24	3.01	0.31	6.68	-1.48	2.71	0.99
Tertiary Sector	4.86	3.46	2.11	5.03	2.85	4.08	1.59
All Non-Agricultural	4.82	3.67	4.09	2.82	2.68	4.81	2.41
Total	2.61	2.19	1.53	2.39	1.04	2.81	0.22

Source:- Various Rounds of NSSO data on employment and unemployment.

Table-1 indicates that secondary sector has been the main employment provider during the reference period. In the secondary sector, a high employment growth despite moderate rates of GDP growth has been possible due to high and rising employment elasticity. But in the tertiary sector, even a high GDP growth has not been able to maintain a high growth in employment because of steep decline in employment elasticity.

Looking at the employment performance within secondary and tertiary sector, we find that construction industry in the secondary sector had maintained a consistent record of providing gainful employment. In the services sector, trade & transport and financial services have recorded highest increase in employment over the longer period 1983-2005.

The fact that rate of employment growth has declined cannot be ignored. What is more surprising is the fact that this decline has been coupled with an acceleration in the rate of economic growth. The employment growth rate and growth rate of GDP over different time period is depicted in Table- 2.

Table-2

Period	GDP Growth Rate	Employment Growth Rate
1972-73 to 1983	4.7%	2.4%
1983 to 1993-94	5%	2.0%
1993-94 to 2004-05	6.3%	1.8%
2004-05 to 2009-10	9%	0.22%

Source:- National Accounts Statistics, Central Statistical Organization, various years.

Comparative Study of growth in employment in Rural and Urban Areas

The development process has, no doubt, been accelerated in urban areas over the years but the rate of employment growth had been high in rural areas. This has been particularly so in non-agricultural activities (Table-3). A comparison of employment growth in rural areas vis-à-vis urban areas reveals that employment in all non-agricultural activities together grew at 4.58% per annum in urban areas during 1972/73 to 1983; growth rates for rural and urban areas were similar at 3.65% during 1994-2005 (Papola and Sahu, 2012). Only during 1983 and 1993-94, urban growth rate was higher at 3.5% as compared to

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3.2% for rural areas. During 2005-10, rural areas did better than urban areas in growth of non-agricultural employment. The pattern of employment growth in terms of rates of employment growth in different activities is found to be similar in rural and urban areas. Construction showed the fastest growth in both rural and urban areas. During the period 1993-94 to 2004-05, employment growth in construction sector has been much higher at 8.3% per annum in rural as compared to urban areas at 5.6%. Transport ranks second and trade third in employment growth in rural areas (Table-3 and Table-4).

Table-3
Growth of Urban Employment (UPSS)

Sector	1972-73/77-78	1977-78/83	1983/87-88	1987-88/93-94	1993-94/99-2000	1999-00/2004-05	2004-05/2009-10
Primary Sector	5.01	3.27	0.42	1.99	-3.48	4.47	-1.17
Mining & Quarrying	1.54	9.23	4.88	2.79	-3.69	3.00	-1.87
Utilities	-8.86	24.12	4.73	3.77	-4.16	4.05	0.93
Construction	2.90	7.62	5.91	6.26	6.29	4.68	6.60
Secondary Sector	4.86	3.80	5.13	1.04	2.32	5.60	2.01
Trade, Hotelling etc.	5.50	2.61	3.88	3.82	8.08	2.53	1.43
Transport & Communication etc.	5.96	4.02	1.78	3.59	3.94	4.36	1.77
Financing, Insurance etc.	5.73	4.45	5.43	5.49	5.59	9.96	6.67
Community & Social Services	2.52	3.66	0.24	7.24	-1.87	3.75	1.58
Tertiary Sector	4.23	3.38	2.10	5.32	3.37	3.78	2.06
All Non-Agricultural Activities	4.47	3.54	3.33	3.61	2.99	4.44	2.04
Total	4.55	3.50	2.91	3.40	2.30	4.44	1.78

Source:- Various Rounds of NSSO data based on employment and unemployment. Papola and Sahu, 2012.

Table-4
Growth of Rural Employment (UPSS)

Sector	1972-73/77-78	1977-78/83	1983/87-88	1987-88/93-94	1993-94/99-2000	1999-00/2004-05	2004-05/2009-10
Primary Sector	1.66	1.49	0.28	2.17	0.20	1.29	-1.65
Mining & Quarrying	5.83	6.11	5.89	1.09	-1.25	2.11	5.21
Manufacturing	5.34	3.45	4.33	0.36	1.64	4.00	-2.74
Utilities	17.15	1.66	11.1	5.14	-8.10	1.75	1.2
Construction	0.91	6.22	18.4	-3.48	6.44	10.52	13.59
Secondary Sector	4.71	4.08	7.57	-0.53	2.55	6.03	4.55
Trade, Hotelling etc.	7.62	3.19	4.05	3.37	3.77	6.23	0.65
Transport & Communication etc.	6.77	8.07	5.13	3.77	6.68	6.23	2.58
Financing, Insurance etc.	10.64	15.33	-7.21	4.44	4.24	8.41	2.05
Community & Social Services	4.08	2.26	0.45	6.21	-1.02	1.35	0.16
Tertiary Sector	5.72	3.58	2.13	4.64	2.12	4.52	0.90
All Non-Agricultural Activities	5.23	3.82	4.90	2.01	2.23	5.25	2.84
Total	2.21	1.89	1.19	2.12	0.67	2.29	-0.34

Source:- Various Rounds of NSSO data based on employment and unemployment. Papola and Sahu, 2012

Workforce Structure and Quality of Employment

Whereas the quantity of jobs available is a serious constraint, the qualitative dimension of employment challenge is as much serious. We find that a large number of workers who have the ability to earn more are forced to live in abject poverty because of lack of full time job opportunities. The worst sufferers are the women workers whose participation in the primary sector is much more than their male counterparts, but, in secondary and tertiary sector, they get less job opportunities. This clearly indicates that their financial condition is worse as compared to males (Table-5).

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Table-5 : Sectoral Distribution of Male and Female Workers (UPSS)

Year	Primary Sector	Secondary Sector	Tertiary Sector
1993-94 (Males)	57.43	16.76	25.81
(Females)	77.52	11.24	11.25
1999-00 (Males)	53.53	18.16	28.31
(Females)	75.36	12.00	12.64
2004-05 (Males)	48.64	21.09	30.27
(Females)	72.26	13.96	13.78
2009-10 (Males)	45.27	24.02	30.71
(Females)	66.99	16.82	16.19

Source: Various Rounds of NSSO data.

Only about one-third of India's workforce consists of women but a large majority of them are engaged in agriculture. Out of the estimated 136 million women workers in India in 2007-08, only 4% were able to get employment in the organized sector. Such employment is mostly in community, social and personal services. In the unorganized sector, women workers face a number of problems. These include lack of training facilities, access to credit, absence of social security measures etc.

Improving the Quality of Employment: Productivity Increase

It is clear that employment opportunities should be increased to ensure quality employment to an increasingly larger number of Indian workers. Increasing employment opportunities would ensure jobs to the unemployed while at the same time, it will improve the quality of employment of those already at work, by enabling them to shift to better quality jobs and increasing the demand pressure in the labour market. The emphasis should be on increasing the productivity of labour force rather than on increasing employment because the labour market already has a good chunk of 'working poor'. The most preferred 'quality-employment-creating-growth strategy' should consist of a high rate of GDP growth derived from faster growth of sectors with relatively high employment elasticity and high productivity and primarily productivity-led growth in sectors with low productivity. The shift of workers from low productive agriculture sector to highly productive non-agriculture sector is apparent. Among the non-agriculture sectors, construction, manufacturing, transport, financial services and information technology sector have emerged as most promising. But most of these sectors provide employment only in the private sector. Public sector, which has the potential of providing quality employment, has registered a declining trend as far as employment generation is concerned. The growth in this sector is coupled with growth of GDP.

Strategy for faster growth of Productive Employment

As discussed earlier, the sectoral and gender asymmetry in the employment pattern as witnessed in our country needs to be addressed for improving employment opportunities both quantitatively and qualitatively. The following strategies would be helpful in this regard:-

1. Economic growth rate needs to be accelerated in order to create new jobs and to improve the quality of existing jobs. Those sectors which have the potential

of generating more jobs, need to be targeted for a faster growth rate.

2. Since there is large scale migration of workers from agriculture sector to manufacturing and services sector, a quantitative and qualitative improvement in employment in agriculture sector is much needed. The growth rate in agriculture sector needs to be accelerated and cropping pattern should be diversified.
3. Workers engaged in informal sector face the problem of poor working conditions, inadequate social security, poor access to credit and technical knowledge etc. Hence, suitable strategy should be chalked out to overcome such problems of workers.
4. The existing labour laws in our country are highly restrictive in nature. As such, it hinders the employment expansion in organized sector. Since decisions pertaining to labour laws have political implications, hence, every ruling party shy away from it. It is necessary to bring in changes in the labour laws regime in India to ensure expansion of and improvement in overall quality of employment. IDA provisions of prior government permission for retrenchment, lay-off and closure needs to be removed with corresponding enhancement of compensation from the present 15 days wage for each completed year of service. Contract labour should be used more flexibly in places where labour is not required on a stable long term basis. Minimum quality of work conditions and social protection should be ensured to workers in the informal sector.
5. Last but not the least, proper and adequate programmes should be organized for workers already engaged and for potential workers so that their bargaining power in terms of wages and service conditions could be improved.

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Study on use of credit cards by the Consumers for day to day expenditures



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Abstract

Present study was conducted to find out as to, how many people as consumers use credit cards, as short term loan, from various lending institutions, such as, banks, for their expenditures. The study included thirty respondents of both the sexes, aging over twenty years. Questionnaire method was used, data collected and analyzed. The study used credit cards for various personal benefits like-online purchase, security in terms of theft, no hassle of carrying cash, easy payment for booking, the travelling tickets, shopping, hotel reservation & payments etc., beyond their instant financial budgets. Most of the respondents used credit cards of H.D.F.C bank as a lender.

Keyword: card, consumers, expenditure, lending agencies

Introduction

A credit card is a payment card, issued to users as a system of payment. It allows the card holder to pay for goods services based on the holder's promise to pay for them. (1) The issuer of the card creates a revolving account & grants a line of credit to the consumer. (2) Credit card allows the consumer a continuing balance of debt; subject to interest, being charged. (3) Credit card involves a third party entity that pays the seller & is reimbursed by the buyer. The size of most credit cards is $3\frac{1}{8} \times 2\frac{1}{8}$ (85.60x53.98 mm) (4) Conforming to the ISO/IEC 7810 ID – 1 Standard. Credit cards have an embossed bank card number complying with the ISO/IEC 7812 numbering standard. (5) The concept of using a card for purchases in his utopian novel- "Looking Backward", and the term credit card was used eleven times in novel. The modern credit card was used for the first time in 1940 in U.S.A., specifically to sell fuel to the automobile owners Early credit cards were made up of celluloid plastic, then metal & fiber, then paper and are now mostly polyvinyl chloride (P.V.C) plastic. When a purchase is made the credit card user agrees to pay the card-issuer. The card holder indicates consent to pay by signing a receipt with a record of the card details and indicating the amount to be paid or by entering a personal identification number. (PIN) Many merchants now accept verbal authorization via telephone an electronic authorization using the internet, known as card not present transaction (CNP) Each month the credit card holder is sent a statement indicating the purchases undertaken with the card and the total amount owed. (6) Many banks now offer the option of electronic statements either in lieu of or in addition to physical statements, which can be viewed at any time by the card holder via the issuer's online banking website. (7) The benefits of using credit card is convenience and allows short term loans (8) Credit cards become detrimental to the customers, when they become dependent with loan & interest to their card provider that they are driven to bankruptcy. Credit cards are more secure than cash because they discourage theft and reduce the amount of cash on premises (9) Parties involved in electronic business are a card holder i.e. customer, card issuing financial institution i.e. bank & a merchant who sells the products or provides services to the customer (10) The number found on credit cards have a certain amount of interval structure & share a common numbering scheme. The credit card's prefix, called the bank Identification Number, is the sequence of six digits at the beginning of the number that determines the bank to which a credit card number belongs; the next nine digits are the individual account. Number & the final digit is a validity check code (11)

Most of the people carry credit cards these days, which simplifies the complicated banking, process for an individual, in case the person is short of cash, during shopping or at the time of emergency. (12) A credit card generally renders its holders an immediate authority to purchase

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goods, travel or hotel reservations or shopping for merchandise in & outside the country i.e. the use of credit card is just like taking a short term loan; that is repaid to the credit card company (lender). If the money is not paid back within the provided time limit, an interest charge is applied. The credit cards come with the credit limit, a pre determined amount of money which its lender is offering as credit to the credit card holder to spend whenever he or she wants to. (13) Many banks in India are offering their credit cards to the customer's like- HDFC State bank of India (SBI), Bank of India, and PNB. ICICI, CITI-Bank, BOB, HSBC & Standard charted Bank to name a few (14).

Keeping in view, the advantages of use of credit cards, the present study was conducted, with the objective as to find out the number of consumer/user of different credit cards, in Jabalpur city. Age, of randomly selected respondents, taken for the study, was above twenty years for both sexes i.e. males as well as females. The respondents taken up for the present study were natives of different localities of Jabalpur city.

Methodology

Data was collected by the use of questionnaire method, which was in Hindi & English languages. Primary source of data collections was group of thirty respondents both male and female from middle and high income groups, aging above twenty years. Secondary source being documentary and for this the information was collected from different books, magazines, journals, news scripts and internet surfing. An introductory letter was provided to the respondents along with the questionnaire. Respondents were explained with the purpose of the present study. Detailed instructions regarding questionnaire were given to the respondents. Only two days were given, to answer the questionnaire, to the respondents. Then all the questionnaire forms were collected & analyzed for the interpretation & results. The survey was completed in two months only, i.e., April & May 2013.

After Collection of data, it was then tabulated and analyzed.

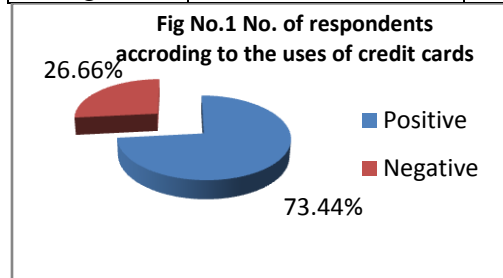
TABULATION & ANALYSIS

Discussion:

Table No.1

No of respondents according to the uses of credit card

Response	No. of respondent	
Positive	22	73.44
Negative	8	26.66

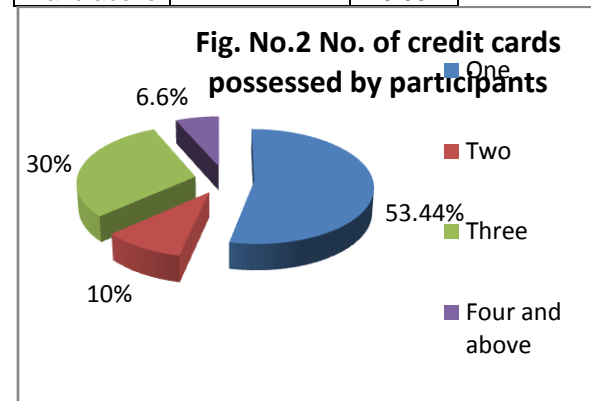


There are total of 30 respondents. Out of these 22 (73.44%) respondents used the credit cards and 8 (26.66%) respondents never used the credit cards.

Table No.2

No. of credit cards possessed by people

No. of Credit card	No. of respondent	
1	16	53.44
2	3	10
3	9	30
4 and above	2	6.66

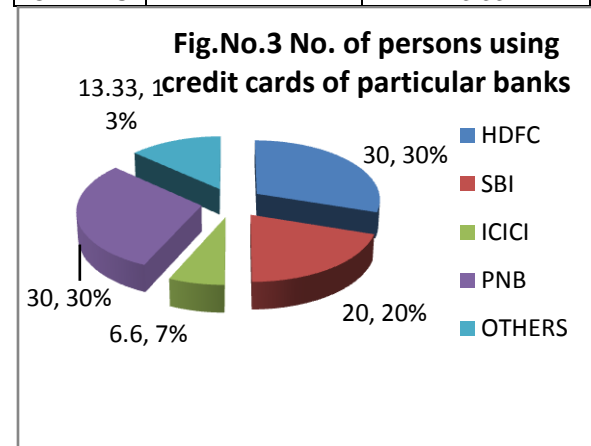


Out of 30 respondents, 16 (53.44%) respondents had 1 credit card 3 (10%) respondents possessed 2 credit cards and 9 (30%) respondents had 3 credit cards and 2 (6.66%) had 4 & above credit cards.

Table No.3

No. of persons using credit cards of particular bank

Banks	No. of respondent	%
HDFC	9	30
SBI	6	20
ICICI	2	6.6
PNB	9	30
OTHERS	4	13.33



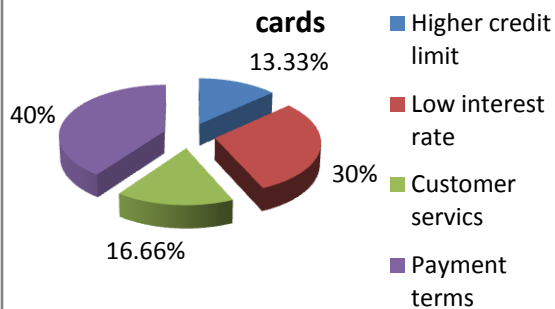
The maximum credit cards of HDFC Bank were used i.e. 9 (30%) by the respondents. 6 (20%) respondents used SBI Bank credit card and 4 (13.33) respondent used other Banks' credit cards.

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Table No.4
Reasons for using Credit card

S. No	Reasons	No. of Respondent	%
A	Higher credit limit	4	13.33
B	Low interest rate	9	30
C	Customer service	5	16.66
D	Payment terms	12	40.00

Fig. No.4 Reasons for using credit cards

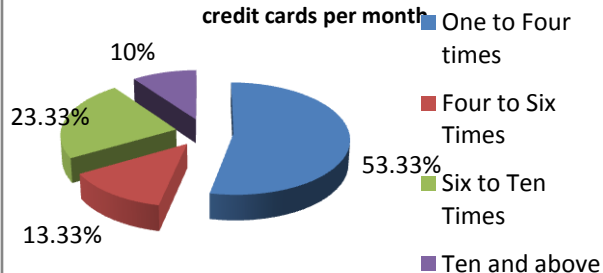


Out of 30 respondents, 4 (13.33%) respondents used their credit cards because of higher credit limit, 9 (30%) respondent chosen their credit card because of low interest rate. 5 (16.66%) respondents used their credit cards because of customer service offered.

Table No.5
No. of respondents' frequency of using credit cards per month:

Time	No. of Respondent	%
1-4	16	53.33
4-6	4	13.33
6-10	7	23.33
10- above	3	10

Fig. No.5 No. of respondents' frequency of using credit cards per month

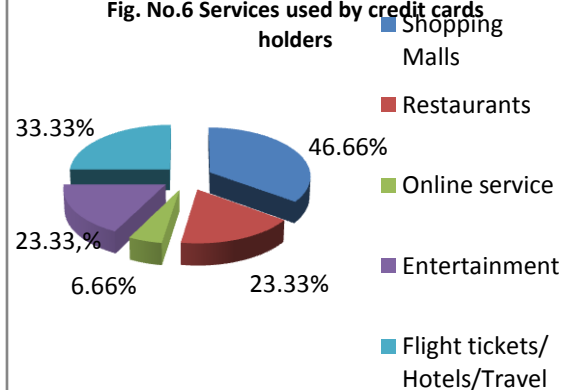


Total no. of respondent is 30 and out of this 16 (53.33%) respondents used their credit card 1-4 times per month, 4 (13.33%) respondents used 4-6 times, 7 (23.33%) respondent used 6-10 times and 3 (10%) respondent used their credit cards 10-& above times.

Table No.6
Services Used By Credit Card Holders:

S.No	Services	No. of Respondent	%
A	Shopping mall	14	46.66
B	Restaurant	7	23.33
C	Online service	2	6.66
D	Entertainment	7	23.33
E	Health/sport	-	-
F	Flight Ticket/Hotels/Travel	10	33.33
G	Other	-	-

Fig. No.6 Services used by credit cards holders

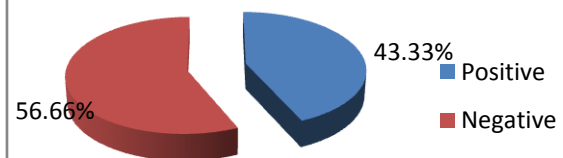


Out of 30 respondents maximum people used their credit cards in shopping malls, then for hotels and travels, restaurants and entertainment respectively.

Table No.7
No. of persons using their credit card for online purchase.

Response	No. of respondent	%
Yes	13	43.33
No	17	56.66

Fig. No.7 No. of persons using credit cards for online purchase

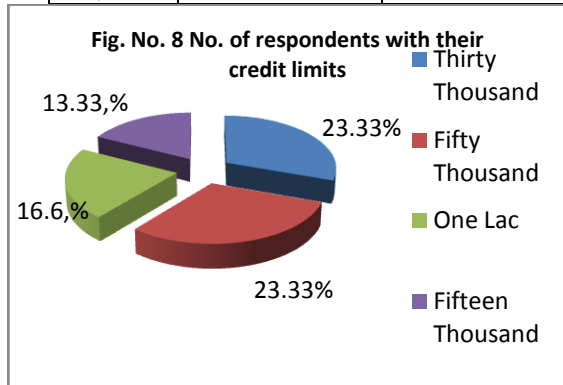


Out of 30 respondents 13 (43.33%) respondents used their credit cards for online purchases and 17 (56.66%) respondents do not use their credit card for online purchases.

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Table No.8
No Of Respondents With Their Credit Limits

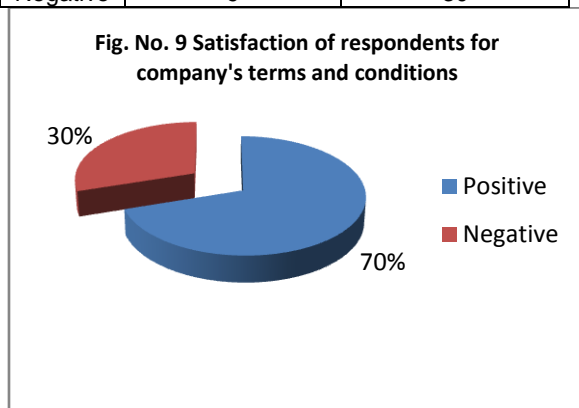
Credit Limit	No. of respondents	%
30,000/-	7	23.33
50,000/-	8	23.33
1,00,000/-	9	16.6
15,000/-	5	13.33



Out of 30 respondents, 23.337% respondents had credit limit of 30, 000, 23.33% respondents had 50,000, 16.6% respondents with 1, 00,000 & 13.33% respondents with 75,000 credit limits.

Table No.9
Satisfaction Of Respondents For Company's Terms And Conditions:

Response	No. of respondent	%
Positive	21	70
Negative	9	30



70% of respondents were found to be satisfied with their credit card company's terms and conditions but 30% respondents were not satisfied.

Analysis of Data

Taking into consideration, various benefits prefer its use. The study concludes that out of total respondents, 73.44% respondents used credit cards and 53.44% of the respondents possessed only one credit card. 30% respondents used credit card of HDFC bank, while 30% used that of PNB. 30% of the participants used credit cards for its low interest rate. Percentage of participants who used credit cards for one to four times per month, only 10% used it for ten or more than that times per month. 46.66% participants

of the study used their credit cards for shopping in the malls, flight tickets and travelling. 56.66% people did not use their credit cards for on line shopping. 23.33% people had their credit limits of thirty thousand and fifty thousand, Only 16.6% had their credit card limit of rupees one lac. 70% of the participants of the study were found to be satisfied by the terms and conditions of the issuing agencies.

Conclusion

The present study concludes that the use of credit cards is common these days, due to its benefits and advantages. Use of credit cards removes chances of frauds. It is cumbersome to carry cash during travelling, its use provides easy mode of payments. Special offers are sometimes given by various agencies while paying through credit cards. Certain companies give reward points by the use of credit cards. Use of credit cards provide handy financial management. There is no need to dig into existing resources for the people who use credit cards because their potential sources are significant.

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Periodic Research

Effect of Climatological Variables on the Frequency of Incident Stroke Hospitalization During Spring

Abstract

Stroke data were obtained as SMR01 (157,639 incident stroke hospitalization in Scotland between 1986-2005). To observe variation in weather parameters with first stroke incidences per day, during spring daily mean temperature/total rainfall/average daily atmospheric pressure was compared with frequency of incident strokes per day using ANOVA (Analysis of Variance). An analysis reveals no statistically significant relationship for any of the variables of climate. Reduction in consumption of alcohol and smoking and maintenance of the blood pressure within normal range, are suggested during spring to minimize the chance of stroke.

Keywords: Stroke, hospitalization, climatological variables, temperature, atmospheric pressure, rainfall, spring.

Introduction

Stroke is defined as "abrupt impairment of brain function by a variety of pathological changes involving intracranial or extracranial blood vessels¹. Prognosis after stroke seems to be very poor. Good number of people (25% to 30%) die in the initial three weeks and 33% to 66% in the 1st year following stroke incidence². In U.K. itself about 111,000 stroke incidents are reported every year³. Yearly deaths in U.K. were reported to be 53,000⁴. Though there has been remarkable decline in the stroke mortality rates since 1968 a lot of variability is still present within U.K. The rates are highest in Scotland, followed by North England, Ireland, Wales and South England⁵.

Although overall climatological variability of stroke is appreciable in Europe and other continents like America, it is difficult to establish a specific trend due to large area wise weather differences and pathophysiological metamorphism. The aim of the present study is to assess whether there is any association between climatological variables (temperature, rainfall and atmospheric pressure) and incidence of stroke in Scotland (1986 – 2005) during spring and suggest measures to reduce them.

Methods

Stroke data relate to all incident hospitalization for stroke in Scotland between 1986-2005. The data set comprises of a sample size 157, 639 incident hospitalization. Following service divisions were kind enough to provide informations about patient's details year-wise.

1. National Health Service (NHS)
2. Information Service Division (ISD)
3. Scottish Morbidity Record (SMR)

SPSS (Statistical Package for Social Sciences, 15.0 versions for Windows) was used for statistical analysis.

Weather data was obtained from the Met Office- UK's National Weather Service in the form of data sets which provide information about average temperature, total rainfall and average atmospheric pressure on a daily basis from 1986 – 2005.

Temperature is measured at a height of 1.25 meters above ground level over a gross surface. A wide range of temperature recording is performed including air temperature, dew point, wet temperature, gross temperature and soil temperature and each is recorded using a different and specific type of thermometer. The values for temperature are noted in degree Celsius and tenths and values below 0°C are preceded by a minus sign⁶.



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Rainfall is measured hourly, then totalled up for the daily total rainfall. The values of rainfall are noted in millimeters (mm), (25.4mm=1 inch) (Personal reference) ⁷.

Atmospheric pressure at any point on the Earth's surface is proportional to the weight of the air above it. It is measured using a precision aneroid barometer (PAB). The daily average air pressure is corrected to sea level and averaged out over the daily period 0001 to 2400 GMT/UTS. The pressure unit used in meteorology was previously the millibar (one bar=1000 millibars). However, this has been replaced by the SI unit of pressure – the pascal (Pa) and one hectopascal (hPa) = 1 millibar (mb) ⁸.

To observe for variation in weather parameters with first stroke incidences per day, daily mean values of variables were compared with frequency of incident strokes per day using ANOVA (One way analysis of variance). Graphically it was presented by 95% confidence interval plot with number of strokes in a day on X-axis and weather parameters on Y-axis.

Ethical approval was granted from Faculty of Medicine Ethics Committee for Non-Clinical Research involving human subjects, University of Glasgow (Project No-FM00609). The retrospective data were approved by Privacy Advisory Committee (PAC).

Results

Spring (Temperature): The 95% CI plot (Fig.1) reveals that the daily average temperature in Scotland is relatively consistent between 7.5 °C and 8.5 °C as the number of strokes rises from 1-14 per day. The variability visible thereafter is attributed to non precise estimation as the total number of strokes each day is very few. This is graphically illustrated as narrow CI intervals in figure 1. The pattern of plots and a 'p' value of 0.2 (ANOVA test) therefore indicates a statistically non-significant relationship between daily average temperature and number of strokes per day.

Spring (Rainfall): The 95% CI plot (figure 2) is quite uneven although the amount of daily total rainfall increases (2 mm – 3 mm) during the same frequency. The 95% CI are also narrow throughout the stroke frequency (figure 2) which suggests precise estimation. The pattern of plots and a 'p' value of 0.2 (ANOVA test) therefore indicates that a statistically non-significant relationship between daily total rainfall and number of strokes per day.

Spring (Atmospheric pressure): From the 95% CI plot (figure 3), the average atmospheric pressure is quite consistent between (1012 and 1014) hPa as stroke frequency increases from 1 to 15 strokes per day. A few outliers at the end hints an error in the estimation (total number of strokes is less) as illustrated by corresponding wide CI intervals (Figure 3). A 'p' value of 0.7 (ANOVA test) therefore indicates a non-significant relationship between daily average atmospheric pressure and number of strokes per day.

Discussion

None of the variables of climate showed significant variation with stroke frequency in spring. Parallel reports do not exist in literature. Our study has large sample size (157, 639) and is conducted over a period of 20 years, thus the results are highly unlikely to be a product of chance. Some precautionary measures are suggested to minimize the chance of stroke i.e. decrease in alcohol consumption and smoking and maintaining blood pressure within safe range during spring season.

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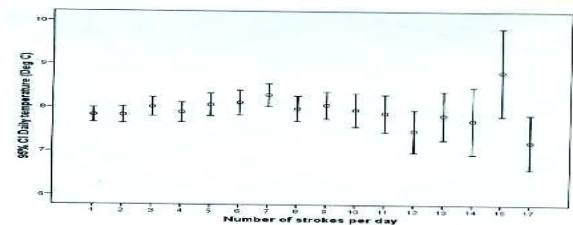


Figure 1 : Daily mean temperature by number of strokes on a given day

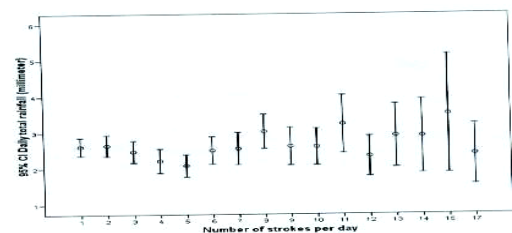


Figure 2 : Daily total rainfall by number of strokes on a given day

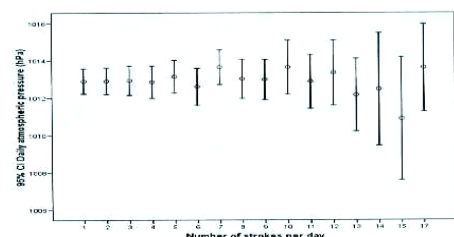


Figure 3 : Daily average atmospheric pressure by number of strokes on a given day

Periodic Research

In Defense of Euthanasia: A Situational Analysis

Abstract

Nowadays, Euthanasia, peaceful death in peace bed has become a burning ethical issue to be discussed on. The advanced age of technology offers various complexities in our daily life and we want to come out of the critical juncture by hook or crook. At present all the members of our families are habituated to lead busiest life and have no time to spare for the sick like early period. So, both, the patients and the patient parties are seeking ways to get relief from such critical positions. Besides this, the life-saving treatment is getting higher and higher day by day. This is also an important cause of favouring euthanasia.

What actual situation demands, ethics may not support. In other words, there is a difference between the thinking of general people and the thinking of ethicists. Ethics has its own line of thinking to represent the matter. An important and profound ethical question arises here regarding this matter. Is the legalization of euthanasia justifiable? It is the main point of my discussion. After providing the definition and classification of euthanasia I shall show the arguments of euthanasia offered in its against and favour to represent the debate. After the analysis of these arguments the demand of the situation will be offered as conclusion to establish my view putting the debate in to bracket. The continuing debate will play its role to enhance our knowledge and will act as the intellectual exercise with a good and qualitative message without having the capacity of application in our daily life. But this debate has no power to indicate or to address the demand of situation. A situation may arise where we find no other options except the application of euthanasia.

Keyword

Good death = Death in peace bed.

Life- taking dose = A dose that may bring death.

Discrimination = An irrational difference.

Instrumental value = A value imposed by others according to their need

Intrinsic value = A value that does not required any imposition

Palliative care = A homely environment concept in the field of treatment

Slippery slope = A concept taking from animal ethics

Introduction

Nowadays, Euthanasia, peaceful death in peace bed has become a burning ethical issue to be discussed on. The advanced age of technology offers various complexities in our daily life and we want to come out of the critical juncture by hook or crook. At present all the members of our families are habituated to lead busiest life and have no time to spare for the sick like early period. So, both, the patients and the patient parties are seeking ways to get relief from such critical positions. Besides this, the life-saving treatment is getting higher and higher day by day. This is also an important cause of favouring euthanasia.

What actual situation demands, ethics may not support. In other words, there is a difference between the thinking of general people and the thinking of ethicists. Ethics has its own line of thinking to represent the matter. An important and profound ethical question arises here regarding this matter. Is the legalization of euthanasia justifiable? It is the main point of my discussion. After providing the definition and classification of euthanasia I shall show the arguments of euthanasia offered in its against and favour to represent the debate. After the analysis of these arguments the demand of the situation will be offered as conclusion to establish my view putting the debate in to bracket. The continuing debate will play its role to enhance our knowledge and will act as the intellectual exercise with a good and qualitative message without having the capacity of application in our daily life. But this debate has no power to indicate or to



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Definition

Euthanasia' means 'good death'. The word 'euthanasia' is divided into two parts, i.e. 'eu' and 'thanatos'. 'Eu' means well or good and 'thanatos' means death. So, euthanasia refers to the practice of intentionally ending a life in order to relieve from pain and suffering. According to the British House of Lords select Committee on Medical Ethics, 'euthanasia is a deliberate intervention undertaken with the express intention of ending life, to relieve intractable suffering.'¹ In the Netherlands, euthanasia refers to the termination of life by a doctor at the request of a patient.²

Euthanasia implies four important elements that must be incorporated at the time of giving definition of euthanasia. These basic elements are: a. An agent and a subject; b. An intention; c. A sufficient causal proximity and d. An outcome. An agent and a subject must be there to apply euthanasia. Subject refers to that person on whom the painless death should be applied and it is the duty of an agent to accomplish this method. It must be purely intentional. The motive of the agent should always be accounted for. It must be a good motive insofar as the good of the person killed is concerned. With the good motive sufficient causal ground must be there to justify the procedure. After all, there must be an outcome, i.e. the intended outcome.

Incorporating all these four basic elements regarding euthanasia Heather Draper says, "euthanasia must be defined as death that results from the intention of one person to kill another person, using the most gentle and painless means possible, that is motivated solely by the best interests of the person who dies."³

Classification of euthanasia

Classification of euthanasia is based on the consent of the subject, i.e. the person on whom the mercy killing procedure will be applied. Some times the subject consciously or deliberately insists his or her family members along with the doctor to relieve him or her from pain by allowing him/her to sleep for ever by using medical aids. Such type of euthanasia is called voluntary. On the other hand, some cases the patient's consent is unavailable. But it is thought by the members of his/her family and doctor/s that the recovery chance is zero and it would be better to allow him to sleep for ever peacefully by withdrawing life supporting treatment. It is termed as non voluntary euthanasia. Lastly, Involuntary euthanasia occurs when euthanasia is performed on a person who is able to provide informed consent, but does not, either because they do not choose to die, or because they were not asked but the situation forces the agent to apply euthanasia on the subject.

So, it is clear that in the basis of giving consent euthanasia is divided into three parts, i.e. a) Voluntary, b) non-Voluntary and c) involuntary.

Euthanasia is also designated as Active and Passive- a) Being convinced by the good motive of

the agent and considering the patient's condition doctor/s may take decision to withhold the life supporting treatment to allow the patient to die peacefully. It is called passive euthanasia. On the other hand, sometimes it is performed by using some life-taking dose. It is called active euthanasia.

Arguments Against Euthanasia: The following arguments are offered by the opponents against the acceptance/legalization of euthanasia.

- 1. It will weaken society's respect for the life of human being on earth:** It is said that the life of human being has a special status; It has its sanctity and it is our duty to show respect to that sanctity. If euthanasia is accepted and legalized then it will weaken this respect which is shown to the lives from the very beginning of the society.
- 2. It will create a difference between a sick and an able bodied person :** Unexpected situations will arise in the form of discrimination between a sick person and an able-bodied person if euthanasia is accepted. And the sick person may think himself or herself as a burden to his or her family. In this situation he or she will be in state of mental depression and may think as unwanted being who has no right to live and he or she may be insisted to give his/her consent to offer the ultimate gift. i.e. death. This type of discrimination may hamper the family peace and ultimately may bring unwanted results.
- 3. Slippery slope argument :** It is stated by the opponent of euthanasia that voluntary euthanasia also should not be legalized as it will help to start of a slippery slope that will lead to involuntary euthanasia and the killing of people who are thought undesirable. It will open the flood gate to apply euthanasia to the elderly, lonely, sick or distressed people. So, the legalization of voluntary euthanasia must not be permitted.
- 4. Argument from the point of interest :** The application of euthanasia may not be counted as best interest of a patient. Some other factors may act as decisive factors rather than the pain relieving factor. When the advantage of application of euthanasia will be there as choice, no one will be interested in sparing a large amount of money to treat a patient and may try to pressure the doctor/s to declare the patient as terminally ill to exercise euthanasia without counting the interest of the patient. On the other hand, doctors may also insist the patient parties on taking initiation in favour of euthanasia to free up beds for other patients who will be more useful to earn more money. Both the situation will not act as the best interest of the concerned patient and hence it will not be morally justified.
- 5. Against the will of God:** It is demanded by the religious people that the life of a human being is gifted by God. The length of life is pre determined by God. So, we have no right to shorten the length of life by applying euthanasia. This action will go against the will of God.
- 6. Devalues the sanctity of life:** This argument expresses a different view. It says that euthanasia

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is bad because it neglects the sanctity of human life. All human beings have values irrespective of age, sex, race, religion and social status. It is not instrumental value. The value possessed by human beings is designated as intrinsic value. So, human being should not be used as means to an end. The acceptance or legalization of euthanasia will surely devalues the sanctity of human life. Devaluation of the sanctity of life is not ethically justifiable. So, the legalization of euthanasia is not ethically permissible.

7. **Proper palliative care:** It is demanded by the opponent that the existence of palliative care makes euthanasia unnecessary. Palliative care is physical, emotional and spiritual care for a dying person when cure is not possible. It includes compassion and support for family and friends. This care will help to prevent a person feeling any need to contemplate euthanasia.

Arguments for euthanasia

1. The first argument deals with the sanctity of life. It was assumed that acceptance of life. It is assumed that acceptance of euthanasia will lead people to the position where there will be no respect for that sanctity. Sanctity is a word having no definite criteria. If someone want to show respect to human life, he or she will have to do something in favour fit in need. When a terminally ill people suffer a lot without any hope of restoration; it is our duty to relieve his or her pain to show respect to him or her. In that situation it will be the right thing. If we remain only as spectators, we will be treated as cruel and disrespectful to the sanctity of life. So, the argument, euthanasia will weaken society's respect for the sanctity of life has no importance. I think, it will help us to be more respectful to the sanctity of life. After all, the concept of the sanctity of life is never rejected or denied by the supporters of euthanasia, they only want to explain it from a different point of new.
2. The argument, creation of difference between a sick and an able-bodied person has also not any concrete base. It should be kept in mind that euthanasia is a project not to create any kind of discrimination, rather, its aim only to relieve pain and sufferings of the terminally ill people.
3. The argument of slippery slope is offered by the opponent only out of fear. There is no scope to apply euthanasia on the generally sick people. If a proper monitoring system is developed under the suppression of court, the chance of supply slope will remain far behind.
4. The argument from the point of interest is also an weak argument. The word 'interest' has several aspects. Preferential interest is also an important aspect. In the case of the terminally ill people, the application of euthanasia will be guided by the principle of preferential interest.
5. The argument of proper palliative care has its in physical, emotional and spiritual care for a person who is terminally ill. It is also argued that proper

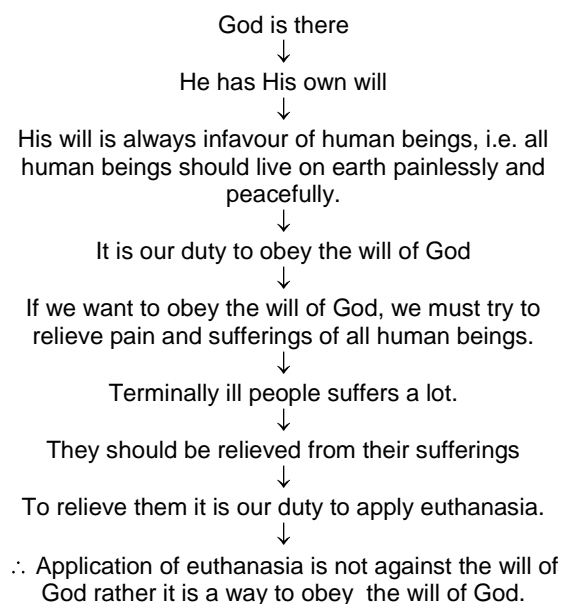
palliative care will show the path not to apply euthanasia on terminally ill people.

There is no doubt that the concept of palliative care is a better concept expressing the higher values of human beings. Palliative care is needed for a dying person lying on death bed to die peacefully. But in actual life, the application, of palliative care is too much difficult for various reasons.

The life style of the people of the today's world kills the possibility of the actualisation of the concept of palliative care. Everyone has his or her own path to drive his or her life. So, they have no time to spare for the others. In this situation the possibility of the actualization of the concept of the palliative care is under scrutiny. There is no doubt that there is a big gap between the two situation and in this situation it is hard to find out any way to bridgeup the gap. Pressure of professional life also a bearer for the actualization of the concept of Palliative care.

The second situation is that the concept of family is now gradually disappearing. The Concept of divorce, the concept of oldage home show the critical situation of today's life. The concept of 'personal life' paves the way of destruction of the concept of 'family life'. The concept of family life is essential for palliative care. Where the concept of family life is in danger, how a terminally ill people can get the proper palliative care? It is impractical and impossible.

6. God's will- is a metaphysical concept having no practical proof. Suppose God is there and He has His won will. Again it can be said that His will always favour human being to live on earth painlessly and peacefully. If this is the case, then it also can be said that God does not want to see any human being to suffer with immeasurable pain. So, it is our duty to relieve pain and let someone to die peacefully, who is terminally ill.



Conclusion

In the concluding part of this discussion, it can be said that the debate will continue in future

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regarding euthanasia. Some people will agree with the arguments in favour of euthanasia, some will not. We all will be able to enrich our knowledge in this field with the help of such debate. But the real picture will remain behind the curtain. A patient, suffering from incurable disease will not be able to enjoy the knowledge extending debate, rather he will prey to God or to his or her doctor to release pain which becomes unbearable and may want to die with dignity. Perhaps, it is his or her right to die with dignity. It is our laws that permit a person to do what they want, as long as they harm none. We should believe in freedom and liberty. If a person finds that his own existence has nothing positive to offer to the world, to his or her near and dear ones, if he/she thinks that his illness will offer him or her nothing but death, then he or she has the right to choose the easy path to be free from pain and sufferings, as he or she knows very well that no one is immortal in this world. Let him or her to die peacefully. It is our duty. It is the situation that demands to respect his or her wish.

I think, not only active euthanasia, but also passive euthanasia be legalized for the same reasons. To support this demand we may consider the case of Aurna Ramchandra Shanbaug who was severely injured by one of the staff of the hospital where she was working as staff nurse. The convict got punishment from the court. He was imprisoned for seven years. After seven years he was set free but Arune Ramachandra Shanbaug was still remain in the vegetative state for 37 years. I think, and I believe that most people will agree with me that it is the victim, not the convict is enjoyed punishment. As there is no chance of restoration of her life, she must be allowed to die peacefully. At last the supreme court of India, in a path – breaking judgment allowed to let her die by withdrawing life-support medical aids from her.

I think, in such cases even where palliative care is present passive euthanasia may be approved under the supervision of supreme court. It can be designated as moderate view and it can be accepted in this critical juncture to get light. This view holds that euthanasia may be ethically permissible in some critical and incurable cases. But the decision should be taken by the court. Like Aruna Shanbaug case, court can take the final decision and give the path breaking judgment. It is the court who has the right to take final decision after verifying and critically analysing the patient's present situation and if the relevant documents of patient satisfies the court that there is no scope to get back into the normal life then court may give permission to apply euthanasia on the subject. But, it should be kept in mind that such types of verdicts must not be taken as precedence, they should be treated only as the path-breaking judgement.

After considering all the arguments discussed for and against of euthanasia I want to offer my own views regarding this matter. I think that it is the high time to be bold and effective in support of euthanasia. I support euthanasia. Today's world demands it. Most of the people of the present world will agree that euthanasia is one of the byproduct of

the technologically developed world and we have to accept this fruit without any question. If we consider the present situation of the world where each and every person is as busy as a rabbit as the world where each and no one wants to be a burden of his/her near and dear ones, it is preferable to die in peace than to suffer. Today it is not difficult to enjoy best treatment to recover and we are thankful to science for the epoch-making success in this field. But, if the condition of a patient is gradually getting worse day by day and he/she has to suffer a lot without any hope to come out of the trouble, if all the procedure of medical treatment fails, then what to do? If you respect the concerned person, if you respect the law of nature, then you have to support euthanasia.

It is the situation that demands the application of euthanasia to terminally ill life to end the unbearable sufferings. Anyone who loves his near and dear ones, who is in great pain without any hope to recover by applying any kind of treatment can find no objection to support euthanasia to terminally ill life to end the sufferings. In this regard no philosophical arguments or ethical considerations or social rules will get more importance than the choice of ending the life when one hears the screaming of his children, his parents to relieve from the horrors of life, certainly he/she will prefer to support euthanasia putting into bracket all the debate regarding this matter. It does not go to questions asked by the philosophers or by the ethicists or by the social workers, but demands the answers needed by the heart and the soul whipped by the great pain of suffering of their relatives. The matter should not be decided by the opinion developed over the discussion of the course of thousands of years, the decision should be taken on the basis of the feelings by seeing the pain of others.

In support of the legalization of euthanasia some hypothetical situations may be cited here. Suppose, a newborn infant suffers from such serious birth defects that it is not expected to live, even with aggressive and sophisticated medical intervention. In this situation what should be done? If you want to apply all kinds of life-supporting treatments to help the newborn baby to remain alive, you will get no positive results. You will only able to offer a lot of pain and suffering to the newborn baby. He will have to suffer without any hope to overcome the condition. There is no reasonable expectation that he or she will grow up to enjoy an acceptable quality of life. In this situation it would be better to let the child die by withholding the life supporting treatment. It is demanded by the situation. In this case if the child is forced to remain alive with the help of life supporting medical assistance, he or she will have to suffer a lot, which is not permissible ethically:

Again in the case of brain death, or cortical death the demand will be the same. Brain death the death of the whole brain, or the irreversible loss of functioning in the whole brain- may be understood as a criterion of human death that attempts to capture both of these essential dimension of death: the

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irreversible loss of the capacity for consciousness and the irreversible cessation of integrated functioning in the organism as a whole. Thus it has seemed that, when the whole brain dies, both the capacity for consciousness and the integrated function of the organism must disappear and the integrated function of the organism must disappear without possibility of restoration.⁴ The case is similar with connection of cortical death or of vegetative state.

All these situations demand the end of the life of the victims either by withholding life-supporting medical aids or by introducing lethal dose to offer them a painless death. In this situation all the ethical arguments must be put into bracket for future.

Death with dignity or euthanasia or mercy killing or physician assisted suicide may be legalized and its application may be approved after considering the concerned case critically by the expert team under the supervision of court. In this connection reference of the Death with Dignity Act of Oregon, a state of America will be helpful to establish the matter. The application of this act is conditional. There it is clearly stated that to request a prescription for lethal medications following conditions must be fulfilled. These conditions are divided into two parts – one part is for the patient and the other part is for the physicians concerned.

Conditions for the patient

1. The patient must be an adult person, i.e. he/she must be 18 years age older.
2. He or she must be a resident of Oregon.
3. He or she must be capable to make and communicate health care decisions.
4. The patient must make two oral requests to his or her physician, separated by at least 15 days.
5. The patient must provide a written request to his/her physician, signed in the presence of two whiteness.

For the doctors

1. The prescribing physician and a consulting physician must confirm the diagnosis and prognosis.
2. It must be confirmed that after the diagnosis the patient will survive to death within six months.
3. The prescribing physician and a consulting physician must determine whether the patient is capable.
4. If either physician believes the patient's judgment is impaired by a psychiatric or psychological disorder, the patient must be referred for a psychological examination.
5. The prescribing physician must inform the patient of feasible alternatives to assist suicide, including comfort care, hospice care, and pain control.
6. The prescribing physician must request, but may not require, the patient to notify his or her next of kin of the prescription request.⁵

7. These are the guideline made by the Oregon state of America of apply euthanasia or physician assisted suicide. It was also stated that to comply with the law, physician must report to the Department of Human services all prescription for lethal medications.⁶

With the help of these conditions the authority offers justification in favour the legalization of euthanasia. But these are only for those cases where the patient is capable of giving his/her clear consent without any psychological disorder. They say nothing about the patients having no capability of giving consent and it is implied that the patients without capability will not be allowed to enjoy the facility of death with dignity. There is no chance to extend the limit of its application to the patients having no capability but suffering a lot. It is also justifiable to apply euthanasia to the said patients who are terminally ill. They have also the right to death with dignity.

Now the question arises whether the application area can be extended or not. I think it depends solely on the situation. If the situation demands then nothing can be accounted for them to apply euthanasia. There are some examples in favour of this demand. Let examine the case of Aruna Shanbawg of India who was allowed to enjoy the facility of euthanasia by a path breaking judgment of supreme court.

So, it is the high time to take a legal decision in favour of euthanasia putting aside all the debates to find a path to help the terminally ill patients to die with dignity and to die with peace. 'Extend your help in need' is the basic motto of humanity. If the situation demand, it is our duty to help the person by letting him or her die with dignity and to show respect to the wish (in case of active euthanasia) of the dying people. It should not be treated as mercy killing or assisted suicide, it should not be regarded as unethical action, rather it should be regarded as an action to help the patients of terminally ill by extending help in need. It should be designated as the extension of help in need.

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The Beginning of Jaina Epistemology

Umasvami's Tattvadhigam-Sutra



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Abstract

Tattvadhigam- Sutra, composed by Acharya UmaSvami (135-219 A.D), is regarded as the most authoritative book on Jainism. It is the only text which is accepted by both Digamber and the Svetamber Sects. Tattvartha Sutra deal with the Seven (or the Nine Essentials -- nav tattva) that forms the core of Jainism. Being a short composition containing only 357 Verse. The first verse is that, Right view, Right knowledge and Right conduct collectively are the path of liberation or moksha. So, the first chapter deals with the process of cognition and details about different types of knowledge. He took *jnana* (right knowledge) and *pramana* as identical. Knowledge (*jnana*) is classified as *Mati*, *Sruta*, *Avadhi*, *Manah-paryaya*, and *Kevala*. The first two, that is, *Mati* and *Sruta*, are called indirect (*paroksa*), and the rest direct (*pratyaksa*). Umasvami has confine 'pratyaksa' or 'aparoksa' only to the soul's immediate knowledge without any medium. Of the above five kinds of knowledge, *Mati*, *Sruta* and *Avadhi* can be erroneous. UmaSvami is aware of the existence of the school of philosophy which holds that the pramanas include inference (*anumana*), knowledge by similarity (*upamana*), scriptural testimony (*agama*), implication (*arthapatti*), probability (*sambhava*), and negation (*abhava*). It is maintained that all these are included in the *mati* and *sruta* knowledge, for they are based upon a contact between the sense-organs and the object.

Keyword: Sense-organs, Knowledge, Jainism

Introduction

The Tattvadhigama-sutra begins with the assertion that the path to emancipation consists of (acquiring) Right conviction (*Samyak-darsana*), Right knowledge (*Samyak-jnana*), and Right conduct (*Samyak-caritra*). (I-1)¹. Right conviction, Right knowledge, and Right conduct have, therefore, come to be known in jaina ethics as the three gems (*triratna*) that in a good life. In the very first sutra of *tattvadhigama-sutra*, Umasvami state this cardinal teaching of jainism. The path to liberation lies through right/conviction faith, knowledge and conduct. Liberation is the joint effect of these three.² When we look at the Tattvadhigam-sutra, we come to know that Umasvami made no difference between the categories of knowledge and the means of valid knowledge. In other words, he did not differentiate *jnana* and *pramana*.³ He observes: *Jnana* is of five varieties, viz., *Mati*, *Sruta*, *Avadhi*, *Manaparyaya*, and *Kevala*. All these varieties are *pramana*. He did not mention any particular characteristic except 'Rightness' regarding the conception of *pramana*. He took *jnana* (right knowledge) and *pramana* as identical.

Knowledge (*jnana*) is classified as *Mati*, *Sruta*, *Avadhi*, *Manah-paryaya*, and *Kevala* (I-9)⁴. These are called the means of knowledge (*pramanas*). The first two, that is, *Mati* and *Sruta*, are called indirect (*paroksa*), and the rest direct (*pratyaksa*)(I-11,12)⁵. Umasvati has confine 'pratyaksa' or 'aparoksa' only to the soul's immediate knowledge without any medium. But, later writers like Hemacandra extend it to ordinary sense-perception as well as most other Indian logicians do. To justify the narrower sense 'aksa' is interpreted as 'jiva' and not 'indriya' as ordinarily explained (vide Gunaratna's com. On sad-darsana, verse, 55)⁶

(1). *Mati* is either knowledge obtained through the five sense organs (*antndriya-nimitta*), which latter may be either reflective knowledge (*mano-vritti*), or general undifferentiated knowledge (*ogha-jnana*). Umasvami, who gives for the first time the definition of *mati jnana*. Of course, he does not state anything new, he only gathers up the scattered view of the scriptures in a logical way. He defines *Matijnana* (sensuous cognition) as 'knowledge caused by the senses and the mind'.⁷ *Mati* includes both perceptual and inferential knowledge.—(I-14, and the Bhasya)⁸. The terms *mati*, *smrti*,

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samjna, cinta and abhinibodha are said to be synonyms(I-13)⁹. *mati* knowledge is further sub-divided into *avagraha, iha, apaya, and dharana*

Umisvami define *avagraha* as 'indeterminate intuitional cognition of their respective objects by the sense-organs. The *avagraha* cognizes only the general features of an object. It is indeterminate. The object presented in it is indeterminate and free from association with name. *Avagraha, graham, grahana, alocana (intuition) and avadharand (holding)* are said to be synonyms. *Avagraha* can be of two kinds *vig, vyanjanavagraha* (contact-awareness) and *arthavagraha* (object-perception). The *Nandi Sutra* does not clearly define *avagraha*, but only clarifies the implication by illustration¹⁰.

Iha (speculation) is a desire to know more particularly and definitely about an object, after it has been indistinctly perceived first (*avagrhita*). The *Nandi Sutra* gives these five as the synonyms of *iha* : *abhoganta* (leaningtowards), *marganata* (searching), *gavesanata* (fathom-ming), *cinta* (discursivethought) and *vimarsa* (enquiry). Umasvami, however, gives quite different synonyms which are: *Iha, uha* (reasoning), *tarka* (reasoning), *pariksa* (investigation), *vicarana* (think-ing), and *jijnasa*(inquiry)¹¹.

Apaya is the determination by means of reflection of the nature of the perceived object with regard to its perfection or imperfection (*samyag asamyag iti*) merits and defects (*guna dosa vicarana*). *Apaya apagama, apanoda, apavyadh, apeta, apagata, apaviddha, and apanutta* are synonyms.

Apaya (perceptual judgement) is followed by *dharana*(retention) which means retention of the perceptual judgement for a number of instants, *samkhyeye* (countable) or *asamkhyeye* (countless). Umasvami defines *dharana* as 'final determination of the object, retention of the cognition and recognition(of the object on future occasions), and gives the following synonyms : *pratipatti* (continued-cognition), *avadharan* (memory), *avasthana* (retention), *niscaya* (continued cognition), *avagama* (retention) and *avabodha* (cognition)¹².

The above kinds of knowledge may be further differentiated according to the objects perceived are many, or of various kinds, perceived quickly or slowly, and so on(I,16). They pertain to the objects of sense (*arthasya*)(I-17)¹³. The knowledge of *vyanjana*, which, as will appear from its description, evidently signifies an invisible object, can be had only through *avagraha* with the limitation that it cannot be perceived by sight nor by mind.(I-18,19)¹⁴. It is said that thus *avagraha* is two kinds. (i) of *vyanjana*, and (ii) of *artha*. Of these the first does not take place through sight and mind, but it is possible through the rest of the four senses. knowledge of the class *ihe* and the rest pertains only to *artha*.

The term *vyanjana* in (I-18)¹⁵ and the *Bhasya* is very obscure, and it has not been explained directly. It has been usually translated as (intermediation)¹⁶ sensation, or as indeterminable object; neither of which seems to represent the exact meaning of the author. Although the term has not been

defined, it appears from the author's own commentary on *Sutra*-I-18, and 19, as explained above, that a distinction has been drawn between such objects of cognition as can be perceived by means of all the senses including mind and those which can be perceived only by means of the four senses of touch, taste, smell and hearing. The former have been called *artha* and the latter *vyanjana*. The underlying idea in regarding knowledge called.

Iha and the rest as applicable to *artha* only, and *avagraha* as applicable to both *artha* and *vyanjana* is that it is only the visible objects that admit of such determination and definiteness as is achieved by *iha* and the rest, and invisible objects admit only of such indeterminate knowledge as is signified by the term *avagraha*. According to the author, these invisible objects cannot also be the object of mind or reflection.

(2). *Sruta* knowledge is preceded by *mati* knowledge (I-20).¹⁷ It is the second kind of ordinary knowledge is mostly interpreted as knowledge obtained from what is heard from others. This includes all kinds of knowledge derived from spoken or written authority. As the understanding of any authority is dependent on the perception of sounds or written letters, *Sruta* is said to be preceded by *Mati*. It is of two kinds: (i) that which is external to the *Angas* (*anga-vahyam*), and (ii) that which is included in the *angas* (*anga-pravistam*). And these are further sub-divided into a number of classes. *sruta, aptavacana, agama, upadesa, aitiha, amnaya, pravacana jina vacana* are all synonyms.

The difference between *Mati* knowledge and *Sruta* knowledge is that while the former pertains to the objects existing at the present time, the latter pertains to the object existing in all the three times, and is also more pure (*visuddhataram*). Further while *Mati* knowledge is the result of the activity of the self as the knower, and is obtained either through the sense-organs or without them, the *Sruta* knowledge, which is based upon *Mati* knowledge is the result of communication from some reliable authority (*aptopadesad bhavati*).

(3). *Avadhi* knowledge is not defined at all either in the sutras or the commentary. It is said to be of two kinds: (i) that which belongs to gods and the denizens of the hell, in whose case it is innate, and (ii) that which belongs to man and other beings, in whose case it is acquired (I,21-23)¹⁸. The latter kind of *avadhi* knowledge is further sub-divided into six kinds according as it lasts for a short time or long time, etc. In the commentary on I-26, while comparing *avadhi* knowledge with *manah paryaya*, the author says that *avadhi* knowledge has for its objects only some aspect of material substances¹⁹, and this assertion is repeated (I-28). Further it has already been classed as direct knowledge. Thus it appears that *avadhi* is a kind of direct knowledge of material substances.

(4). *Manah-paryaya* is of two kinds (i) *rju-mati*; and (i) *vipula-mati*. The difference between the two is that the latter is purer (*visudda-tara*) than the former and while the former might cease (*pratipatati*), the Latter cannot (*na pratipatati*), (I-24,25)²⁰. *Manah-*

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pariyaya is compared with *avadhi* knowledge as follows :

(i) *manah-pariyaya* is purer than *avadhi*, for the material objects which are known by the possessor of *avadhi* knowledge are known in a purer form and mentally (*manogatanī*) by the possessor of *manah-pariyaya*.

(ii) while *manah-pariyaya* is confined to the universe inhabited by human being, *avadhi* can extend to the whole universe.

(iii) While *avadhi* knowledge can belong to all being, whether of disciplined lives or not, and in all condition *manah-pariyaya* can belong only to two men with disciplined lives.

(iv) While *manah-pariyaya* has for its objects material substances in all their aspects, *avadhi* has these only in a limited number of aspects.

(5). Kevala knowledge is perfect (paripurna), complete (samagra), unique (asadharana), absolute (nirapeksa), pure (visuddha), all-comprehensive (sarva-bhava-jnapaka), that which has for its object both the world and the non-world (*lokaloka-visaya*), and infinite (*ananta-pariyaya*) (I-30). Summing up the author says that the objects of *mati* and *sruta* knowledge are all the substances, but in all their aspects (*asarva-dravyesu asarva-pariyayesu*); of *avadhi* only material substances, but not in all their aspects (*rupisvev adravyesu asarva-pariyayesu*; *manah-pariyaya*) is a purer and infinitely subtle knowledge of the material substances known by *avadhi*; and *kevala* has for its objects all the substances, and in all their aspects (*sarva-dravyesu sarva-pariyayesu ca*) (I-27-30).²¹

Of the above four kinds of knowledge, *Mati*, *Sruta* and *Avadhi* can be erroneous. Error (*viparyaya*) is that which is the opposite of knowledge, and consists in a failure to distinguish between that which is and that which is not (*sad-asatōra avisesad*); as for example, to perceive a horse as a cow, and vice versa. (I-32, 33).²²

Such is the classification of knowledge as found in the *tattvadhigama-sutra* and its commentary by the author of the *sutra* himself. The terms employed are peculiar to the *sutras*, and their exact significance is far from being clear. The first point to be noted is that what is perceived through the sense is regarded in this earlier jaina logic as indirect (*paroksa*), and that which is perceived without the medium of the senses as direct (*pratyaksa*). In this particular work, explanation of these; for, in the first place, their meaning is obvious and in the second place, they are of little importance from the epistemological point of view.

The author of the *Tattvadhigama-sutra* and the *Bhasya* is aware of the existence of the school of philosophy which holds that the *pramanas* include inference (*anumana*), knowledge by similarity (*upamana*), scriptural testimony (*agama*), implication (*arthapatti*), probability (*sambhava*), and negation (*abhava*). It is maintained that all these are included in the *mati* and *sruta* knowledge, for they are based upon a contact between the sense-organs and the object (I-12). This fact indicates that probably Umasvati, while referring to these *pramanas*, had the *Mimamsa* school in mind. He does not show any signs of knowing, or being influenced by the *Nyaya* school, and hence, as has

already been suggested, he seems to have lived before the compilation of the *Nyaya-sutras*. Siddhasena Divakars, the next important writer on jaina logic and epistemology, is much later than Umasvati, and as we shall see, he is distinctly influenced in his doctrines by the works of the Hindu and Buddhist writers. *Mati* knowledge pertains to the objects of the senses, and is either perceptual or reflective, - the latter also knowledge by inference. *Sutra* is knowledge by testimony. *Avadhi*, *manah-pariyaya* and *kevala* are forms of direct knowledge with such distinction as have been explained above. *Avagraha* and the rest three kinds of *mati* are the various degrees of sense-cognition according to its clearness and definiteness.

The *Nayas* have been described as the various ways of determining the nature of an object of perception and have been classified in the usual way. It is not necessary to go into a detailed.

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Biotechnology: Tools for conserving Biodiversity and Sustainable Agriculture



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Abstract

The loss of India's forests and bioresources is occurring at an alarming rate, a consequence of increasing population pressure, agricultural land degradation, urbanization, deforestation and negligence. Plant genetic resources are the major biological basis of the world food security. Biodiversity is the store house and acts as a cushion against potentially dangerous environmental changes and economic reforms. Such a buffer is facing threat due to manmade and ecological disasters. Hence, there is a growing recognition worldwide that conservation and sustainable management of bioresources are pressing priorities in the world today. Traditional means of germplasm storage and conservation of plant genetic resources has been immensely useful and are not without drawbacks. The choice of conservation methods and techniques depend on the objectives of the particular conservation effort, the breeding system and behaviour of the species in question as well as the available resources including funds, trained personnel, infrastructure and technologies. Thus utilizing the biotechnological approaches towards the improvement of in situ and ex situ conservation programmes are becoming vital. Integrating biotechnology in conservation programmes is a prerequisite to achieve success in sustainability and to complement the existing technologies.

Keyword: Bioresources, Genetic Conservation, Biotechnology, Biodiversity loss, Sustainability

Introduction

Biodiversity today is the result of 3.5 billions years of evolution. All the living organisms we know today, as well as those that ever lived before, have developed from one original micro-organism through the processes of mutation and selection. Separate species arose when mutations between relatives no longer allowed for interbreeding, for instance after geographic separation.

The Biodiversity can be distinguished at three different levels, ecosystems, species and genes. The various species of plants and animals do not live an independent existence but are associated in specific communities and ecosystems to form more or less stable associations. The distribution of biodiversity is uneven on the earth because of the different environmental conditions. Warm humid tropical areas are rich in biodiversity compared to temperate and polar areas. The countries like Brazil, Columbia, Mexico, Indonesia, Peru, Malaysia, Ecuador, India, Zaire, Madagascar and Australia are known as **Megadiversity countries** because of their rich biodiversity. In India, over 1, 15,000 species of plants and animals have already been identified and described. Vast majority of species that arose, probably more than 99%, disappeared again. Clearly however today, with man's massive influence on the globe, change and the loss of biodiversity is much faster than at any time before, making concern with sustainability important. Rapid biodiversity loss worldwide could be attributed to the deforestation, forest fragmentation, invasion by invasive species, Overexploitation due to increasing population, environmental pollution, global warming, climate change and commercialization of agriculture and forestry.

Biotechnology for the acquisition of knowledge

The Convention on Biological Diversity (CBD) defined biotechnology as "any technology application that uses biological systems, living organisms, or derivatives there of, to make or modify products or processes for specific use." In a broad sense, the definition covers many of the tools and techniques, which have been commonly used in agriculture and food production, processing, and utilization. In a narrow sense, however, it encompasses DNA techniques, molecular biology, and reproductive technological applications dealing primarily with gene splicing

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and recombination, and genomics. Biotechnology can be used as a tool for acquiring scientific knowledge or to intervene directly in plant and animal breeding and, in particular, to transfer genetic information from any other organism to a crop or farm animal.

In seed banks genetic fingerprints are used to establish the origin of a seed or the relatedness of plant varieties. Biotechnology is also useful for following genetic markers in plant and animal breeding done by conventional means. By analysing a few cells of the newly born calf or of the newly sprouted crop and looking for the presence or absence of certain genes it is possible to predict properties of the progeny which will show up only later in life such as the characteristics of a cow's milk or a crop's expected resistance to a plant disease. These applications of biotechnology to farm animals (not to humans) are hardly controversial.

Role of Biotechnology for Conservation

Biotechnology is invaluable in research on conservation of bioresources. Although modern biotechnology is a newly introduced science (less than 50 years old) its impact has greatly excited the imagination and provoked the concern of almost every part of the society worldwide (Eneobong, 2003). The richness of plant and animal diversity in developing countries is a major asset in agricultural development and, therefore, the conservation of such resources is fundamental to the progress and usefulness of biotechnology. The tools of modern biotechnology are being increasingly applied for plant diversity characterization and undoubtedly they have a major role in assisting plant conservation programmes.

1. Plant Genetic Resources

The Efficient conservation of plant genetic resources can best be achieved through an appropriate combination of *in situ* (in natural or original areas) and *ex situ* (in artificial habitat or habitat different from the original one) methods (IPGRI, 2001). Generally plants with orthodox seeds (high tolerance of low temperature storage conditions) are best preserved *ex situ*, under medium or long term conditions as comparatively dry seeds stored at low temperatures (Ng, 1991). Plants that produce recalcitrant seeds (intolerant of desiccation and low temperatures) could be preserved as *ex situ* live-gene banks (or gene libraries) or by *in vitro* conservation methods of enforced reduced growth storage. Plant resources are also routinely preserved *in situ* in parks, reserve areas and rangelands.

This section of the paper will discuss *in vitro* methods for storage as well as the cryopreservation of embryos, seeds, protoplasts and other materials in long-term liquid nitrogen base-storage systems. Many plants, especially forest plants, are extremely difficult to propagate through conventional means since they are frequently polyploids and aneuploids or produce seeds with little or defective endosperms. Also the risk of losing some of these plants due to industrialization and urbanization, characterized by rapid deforestation, uncontrolled logging, burning and uncontrolled search for food and other non-timber forest products. Plant tissue culture provides a

method for the mass clonal propagation of such materials, as well as serving as a tool for their germplasm conservation.

Micropropagation:

This refers to *in vitro* mass production of plant propagules from any plant part or cell. Such propagules are used to raise whole plants.

a. In vitro conservation

Germplasm conservation of vegetatively propagated crops (e.g. banana, cassava) forest species especially those with recalcitrant seeds (e.g. mango, coconut) is live genebanks, in fields poses tremendous problems in terms of required land space and labour input during annual or perennial replanting, testing and documentation. Such collections are also exposed to threats by biotic and abiotic stress agents. Consequently, *in vitro* conservation is recommended, at least as a supplement to field collections, as long as an adequate protocol for micropropagation has been worked out for the species. The advantage of *in vitro* include little space necessary in growth rooms for maintaining thousands of genotypes and the absence of diseases and pest attack in culture vessels. Furthermore, *in vitro* storage eliminates the need for long and frustrating quarantine procedures during movement and exchange of germplasm.

b. Cryopreservation:

The collections of base seed must be maintained under very cold conditions in high tech ultra low temperature freezers. Cryopreservation is an attractive alternative for the storage of base collections and involves the freezing of plant material, usually to the temperature of liquid nitrogen (-196°C), at which point cell division and consequently growth and all other biological activities are completely arrested. This must be done in a manner that viability of the stored material is retained and biological functions and growth can be reactivated after thawing (Towill, 1991; De, 1995). Liquid nitrogen storage is useful for the preservation of various types of plant material including whole seeds, embryos, suspension cells, callus, protoplast cultures, gametes and meristems.

2. Animals Genetic Resources

Animal genetic resources, like plant genetic resources need to be conserved for future generations. The use of artificial reproduction is a very useful tool in conservation of endangered species. It should, however, be made to complement the conventional methods of breeding. Some of the biotechnological methods used for production and conservation of animal genetic resources are summarized below:

a. Cryopreservation:

Materials such as cells, tissues, gametes, oocytes, DNA samples are also used for cryopreservation and stored in a genetic databank for future use.

b. In vitro production embryos:

Methods used in the production of embryos *in vitro* include splitting and cloning of embryos, marker-assisted selection, sexing of embryos and transfer of new genes into an embryo (First, 1992).

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Cloning in animals is enhanced by nuclear transplantation, a method used to produce a large number of viable identical embryos and offspring of desirable genotype in cattle, sheep, rabbits and swine. The procedure involves the separation and transfer of nuclei of a valuable embryo at a multicellular stage into enucleated oocytes at metaphase II followed by serial cloning.

c. Embryo Culture and Transfer:

This technique is used to introduce fertilized embryos into surrogate mothers. Sometimes closely related species can be used to produce the offspring of an endangered species. The great majority of commercial embryo transfer is done with cattle for strictly economic reasons since the economic value of production per head is much higher for cattle (and buffaloes) than for other farm animal species.

d. Artificial insemination:

This technique is useful in livestock farming. Cryopreserved sperm from selected males are thawed and introduced into ovulating females.

e. Intracytoplasmic sperm injection:

This technique is used to introduce sperm from selected males are microinjected directly into the oocyte.

Biotechnological methods vs. conventional captive breeding procedures

These biotechnological methods offer many advantages to conventional captive breeding procedures.

- less stress is experienced since the animals do not have to be moved around.
- the problem of space for keeping the animals is also solved since samples can be taken in the wild.
- storage of genetic resources will help to preserve biodiversity and counter the effect of genetic drift on small populations.
- even if an animal dies, its genes will still be available for future breeding work.
- gametes can be extracted from animals that have been dead for upto 24 hours and cryopreserved for future use.

The main disadvantage is that sometimes preserving only the DNA samples may not be enough to conserve the entire animals as many animals need to learn behaviour (which may not be in the genes) in order to survive. Moreover, the use of biotechnological tools for endangered species is still at a very early stage and is very expensive.

Biotechnology and Sustainable Agriculture

Biotechnology contributes to sustainable agriculture by reducing the dependence on agro-chemicals, particularly pesticides, through the deployment of genes conferring tolerance or resistance to biotic and abiotic stresses. Carefully selected genes from related or unrelated genetic resources are integrated in otherwise desirable genotypes. Systematic pyramiding of genes allows integration of desirable genes in one genotype for different traits, such as tolerance to stresses, productivity, and nutritional quality. It is also

contributing in bioremediation of polluted soils and bioremediators for monitoring pollution.

Technology, including new varieties and breeds, is an essential element of sustainable agriculture. However, it is not the only element of sustainable agriculture. Some examples of transgenic crops are given in **Table 1** along with genetic modification and advantages.

Crops	Genetic Modification	Purpose
Tomatoes, peas, peppers, Tropical fruits, broccoli, Raspberries, melons	Controlled ripening	Allows shipping of vine ripened tomatoes improves shelf life, quality
Tomatoes, potatoes, corn, rice, lettuce, coffee, cabbage family, apples	Insect resistance	Reduces insecticide use and crop loss
Peppers, tomatoes, cucumbers	Fungal resistance	Reduces fungicide use and crop loss
Potatoes, tomatoes, cantaloupe, squash, cucumbers, corn, oilseed rape (canola), soybeans, grapes	Viral resistance	Reduces diseases caused by plant viruses and, since insects carry viruses, reduces use of insecticides and crop loss
Soybeans, tomatoes, corn, cotton, oilseed rape (canola), wheat	Herbicide tolerance	Improves weed control
Corn, sunflower, soybeans, rice	Improved nutrition	Increases amount of essential amino acids, vitamins or other nutrients in the host plants
Oilseed rape (canola), peanuts	Heat stability	Improves processing quality; permits new food uses for healthier oils

Conclusions

Biodiversity is vital for our existence. Its depletion at a faster rate is a cause of concern for everyone. It is thus very important to conserve it at the local, regional, national and even at the international levels. The issues involved in the interaction between biodiversity and biotechnology have far-reaching consequences and need to be subject to an open and well informed dialogue in society. The discussion needs to include all the different stakeholders, farmers, scientists, industrialists, public interest organisations, policy makers and the media. Technical contributions will be necessary either by traditional crop breeding or by modern biotechnology. Reliance will have to be more on the latter since traditional breeding appears to have reached a plateau in yield and is slower, less precise and only feasible when interbreeding is possible. So biotechnology has the potential, when judiciously applied, to increase farm productivity and conserve biodiversity.

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Revenue Administration under Vijayanagar Empire

Abstract

The Stability of any state depends on its economic resources. Revenue, being the major source of income the medieval kingdoms attached great importance to its administration and collection. The financial needs of any empire increased with its expansion, not only for its administration, but also for its military requirements. So a variety of taxes were being imposed, among which land revenue occupied the prime position. Therefore the present paper deals with the revenue administration of the vijayanagar Empire. Its respective share in the land revenue, other taxes on land, differential taxation on different kinds of land tenures, revenue collection and remissions, so on and so forth.

Keyword: 1) Revenue Administration. 2) Vijayanagara Empire.
3) Land Tax. 4) Tax on Wet Crops. 5) Tax on Dry Crops.
6) Allied Charges. 7) Methods of Assessment.
8) Rates of Assessment. 9) The Department of Revenue.
10) The Burden of Taxation. 11) Karagrama (Revenue Village)
12) Harihara King. 13) Krsnadevaraya.



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Introduction

Inscriptions form main source for the study of the revenue system under the Vijayanagar kings. Almost every Vijayanagar inscription refers to some income from land, assignment of land, remission of the revenues, levy of fresh taxes, or the renewal of obsolete ones. Besides the inscriptions of the period, there are the writings of foreign visitors to the Vijayanagar Empire containing accounts of the revenue administration under the Vijayanagar kings. Among such accounts the impressions of 'Abdur Razzak, Nuniz, and Paes are important, Especially the chronicle of Nuniz is indispensable because it gives an account of the revenues in the Vijayanagar Empire, how they were collected through 'captains', and how far the revenue policy of the Vijayanagar rulers weighed heavily on the subjects. But one fact is worth noting here; that is, the foreign chroniclers, who did not know the real nature of village life, rural organization and the dues from the villages contented themselves with making prominent mention of the transit duties and excise and other dues payable on the import and export of merchandise to and from a city. 'Abdur Razzak, for instance, has nothing to say about land tax, but he was struck much by the customs and the taxes on the prostitutes. Hence they have not described all the sources of revenue of the State, the differentiation between imperial and local revenues and other questions connected with Revenue Administration.

It may be convenient to classify the sources of the revenues of Vijayanagar under certain broad heads;¹

1. Land tax
2. Tax on property
3. Commercial taxes
4. Profession taxes
5. Taxes on industries
6. Military contributions
7. Social and communal taxes
8. Judicial fines and such other income, and
9. Miscellaneous items of income

Land Tax

The most important of the sources of revenue was the land tax, which still continues to be the mainstay of Indian finance. This may be analysed under the following heads;

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Tax on Wet Crops

The government taxed all the wet crops. In levying taxes on land certain factors were taken into consideration, such as the nature of the village and the tenure of land, the nature of the soil and the kind of crop raised on it. For instance, before the government levied tax on a particular piece of land it considered whether it was a devadana (land belonging to a temple), or a brahamadeva (land belonging to Brahamans), or was situated in a daldvay agrahara (village granted for military service), or was in a Karagrama (revenue village). Distinction was made between lands and taxes were collected on land according to the nature of the crops raised. Even in the karpasnam lands, those that died in planting those that yielded only blighted grains and those that were otherwise damaged were not counted. In the taxable land a distinction was made between paddy fields, uncultivated waste (newly brought under cultivation), forests reclaimed, and kadaippu lands (lands on which only the last drop is raised) and lands irrigated by lifting water. The government also considered if they were wet lands on which were wet lands on which were grown plantain and sugarcane, or where these were grown, or marshes in which red lotuses were grown, or dry lands producing brinjals pumpkins, turmeric, ginger, onions, garlic, castor seeds mustard, Bengal gram, wheat, paddy and a large number of other crops. Some differentiation was also made between wet crops raised on wet lands and wet crops raised on dry lands.²

Tax on Dry Crops

Similarly a tax on dry crops and edible vegetables was also levied. Here too distinction was made between dry crops raised on dry lands and dry crops raised on wet lands. Further differences were made between the various crops raised on dry lands. Of the wet crops, areca palm, coconuts, jackfruits, margosa, plantain trees, sugar cane, turmeric, ginger, flower and other minor cultivation were also taxed. According to one record tax from garden lands also seems to have been collected from the people. These lists clearly show how, for purpose of assessment, the government carefully noted the nature of the crops and the land on which they were raised.

Allied Charges

In this list certain other sources of revenue in the nature of allied charges on the owners of land. There seem to have been set apart some land near the village for the cattle to graze, and a few inscriptions refer to a tax levied on shepherds as grazing fee. Another tax, *vassal panam* was levied on houses and house sites. It was assessed on the basis whether the house was a roofed one, or with small doorways, or was a storied one or was one with inside veranda.

Besides these a few contributions were collected from the people towards the cost of payment and maintenance of village officers and special messengers coming from governmental head quarters. In ancient and medieval times the temples,

choultries and other public institutions collected from the people some money for their maintenance and upkeep. Under this head may be grouped the following taxes: contribution formerly levied on merchants and cultivators for a temple now given optionally and contribution to the temple of the village goddess. These taxes were collected by the local authorities on behalf of the imperial government and paid to the temples concerned; or in a few cases the temples and other institutions took these contributions directly from the people.

Methods of Assessment

A careful study of the inscriptions of the period shows that it was the policy of the Vijayanagar kings to base assessment on the fertility and regional location of the land. Thus the rate of revenue varied in the different parts of the Empire; and in the same region too, it would change with the fertility of the soil. But it was clear, however, that all assessment was on the basis of the gross yield. From an inscription at Tirukkattalai we learn that the government took five-tenths share of the produce from wet and dry lands. Thus one of the factors infixing the assessment on land was the yield from land. But this does not seem to have been either universal in the Empire or applicable to all cases of wet and dry crops. Another basis of assessment on wetland was the sowing capacity of a unit of land used for wet crops. It is mentioned for instance that tax on a *tum* (a cubic measure in the Telugu districts) of land was 8 *varahas*. This means in fact that unit of land requiring a *tum* of seed to be sown was assessed at eight *varahas*.⁴

According to a tradition incorporated in Buchanan's *Journey through Mysore, South Canara and Coorg* Krsnadeva Raya ordered a survey of his Empire for purposes of assessment and fixed the rates of taxes; and this tradition is confirmed by an inscription of the period of Krsnadeva Raya himself. A record dated A.D. 1513 in the Mysore district registers the grant of a village with all the wet and dry lands according to former measurement. From this inscription it appears that there were two measurements in the district, and perhaps in the Empire too. One was the old measurement according to which this particular grant was made, and the other was the new, also prevalent perhaps, on the date of this inscription. This piece of evidence clearly shows that for purposes of assessment lands were systematically surveyed in the time of Krsnadeva Raya. Rice too, after studying the Mackenzie Manuscripts, came to this conclusion. He observes: "It appears that in the time of Krsnadeva Raya and Achyutadeva Raya the revenues of the Vijayanagar State were first reduced to a regular form checked by ordinances, and a system of accounts and management introduced, calculated to improve the revenue of the empire gradually in yearly amount without distressing the inhabitants." Owing to local variations there could be no uniform measurement of land throughout the Empire.

The inscriptions of the period mention a large number of measuring rods. Even in the same place

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two rods seem to have been used almost at the same time. The absence of a general uniform rod for the whole Empire caused great difficulty for the government in fixing a uniform rate of assessment on land all over the Empire.

Rates of Assessment

The traditional share of the state in the produce from a unit of land was one-sixth, of the Brahman one-twentieth and of the temple one-thirtieth, each payable in kind or equivalent cash. Of the remaining three-quarters, the cultivator for his share retained one, while the balance went towards the expenses of cultivation. Discussing this question Wilks remarks that in the early days of the Vijayanagar dynasty Harihara's minister, Vidyaranya, published for the use of the officers of state, a manual founded on the text of *Parasara* with a copious commentary dealing elaborately with the assessment of land and conversion of grain revenue into money. Briefly, he took the Sastra rate of one-sixth of the crop as the government share, and assuring that the average out-turn was twelve times the seed sown, he distributed 30 *kuttis* of paddy (the produce from 2 ½ *kuttis* of land) as follows;

To the lord ½	7 ½
To the cultivator ½	15
To Sarkar ¼	5
To temples ^{1/30}	1
To Brahmins ^{1/20}	1 ½
Total	30 <i>Kuttis</i>

The shares of the temples and the Brahmins were collected by the Sarkar and paid over by it, so that the revenue payable by the landholder was readily ¼ of the gross produce.⁶ Subsequently Harihara introduced a few changes in the system owing to the difficulties experienced in adhering to these recommendations. He abolished the system of payment of the government share in kind, and insisted on cash payment at a particular rate. This conversion was "founded on the quantity of land, the requisite seed, the average increase and the value of grain."⁷ In addition, Harihara increased the rate of assessment also. Thus he "had recourse to the law of the Sastras which authorized him by no very forced construction to attack the husbandman by a variety of vexatious taxes which should compel him to seek relief by desiring to compound for their abolition by a voluntary increase of their landed assessment."⁸ In this way he actually raised it by twenty per cent by his skill in applying to his calculations, a procedure which has been characterized by the Bombay High Court as "a thinly veiled violation of the law."

But we have to examine here how far the evidence of inscriptions corroborates the account of Wilks. They are the only source of reliable information on this question of the rate of assessment in the Vijayanagar period. The *Parasaramadhaviya*, being an elaborate commentary on the *Parasasmriti*, deals more with the theoretical than with the practical side of taxation.

Burnell is of opinion that the share of the state in the produce of land in South India was

generally one-half though the normal share of the state in North India was one-sixth. He says: "There is ample evidence to show that Manu's proportion of one-sixth was never observed, and that the land tax taken not only by the Muhammadan but the Hindu sovereigns also was fully one-half of the gross produce."¹⁰

As for the total income of the state, Rice estimates it at 81 crores of *Avakoti cakras* or *pagodas*,¹¹ after a study of the manuscripts collected by Colonel Mackenzie. The *Carnataka Rajakkai Savistara Caritram* or *A General History of the Indian Peninsula* states that during the time of Krsnadeva Raya the amount of revenue payable to the imperial treasury by eastern Caranataka (as distinguished from Mysore, etc.) was three crores of rupees.¹² Varthema says: "This king of Narasinga is the richest king I have heard spoken of; elsewhere he says; 'His Brahmins, that is, his priests, say that he possesses a revenue of 12,000 *pardai* per day.'¹³ Paes who visited Vijayanagar in 1520 says that Krsnadeva Raya after retaining enough for his expenses and the expenses of the houses of his 12,000 wives put in his treasury every year ten million *pardaos*.¹⁴ Nuniz is of opinion that the feudatory nobles in the Vijayanagar Empire paid to the king every year sixty lacks of income.

Unforeseen mishaps to the people, like plunder, raid drought, floods or the ruined condition of a village was given due consideration, and concession was shown in the matter of collection of taxes from the ryots thus affected. In some cases deserted villages were rehabilitated and granted as *sarvamanya* for different services in temples.

The Department of Revenue

The Revenue Department was known as *athavana* and was presided over by the Minister for Revenue. He was helped by a large staff of officers and clerks in keeping regular accounts of the income of the government from the various districts and sources. Evidently the administration of this branch was divided into a large number of small sections, each under a superintendent. It appears that there were special officers in charge of the collection of various taxes in the different parts of the Empire. Besides, the revenue of every district was generally in charge of an Officer appointed by the government. Orders conveying the remissions of taxes or the imposition of new ones were communicated to him.¹⁵

The royal order was sent to the local governors and it was entered in four registers and when a third party was involved in the matter of remissions or grants, the original order of the king was placed in the hands of the party concerned. But where the district assembly were responsible for the payment of revenues to the government, the communication was sent to them. In the case of such remissions, the assembly, which kept regular accounts for its income from various sources, deducted the amount thus remitted by the imperial officers both from the tax register and the village account. But in later days the assemblies of the village and the nadu showed signs of decay and dismemberment in their organization, and hence they

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were gradually deprived of the responsibility of collecting taxes; and instead revenue collectors and revenue farmers were appointed.¹⁶

We see both the imperial and the local governments remitting taxes in favour of public institutions like a temple or a matha. The question will naturally arise if the provincial governor or a local assembly could remit taxes without the permission of the government at the headquarters. It seems that the local officers or administrative units could remit certain specified taxes, while the power to remit others was reserved to the imperial government; for the power to remit taxes depended upon the nature of the revenue and the allocation of the taxes as between the local and the imperial treasuries. The local authority only with the approval and consent of the imperial authority could remit taxes due to the imperial government, while local dues could be remitted by them without imperial sanction.

However, if the local authority remitted a tax due to the centre without the approval of the imperial authority it did so on its own responsibility. It did not involve any loss of revenue to the central government for the remission was made good by the levy of higher rates of taxes on other sources by the local authority, which was usually obliged to pay a fixed amount from the village to the central government.¹⁷

In the imposition of new local taxes or in their remission, the order of the imperial government was more advisory than mandatory. The marriage tax, for instance, seems to have been only a local tax. Generally Krishnadeva Raya has been credited with the remission of the tax on marriages; but even during the days of Achyuta Raya the tax continued to be levied as shown by a few inscriptions of his period. If the tax had been an imperial one, then at one stroke of the pen the enlightened Emperor would have abolished the tax. In an inscription dated A.D. 1540 the people of the locality wish prosperity to the agents, *sime hebbaruvas, gaudas, senabhovas, settis, pattanasvamis*, and all of both sects of *nanadesis*, who were responsible for the remission of the tax on marriages in that year. This expression of the gratitude of the people to the influential persons in the locality for the remission of the tax clearly shows that it was a local tax. Likewise the tax on the artisans seems to have been only a local one. The tax levied on them was not uniform.

But imperial taxes collected directly by the central government were different. Only the imperial government could remit them. In the case of the nayakas who held lands from the king on a feudal tenure, remissions of taxes by them would not affect their fixed contribution to the imperial exchequer. Communications of the remissions made by the central government were sent to those responsible for the collection of imperial revenue. They would note the remission in their account books, for reference and action at the time of collection. These account books known as the *patte* contained the names of the tenants and the amount of assessment they had to pay. At times certain taxes were remitted in return for a consolidated amount, which was probably their

capitalized value. Perhaps the items of revenue were too many and petty in detail and the arrangement was made evidently to lessen the inconvenience of entering them all in the account books. Likewise payment in cash was commuted for payment in kind, as is shown by an inscription at Tirukkalakkud. It registers an order of an Alagiya manavalaperumal Tondaimanar issued to a native of Nattinmangala to measure a fixed quantity of paddy in lieu of the taxes due by him on certain lands in the temple of Agattisuramudaiya Nayinar.¹⁸

Nuniz notes that the king gave no receipt for the money he received from his 'captains': "He (the king) never gives any receipts to them, only, if they do not pay, they are well punished they are ruined, and their property taken away."¹⁹ But it is doubtful if we can believe the statement of Nuniz. It is incredible that such an elaborate machinery of administration could have been carried on without receipts for the money granted or the income derived.²⁰

The financial year in the Vijayanagar days commenced in September-October, when the *Mahanavami* was celebrated for nine days; and the accounts were cleared then. Paes says that it began on the twelfth of September²¹ and states that the New Year commenced in the month of October. "At the beginning of the month of October when eleven of its days had passed..... On this day begins their year; it is their New Year's Day..... They begin the year in this month with the new moon, and they count the months always from moon to moon."²² Within these nine days the king was paid all the rents were due from the kingdom.²³ Nuniz says: "According to the lands and revenue that they have so the king settles for them... how much revenue they have to pay him every month during the first nine days of the month of September." According to him the dues to the imperial government seem to have been payable every month in accordance with an annual assessment made in September.²⁴

The Burden of Taxation

Inscriptions of the period go to show that during certain periods of Vijayanagara history the taxes were heavy. The people could not bear the tax-burden and hence were at times forced to sell their lands to meet the government demands. They had to sell their lands for they were otherwise unable to meet the demands made on behalf of the government.²⁵

Sometimes people opposed levy of taxes. Local organizations like the village assembly joined together and opposed the *rajagaram*. Now and then after due deliberation they themselves fixed certain rates of taxes which they would pay to the government. In certain parts of the Empire where the people were not well united to offer civil resistance, they abandoned their original homes and migrated elsewhere. To prevent such migrations, or when they had migrated, to call them back to their old villages, the government had to reduce the taxes. Krishnadeva Raya truly says in his *Amuktamalyada* that "the king is never pro____ous even though he conquers the seven dvipas who has an order who does not call back the subjects when they leave the

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state on account of suffering." Nuniz comments on the nature of the revenue collections made under the Vijayanagar Emperors: "For this reason the common people suffer much hardship those who hold the lands being so tyrannical... As already said, all the land belongs to the king and from this hand the captains hold it. They make it over to the husbandmen who pay nine-tenths to their lord; and they have no land of their own, for the kingdom belongs entirely to the king."²⁶ Nuniz appears to be wrong both in this calculation and in his statement that all lands belonged to the king. Sewell comments on this observation of the chronicler thus: "Whether true or not this statement, coming as it does from a totally external source, strongly supports the view often held that the ryots of South India were grievously oppressed by the nobles when subject to Hindu government. Other passages in both these chronicles each of which was written quite independently of the other confirm the assertion here made as to the mass of the people being ground down and living in the greatest poverty and distress".²⁷

Sewell's remark is too sweeping. Though we have much strong Epigraphical and literary evidence to show that the taxes were heavy during certain periods, and that the people then were pressed hard, such oppression may not have been continuous or universal. Complaints about heavy taxation and oppression by officials were due, as the inscription themselves say, to the occupation of the Kannadiyas. The period of the Saluvas was one of oppression of the people in certain parts of the Empire when taxation was heavy, and was perhaps combined with rigorous collection. Later too, the people were oppressed more by the governors than by the imperial government as such. Such oppression was felt not due to the revenue so much as to the method of its collection. This is shown by a few inscriptions of the period. A lithic record at Tiruvamattur details the several taxes was only 12 *pons*. As the Government Epigraphist remarks "This, if it could be taken as the average, suggests that the assessment of the several taxes in coin and contributions in kind must have adopted a very low rate.

An inscription of A.D. 1414-15 at Perunagar records the fixing of the amount of consolidated taxes from the weavers, oilmongers and the other commercial classes in return for their burning a perpetual lamp in the local temple. Another inscription in the Mulbagal taluk registers that Muluvayi Hariyappa gave to a merchant Sankapa Setti a *sasana* remitting the fixed rent of 2 *hana* he paid, besides many taxes, on condition he presented daily 2 betel leaves to the temple at Muluvayi. These inscriptions clearly prove that though the items of taxation payable in kind and cash were many, the burden of taxation was not much, for here we see a regular commutation of a variety of taxes customary and otherwise, for comparatively small returns.

Thus side by side with the inscriptions which record the oppressive taxes, there are some others which show that taxation was not so very heavy under the Vijayanagar taxes conformed to the ancient

proportion of one-sixth, for many of the kings took advantage of every opportunity to increase the revenues of the state, and collected their dues with the utmost rigour. But it has been the practice to exaggerate the oppressive character of the taxes imposed on the people. As observed earlier really the people were more opposed to the method of collection rather than the items of taxes or the burden of taxation.

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Discovering untouchable past: a brief survey of untouchables histories in united provinces (1900-1950)

Abstract

The modern dalit intellectuals and dalit organizations engaged in evolving historical consciousness which is different from normative academic history, and different from socio-cultural perception of history. This new history mainly practiced by dalits themselves intended to create a history which reflects the new confidence within dalits. It is argued that representation by other has been done by brahminical forces to made dalits as servants to upper caste Hindus. This paper traces the historiographical interventions with regard to construction of the past of untouchables of Uttar Pradesh.

Keyword: Untouchability, United Provinces, hegemony

Introduction

The evolution of a dalit conscious in UP first emerged in the 1920s and slowly acquired a concrete form between the 1940s and 1960s. The Chamars through a range of organizations and caste mahasabhas, were the first dalit community to launch a struggle to redefine their identities in UP in the 1910s and 1920s. This struggle was launched initially to contest the dominant colonial and Hindu narratives of their 'Untouchable' identity by emphasizing the purity of their lives and by demanding a status equal to that claimed by caste Hindus. Dalits started questioning and rejecting categories like untouchables, depressed classes, Scheduled castes and Harijans that were coined by colonial and Hindu nationalist discursive practices. This was not merely to contest dominant ascriptions to their identities but also, more importantly to question the notions of impurity and pollution attached to their community, identity and history. Familiar examples are the assertions of the Adi-Dharmis and Balmikis of Punjab, the Satnamis of Chhatisgarh, the Namasudras of Bengal, the Chamars, Pasis and Bhangis of UP, the Shilpkars of Kumaon and the Mahars and Chambhars of Maharashtra. In December 1927 the leaders of the Adi-Hindu Mahasabha in UP made a claim for a more inclusive *achhut* or 'untouched' identity to unite disparate dalit castes. Kalwars claim themselves *Kshatriya*, Dusadh claim themselves "*Dushashan Vanshi Kshatriyas*". Bhangis (sweepers) claim themselves "*Balmiki Vanshi Brahmans*". Pasis claim themselves "*Parasram Vanshi Brahmans*". Although these claims are based on Vanshavalis (genealogies) prepared by Brahmans, yet their "sacred threads" and their heads in unison are forcibly broken by the high class Hindus and their claim is never likely to be accepted. With the references of this claim these castes have originated a glorious history. By emphasizing their *achhut* identity, the leaders of the Adi-Hindu Mahasabha were hoping to build a new politics that would bring together all dalit castes- Domes, Mehtars, Pasis, Lalbegis, Dhanuks, Koris and Chamars. In claiming that *achhuts* were the original inhabitants of India and descendants of the *dasas*, *asurs* and *dasyus* mentioned in Brahmanical Hindu texts, dalits were challenging, both colonial and Hindu interpretations of their identity. *Achhut* was declared as the identity of all 'Untouchables', separate from the Hindu community. Dalit identity became the foundation for the formation of a new consciousness, raising a new set of issues and mobilizing all dalit castes.

Objective

The proposed study explores the historiographical dynamics of dalit past and its multiple versions in the United Provinces. Besides examining this, the study also documents the way the dalit past was appropriated into the agenda of the present. By focusing on the United Provinces, the study explores the local histories of dalits and their impact on the mobilization and assertion of dalit community. To investigate the

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multiple forms of historical narratives on dalit past. This paper traces the way dalit identity formation facilitated by new history by dalits themselves.

Hypothesis

The communal sense among dalit was significantly facilitated by historical narratives. The historical narratives on dalit past exist in multiple forms as dalit community means different meaning to different people. It was the historical narratives which mediated and facilitated the mobilization, and assertion of dalit community.

Research work

Out of the total population of the Scheduled castes in the country, their largest concentration is in Uttar Pradesh. One hundred and one Scheduled caste communities come under the broad rubric of dalit category. The past of dalit community did not exist in the written form; rather it exists in folklore, myths and other cultural forms. One of the features of the degraded social status of scheduled-caste people has been the role of myths which explained their origin as impure of Hindu fertility. But there has been a sea change in recent years in the perception by scheduled caste people of themselves which initiated the process of counter hegemony. This has been expressed in multiple forms such as cultural practices, religion, literature, language, and history.

Dalit communities such as the Chamars, Jatav, Mochi, Satnami, Raidas, Valmiki, and many others have their imagination of history. They do different profession and have strong community identifications. Among the Chamars, Jatav, kuril, Jaiswar, Jatav, Dhanuk, Valmiki, Pasi, Mochi, Satnami and many others have their own sense of superiority. So, there are a few Scheduled castes from whom the other scheduled-caste communities accept neither food nor water¹. Among all the sections of the Chamar of the United Provinces, two great sub-castes predominate. These are the *Jatiya* and the *Jaiswar*. Now in present time they are field labourer, a cultivator, a dealer in hides, and a maker of shoes, some of the cultivating sections of this sub-caste do not make leather, and do not allow their women to practice midwifery, some of the shoemaking sections do not mend shoes. *Jatiya* which includes more than twenty percent of the total Chamar population is found almost entirely in the north and west of the Provinces, in the Meerut, Agra, Moradabad and Badaun Districts. Jaiswar are found chiefly in the Allahabad, Benares, Gorakhpur, and Fyzabad Divisions, being most numerous in the Jaunpur, Azamgarh, Mirzapur, and Fyzabad Districts. These two sub-castes make up nearly two-fifths of the whole Chamar population.

New Dalit History

For many lower castes, the view of the past embodied in their myths and popular stories. However, these stories are sanskritised versions of dalit imaginations of their past which narrate the causes for degraded position in Hindu community. Most caste-origin myths of the lower castes involve a mishap, an act of greed, or an accident, usually in connection with actions aimed at defending sacred honour which caused the downfall from a higher status.

For example, some *Chamars*, an untouchable caste of northern India, tell the story of four Brahman brothers who were one day walking by the side of a river and saw a cow stuck in the mud. They tried various things to get her out and then, as one of the brothers was tugging at the tail of the cow, she died. Because he was touching the cow at the moment of her death he became implicated in the death, and from then on, the descendants of this Brahman became the Chamars who are relegated to a very low position. The myth explains to Sanskritisation tendencies among the Chamars by the way of positioning them in Brahman varna.²

Another myths about their origin Chamars tell the story of Chamu and Bamu.³ Another legend tells how five Brahman brothers were passing along together. They saw a carcass of a cow lying on the way. Four of them turned aside; but the fifth removed the dead body. His brethren excommunicated him, and since then it has been the business of his descendants to remove the carcasses of cattle.

Another tradition makes them out to be the descendants of Nona or Lona Chamarin, who is a defined which much dreaded in the eastern part of the Province. Chamars are major untouchable community found in almost all the states of northern India. In the detailed lists we find the Chamars of the Province classified into sixteen main sub-castes. Aharwar (principally found in the Allahabad Division), Chamar (chiefly in Meerut); Chamkatiyas (mostly in Bareilly); Dhusiyas (in Meerut and Benares); Dohars (in Agra, Rohilkhand, Allahabad, Lucknow); Gole (in Etawah); Jaiswaras (strongest in Benares, Allahabad, Gorakhpur and Faizabad); Jatwas (in Meerut, Agra and Rohilkhand); Koris (in Faizabad, and Gorakhpur); Korchamars (in Lucknow); Kurils (in Lucknow and Allahabad); Nigoti (a small sub-caste chiefly in Mainpuri); Patthargotis (in Agra); Purabiyas (in Lucknow and Faizabad); Raedasis (tolerably evenly distributed throughout the province), and Sakarwars (in Agra and Allahabad).

Some of these sub-castes are of local origin, some are occupational, and some take their name from their eponymous founder. Thus the Ahiarwar are connected with the old town of Ahar, in the Bulandshahr District, or with the Ahar tribe; the Chamkatiyas take their name from their trade of cutting hides (*cham katna*). These sub-castes claim to have produced the saints Rae Das and Lona Chamarin. The Jatua or Jatiya have, it is said, and some unexplained connection with the tribes of Jats. The Jaiswaras trace their origin to the old town of Jais, in the sense that they are agriculturists and grow various crops (*jins*). The koli or kori, a term usually applied to the Hindu weaver, as contrasted with the Julaha or Muhammadan weaver, are connected by some with the kols; by others with the Sanskrit *Kaulika*, in the sense of "ancestral" or a "weaver." They say themselves that they take their name from their custom of wearing unbleached (*kora*) clothes.

In some places *Jatav* referred to as *Jatua*, it is felt that they were originally Jats, the dominant caste in western Uttar Pradesh and Haryana, *Jatava* as a

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caste distinct from the *Chamars*. In Swami Atma Ram's Gyan Samudra, it is mentioned that according to Lomash Ramayana, which is found in Nepal, the Jatavs trace their ancestry to a gotra of Lord Shiva. Besides, in Jatav jiwan (1924) and Yaduvansh ka Itihas (1924) the Jatav are mentioned as a separate jati of the Kshatriya race.⁴

Chamar *Kuril* largely settled around Jabalpur of Madhya Pradesh for about three generations, the Kuril migrated from Kanpur in Uttar Pradesh. They are one of the many subgroups of the larger Chamar cluster and are also known as Pradesi Chamar.⁵ W.Briggs (1920) recounted a story about the origin of the Chamar and the Kuril. Once in a family, the youngest of four brothers was made to remove a carcass by the other three and after the task was completed, the youngest brother was not accepted on equal footing by the remaining three brothers despite their promise to do so. After that the youngest brother, engaged in occupations like skinning dead cattle, making leather wear, etc, is considered the progenitor of the Chamars. Once when he could not remove a dead buffalo, all by himself, lord Shiva asked him to collect a pile of refuse (Kura) and urinate over it, when this was done, a strong man arose from the heap who could remove the carcass and came to be called Kuril, his descendants are the present day Kuril.

The Jhusiya, and also perhaps the Dhusiyas, have traditions connecting them with the old town of Jhusi, near Allahabad. There are again the Azamgarhiya of Azamgarh; the Jatlot of Rohilkhand, who like the Jatiya say they are kinsfolk of the Jats; To these Mr. Sherring adds: - In Benares the Rangua (*rang*, "colour") who are dyers; the katua or "cutters," (*katna*) of leather; and the Tantua, who manufacture strips of strings of leather known as tant. According to the same authority some of these sub-castes are differentiated by function. Thus, many of the Jaiswara are servants; the Dhusiya or Jhusiya, who trace their origin to Sayyidpur, in Ghazipur, are shoe-makers and harness makers; the kori, weavers, grooms, and field labourers; the kuril, workers in leather; and the Jatua or Jatiya, labourers.

The Dusadh of Uttar Pradesh claim descent from Dushasan. Another account refers to their descent from Bhimsen. They are distributed in the districts of Varanasi, Mirzapur, Ghazipur, Ballia, Gorakhpur and Azamgarh. The Dusadh in Uttar Pradesh are divided into seven subgroups, namely Bharsiya, Dharhi, Gondar (Gundar), kanaujiya, Madhesiya, Magahiya and Rajar. Dusadh is used as a surname.⁶

Dhanuk a low tribe who work as watchmen, musicians at weddings, and their women as midwives.⁷ They are most numerous in the Agra division, but are found all over the Province except in the Benares, Gorakhpur, and Faizabad divisions, and in the hills. The Dhanuks were recorded in the following important sub-castes:- Dhakara, Dusadh, kaithiya, kathariya, kori, and Rawat. The complete lists show three hundred and twenty sections of the usual, mixed type, some the names of well known tribes, others of local derivation. A full list received

from Etawah names twenty sub-divisions - Laungbarsa, Hazari, kathariha, Lakariha, Bhuseli, Garuhaiya, Hathichighar, Garpetha, Atariha, Pichhauriha, Jashar, Jalaliya, kachhwaha, Jugeli, Ruriha, Kharahia, Tahele, Dunhan, Bagheli. Sir H.M.Elliott gives the seven sub-divisions as follows:- Laungbasta, Mathuriya, kathariya, Jaiswar, Magahi, Dojwar, Chhilatiya. In the east of the Province another list gives Jaiswar, Dhanuk, Magahi, Dojwar and Chhilatiya.

Dharkar a sub-caste of the Eastern Doms. They are also known as Bentbansi, because they work in cane (bent), which some corrupt into Benbansi or of the race of Raja Vena. Their sections in Mirzapur are quite distinct from those recorded by Mr.Risley in Bihar.

Valmiki - Some sections of a cluster of communities like the Bhangis, Mehtar, Lalbegi and other castes who were associated with scavenging in the Past, who are now united as one community, claim a common descent from the legendary saint Balmiki. They are widely distributed in Uttar Pradesh, Haryana, Punjab, Delhi, and Chandigarh. Their community council (panchayat) maintains social control. The Balmikis are Hindus and their sacred specialists are the Brahmans. On occasions, their own community members also conduct different ritual observances connected with birth marriage and death. Balmiki Jayanti is an important festival for them.

The Bhangis link themselves to the Brahmin and claim that they belonged to the Balmiki, the composer of the epic Ramayana. Bhangis claim that the Mughals wanted to convert the Bhangis into Muslims, but when they protested they were declared outcastes and forced to do dirty jobs like sweeping and cleaning, which they still continue to do. Later, with the rise of the Dalit movement in UP the intellectuals among them tried to establish Balmiki as a Shudra and as a result the Bhangis too were Shudras. The Ahirwar-is found chiefly in Bundelkhand, where in some districts, as in Jhansi and in Hamirpur, he comprises about ninety percent of the Chamar population. In some places, he does not make leather, nor does his wife practise midwifery. Many Aharwars are cultivators, and some are petty contractors.⁸

Some untouchable caste linked with genealogy with warier caste. The Gihar caste, an untouchable community links itself with Maharana Pratap Singh and Prithviraj Chauhan in caste history.⁹ Hiralal Gihar wrote his caste history called '*Bharatiya Adivasi Gihar Itihas*'. According to him in the Battle of Haldighati the soldiers belonging to the Sisodiya Kshatriya caste, were actually Gihars. The soliders who fought along with Prithviraj Chauhan against Muhammed Ghori in the battle of Tarain (1192) to were Gihars.

Pasi caste traces their origin to the sage bhrigu. Russell and Hiralal (1916) are of the opinion that the Pasi held a part of Oudh before it was conquered by the Rajputs. The Brahmanical legend about the origin of the community says that one day a man was going to kill a number of cows. Parasurama was at that time practicing austerities in the jungle; on

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hearing the cries of the sacred animals he rushed to their assistance, but the cow killer was aided by his friends. So Parasurama made five men out of Kusha grass and brought them to life by letting drops of his perspiration fall upon them. Hence arose the name Pasi, from Hindi pasina, sweat. Pasi is also derived from the Sanskrit word, pasika, meaning one who uses a noose.¹⁰

The Pasis have also been Sanskritizing their ritual order. Some panchayats have taken some initiative in this process. A few of them took to the teachings of Baba Jagjivan Das of the Satnami sect. In order to this, an organization named after their caste hero Udadevi, called the Virangana Udadevi Samarak Samiti was formed, which is active as a forum for reflecting the new identity of the Pasi caste. Lalbegi, their oral traditions recall that they were earlier Balmiki, but after taking initiation from Saint Kabir, have become Lalbegis. They claim that their original homeland was Rajasthan. The word Lalbegi is derived from Lalbeg, 'the eponymous ancestor of the tribe'. Their surnames are Begi and Balmiki. They are found in Bihar, Uttar Pradesh, Arunachal Pradesh, Delhi, Meghalaya and Mizoram. They celebrate Balmiki Jayanti and Ramdeo Puja with gaiety. They also celebrate other festivals like Ramnavami, Mahavir Jayanti, Manasa Puja, Sitla puja Sivaratri and Holi.¹¹ A Dravidian tribe found in scanty numbers only in the hilly parts of Mirzapur south. The Mirzapur Agariyas confined themselves almost entirely to mining and smelting iron. The Mirzapur Agariyas say that some five or six generations ago they emigrated from Riwa, hearing that they could carry on their business in peace in British territory. Their first settlement was in the village of khairahi in Pargana Dudhi. Aheriya a tribe of hunters, fowlers, and thieves found in the Central Duab. Sir. The Aheriyas say that the son of the solar hero, whose name they have forgotten, was devoted to hunting, and for the purpose of sport took up his abode on the famous hill of Chitrakut, in the Banda District. Here he became known as Aheriya, or "sportsman," and was the ancestor of the present tribe. They emigrated to Ajudhya, and, after the destruction of that city, spread all over the country. They say that they came to Aligarh from Cawnpur some seven hundred years ago. They still keep up this tradition of their origin by periodical pilgrimages to Chitrakut and Ajudhya.¹²

Kanjar also known as Gehar Kanjar, they claim descent from the legendary hero, Mana. Some of them claim descent from Kush. Besides, they associate themselves with the Shishodiya dynasty to which Maharana Pratap belonged. They are believed to have immigrated from Rajasthan to various parts of the country to escape conversion to Islam. On their migration, they were rendered homeless, so they took refuge in the jungles and consequently resorted to hunting and looting.¹³

Bansphor a subcaste of Doms. Those in Mirzapur represent themselves to be immigrants from place called Bisurpur or Birsupur in the Native state of Panna, which, according to some, is identical with Birsinhpur, a place north-west of the town of Riwa. In

Gorakhpur they call themselves Gharbani, or "settled" Doms, in contradistinction to the Magahiya, or vagrant branch of the tribe. Their immigration from the west is said in Mirzapur to have commenced some four generations ago and still continues. They profess to undertake occasional pilgrimages to their old settlement to worship a local Mahadeva. In Gorakhpur they have a story that they are the descendants of one Supach Bhagat, who was a votary of Ramchandra. He had two wives, Man devi and Pan Devi, the first of whom was the ancestress of the Bansphors. They freely, like other Doms, admit outsiders into the caste, and this is generally the result of an intrigue with one of their women.¹⁴

The Dabgars of Uttar Pradesh are makers of jars from the skin of animals. They trace their origin from a Rajput clan who used to shields of leather used in battlefields. Others believe that they are an offshoot of the Chamars as they work with leather. Kori or Koli they claim to have originated from a Brahman king. According to Crooke (1896), the name Kori has been derived from the Kol caste, and they are assumed to be an offshoot of the Kol. According to some, the word Kori is derived from the word Kora, meaning coarse cloth and refers to their occupation of weaving coarse cloth. They are distributed throughout Uttar Pradesh. Today, the Koris use the myth of Jhalkaribai for the glorification of their community. They also celebrate Jhalkaribai Jayanti each year to enhance their self-respect and elevate the status of their caste. It is a matter of great pride that she was a Dalit Virangana born in the Kori caste.

In late nineteenth century, ethnographers have written about the origin and development of the Doms but the ethnological affinities of the Dom have remained enigmatic. H.H. Elliot considers them to be 'one of the original tribes of India.' The Dom are spread over Punjab, Uttar Pradesh, Bihar, West Bengal, Orissa, Maharashtra and Madhya Pradesh. The Dom in Uttar Pradesh is also known as Dome, Domra, Domahra, Dumna and Dombo. The Doms are believed to be descendants of one Raja Ben or Vena, from whom one of the Dom subgroups, the Benbasi, has got its name. They are largely distributed in the districts of Varanasi, Jaunpur, Mirzapur, Azamgarh, Ghazipur, Ballia, Deoria, Gorakhpur, Allahabad, Pratapgarh, Faizabad and Basti. The Dom in Uttar Pradesh are divided into a number of hierarchically arranged subgroups, such as the Odiya, Mandini, Mirgan or Mirgain, Mohra, Onimia, Maghiya, Bansphor, Litta, Dharkar, Damra and Jallad Harchandi or Harchariya. The last of these subgroups relates to the Pauranic Raja, Harischandra. They categorize themselves in terms of their occupational affiliation, for instance the Dom who work on burning bhats are differentiated from those who work as sweepers, Bansphore and Jallad. In spite of several divergent historical and cultural memories, Dalits emerged as class mainly due to new cultural identity. The emergence of new cultural and historical consciousness can be captured from Chamar as they represent numerically large untouchable community.

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Conclusion

One of the features of the degraded social status of scheduled-caste people has been the role of myths which explained their lowly origin, and even rationalized it. But there has been a sea change in recent years in the perception by scheduled-caste people of themselves; a new sense of self-respect. Part of this was due to the sanskritization of those sections of these communities which abstained from drinking liquor, eating non-vegetarian food (especially beef and pork)- in fact vegetarianism of all kinds. This also involved giving up names which were considered derogatory and assuming names which were considered respectable, e.g. the Chuhra called themselves Balmiki, Lalbegi; the Chandals became Namasudras; the Julaha called themselves kabirpanthis; the Mala and Madiga named themselves Adi Andhra; the Pallan and Parayan claimed to be Adi Dravida, the Holeyas in Karnataka are now Adi Karnataka; the Chamar and Chuhra, after conversion to Sikhism, called themselves Ramdasia. A new strand in the self-perception of the scheduled castes are the Neo-Buddhists who stress their identity as members belonging to an order that stands outside the varna system.

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Foot Notes

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Evolution of the Colonial forest policy in Oudh: 1860 to 1900

Abstract

Environmental history, a relatively new branch of historiography, is the study of human interaction with the natural world over time. Forest is a significant discussion of Environmental History. The evolution and implementation of a forest conservation policy inevitably involves decisions about the use of forest resources. This paper focuses on the construction of colonial forest policy in Oudh region. In the period of 1860-1900 Oudh forests had made great progress in the field of forest management and conservation. Colonial state intervention in management of forests was necessitated by the requirements of timber for three sources: railways (Oudh railway company and Rohilkhand railway companies), wood required for various departments such as public work department and military department and finally increase of demand for firewood by the public. To meet the demand from these three sources, forestry as a category of science and technology for enhancing the productiveness of forests was encouraged by the colonial state.

Keyword Chronological, Trajectory, Environmental Historians

Introduction

Environmental history in South Asia mainly focused on colonial forest policies. It is due to the fact that contemporary discourse on environmental conservation perceived forests as most efficient absorbers of green house gases. In this context study of colonial forest policies emerged as most fascinating field of enquiry in history. Though substantial historical literature has been produced in the last two decades, still several regions are not being paid due attention by historians. Oudh is one such region which has not been paid attention by environmental historians. This article attempts to construct a chronological trajectory of colonial forest policies. By so doing the role of political economy and resource hungry colonial economy are given particular attention.

It has been a contentious debate in the historiography of Colonial forest utility on the factor responsible for forest policy. How were these policies beneficial for the forest management and to what extent? Conservation, as Richard Grove argues guided by the incentives of agrarian prosperity and social stability. These are, however, no unanimity on this issue. The histories of Indian forestry written by forest officials argued strongly in favour of the benefits of scientific forestry and scientific supervision and management of forests. They contended the necessity of 'reserved' forests, to protect them from hazardous private interests, although access to the limited tracts of forests was allowed to the villages. Conversely, there are many who have argued that the colonial forest policy led to deforestation and that 'every day beliefs of tribal and peasant society' were smashed by the commitments of the colonial Governments. They manipulate the customary use of forest.....to enable sustained timber production fulfilling their commercial and strategic interest. These systems of forest use a management led to ecological decline and agrarian protest. These scholars also emphasize the conflict between state forestry and peasantry and establish the significance of local perceptions as affected by state policy rather than the perceptions of the forest department. These arguments enforce a pattern of uniformity in the sphere of forestry, while there is sufficient space to pontificate elements of diversity between one region and the other. The state policy- whether of the East India Company or of the earlier Governments- towards the forests changed over time and was constantly evolving. In the case of Oudh, in the late eighteenth early nineteenth centuries, while the commercial and strategic interest were strongly influential, were never so at the cost of conservation of forests or agrarian prosperity.

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Objective

The present paper is an attempt to look in to the evolution of the forest policy in Oudh region (1860-1900). The important motive behind selecting the time period from 1860-1900 for my study is that during this era the colonial Government introduced the concept of forest management and implemented it. The main objective of this paper attempts to construct as chronological trajectory of colonial forest policies and its execution.

Hypothesis

The hypothesis of the study is: The British forest policies depleted the forest cover which distributed the balance between agriculture, pastoralism and forestry.

Methodology

A precise study of the evolution of the forest policy in Oudh region: 1860-1900 (Colonial period) is completed with help of primary sources and secondary sources. Main primary sources are District Gazetteers and Original Files Record from Archives. Apart from these primary resources, secondary sources are also utilized in this work, these are books and articles. These books and articles have provided views and fine material for completing this article.

Research Work

In the United Provinces, Awadh was constituted as a separate circle for efficient management of forests. Forestry as a scientific category implemented through separate government department in Awadh region begun after 1865 and by 1880s consolidated as a legitimate branch of government apparatus. Awadh forests were originally administrated under the waste land rule, but were declaring to be state forests in 1861. Mr. F. Read was appointed conservator of forests in Oudh in 1861. The Secretary of State gave sanction to the appointment of an assistant conservator in Oudh in 1865. Brandis had visited in 1863 and had made a series of valuation surveys in the best stocked forests situated between the Sardah and Koriah rivers. These forests were demarcated and as surveyed by Reid in 1864 for better management. As a result of Brandis suggestions conservancy had been introduced on systematic lines. The reserved forests had up to that date been confined to areas containing the three species Sal, Sissu and Tun. Wood had reported that there were in addition grass lands within the forests and unculturable tracts containing miscellaneous forest produce which might with advantage be included. Sanction had been given during the year to the inclusion of the latter within the reserves. As regards the former the Chief Commissioner that as the regular survey was now entering these tracts the cost of demarcation would be small. Works of improvement of the forests had been commenced, and one of the most urgent was the operations require to free the sal trees from the destructive creepers, Argynia and Bauhinia vahlii. Brandis had been fixed the limit on the number of trees to be felled annually in the forests 4000. The annual felling was to be determined by two considerations: 1) The natural yield of the forest, 2) The aggregate stock of timber in the

Oudh and Nepal depots. Before 1865-66 Forest Report had been drawn up for the forest year ending 30 September. At the desire of the Government of India the Reports were in future to be drafted for the financial year in order that they could be compared with the figures of the other administrations. The question of village forests, valuation surveys and the opening out of forest roads are points of interest in Cleghorn's summary of the work being undertaken in Oudh. Mr. Read recommends that all timber within forest limit should be considered reserved and placed under departmental control. He objects to the partially authorized entrance of villagers into the reserved forests for the purpose of obtaining timber for domestic purpose and attaches much importance to the isolation of villages from reserved forest lands after the plan followed in Kumaun, viz. the definition of limits by the excavation of a ditch in lieu of boundary posts or pillars. These remarks contain matter for serious consideration this difficulty might be met, as proposed by Mr. Read, by assigning a tract of sufficient extent for the village consumption, measures are always attended with difficulty at first, but with persevering efforts and the careful explanation of the intentions of Government the object will be attained. An illustration of this is given by Mr. Read: "On the introduction of the first step towards conservancy of the forests in Oudh, the felling of Sal saplings was strictly prohibited. The Tharoos at once declared they would leave their villages and go over to Nepal, as the straight Sal sapling was the only kind of wood they could use, and had hitherto used, for fencing their field and roofing their numerous sheds and habitation; but I observe there are now as thickly populated as they then were and their fences, etc., are constructed with less valuable timber than Sal". The importance of valuation surveys on the system proposed by Dr. Brandis is urged in view to the compilation of statistics in the conservator's office; this and the topographical survey being correctly considered as the basis of all Forest Conservancy. The want of communications through the forest is dwelt upon in Mr. Read's report thus: "A point of considerable importance is the construction of roads through our forests not only with a view of facilitating timber operations but to assist the transit of timber from Nepal. I have ascertained that the average distance traversed by an ordinary timber cart is scarcely over three miles a day as the cart tracks followed by the carters in many instances are so bad as to impede their progress." The construction of good forest roads is unquestionably of great importance for facilitating timber operations, and is likely to secure enhanced revenue from the sale of miscellaneous forest produce. The sanctioned forest establishment in 1866 was not large. It consisted of the Conservator and two assistant conservators Mr. C. Chapman and Lieutenant W.R. Martin. It was shown that from the commencement of the forest operations in 1861 up to 30th April 1865, the balance in favor of the Department amounted to Rs. 1,06,029 and the net profit for the 1866-67 amounted to Rs. 82,040 a considerable increase on the previous year. Wood held the

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appointment of officiating conservator throughout the year 1866-7 and prepared the progress report of these forests for the year under the headings already laid down by Brandis for these Reports. During the year the main operations and work had been confined to the 1st and 2nd Divisions; in the 3rd Division (Gonda) the settlement and survey officer was engaged in laying down the boundaries between Oudh and the North-West Provinces and therefore had been unable to proceed with the demarcation work in the Gonda District. It was stated, moreover, that "the grazing, etc., contracts of the 3rd division still remained in the hands of the Maharaja of Bulrampur." The erection of permanent boundary pillars was in progress in the Kheri and Bahraich divisions, but had not for the above reasons been commenced in Gonda. As a full staff of assistants had been sanctioned for Oudh it was hoped that demarcation work and erection of pillars in the latter division would be undertaken during the ensuing year. The areas of the three divisions still considered approximate only were as follows: 1) Division in Kheri District 263 square miles. 2) Division in Bahraich 269. 3) Division in Gonda 170, Total 702'. Read had suggested that the forest in certain waste lands south of the Sardah River in the Mohumdee District should be included in the Reserved Forests. The conservator also wished to add to the State Forests two forests in the Bahraich District, the Charda sal forest and the Rajghur Singha tract. The inclusion of the first named area was still under consideration, whilst on the latter the Oudh Government had stated that "the claims of private parties to these forests require judicial settlement in the regular courts before further action can be taken". In their review of the Report the Government of India alluded to the description of the forests in three divisions enumerated in the Report, and to the details given of the requirements of the agricultural population in the vicinity, which they had hitherto been in the habit of obtaining from the forests. Brandis had submitted to the Oudh Government detailed proposals for the settlement of these matters. The subject had already been under discussion between the government of India and the former Chief Commissioner of Oudh. The Government of India gave a short review of the present position and recorded an expression of their own opinion on the subject: "The work of demarcating the Oudh Forests commenced in 1862, in what is now called the Kheri District, between the Sardah and Korially Rivers". The then Chief Commissioner considered that all waste lands in that part of Oudh had become the property of the State at the time of annexation, and were thus declared at the settlement of 1858. This view he recorded in a letter to the Government of India of the 1st September, 1863. Subsequently, government were demarcated in the Baharaich and Gonda Districts, and it is supposed that in these district also the right of Government over the forest lands were at the time considered to be unquestioned. The forest rules which were promulgated in September, 1866, were apparently framed on the supposition that Government held the forest lands that had been

demarcated as state forests, subject to no rights or privileges of other parties. These rules imply that the right to all the produce of the forest is vested in the Government. Thus all interference with trees, timber and forest produce, without the authority of the conservator is prohibited in rules VI, IX, X and XI. Burning grass and jungle clearing the forest for cultivation, burning lime or charcoal, or the grazing of cattle, is prohibited by rule XII. Provision to protect the forest against fire from out side the forest limit is made in rule XIII. And the power of closing existing roads through the forests is assumed in rule XIV. A limited permission to cut unreserved timber for their own bona fide use for domestic and farming purposes is granted in rule VII to villagers living in forests or with in three miles of the Government boundary line but this concession was apparently made as a free gift on the part of Government and not as a matter of rights'. It was reported in letter of the 2nd July 1867, that it was intended to enforce the prohibition against the grazing of cattle gradually and that it was proposed, over and above the additional areas of waste land included within the new boundaries of villages, to allot to them certain parts of the forests as fuel allotments, by way of compensation for all the privileges which they may have lost by the introduction of strict conservancy rules. In review of the present report, however, it is said that much difficulty has been experienced in satisfying the talookdars and villagers, and that, though the subject has received unremitting attention, but little progress has yet been made towards its solution. It is gathered from the report on this subject, submitted to you by the Inspector-General, that in a large portion of the forest it will be found difficult to effect the demarcation of fuel allotments, and that the requirements of the surrounding population, and that the arrangements for satisfying them, must be considered in detail, separately with reference to each subdivision of the forest; that, in fact, a detailed enquiry into the circumstances of each village must be made. To make this enquiry in a satisfactory manner the Inspector-General has suggested to you the appointment of a special commission, consisting of an officer of Revenue and one of the Forest Department, whose joint Report, subject to an appeal within six months, would be final when sanctioned by the Chief Commissioner. Regarding these an expression of your views will be awaited. Should you entertain the proposal of entrusting the settlement of this matter to a special commission, it appears right to State that, if the basis on which the Oudh Forest Rules were framed, that is, the assumption of complete rights of the state in these forests can be maintained, there will be no necessity for giving legal force to the decisions of the commission on the part of Government. But if the basis of the existing rules is not tenable, then a clause must be inserted in the Oudh Forest Rules, giving legal force to the decisions of the commission when sanctioned by the Chief Commissioner, and this will require an additional section in the Forest Act. Under all circumstances, His Excellency in Council considers that it will be proper to insert such a section

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in the Forest Act, to enable local Government to effect a satisfactory settlement of customary or prescriptive rights in the forests'. No progress had yet been made with the important matter of keeping out fires from the forests. The chief commissioner stated that in his opinion the Conservator had not exaggerated the evil done to the forests by fire, but expressed a doubt whether these could be immediately put a stop to, as it would be out of the question entirely to exclude from this part of the country the enormous herds of cattle sent to graze there. The Chief Commissioner in another passage of his review on this subject said that the stoppage of firing the jungles might involve the closing of the forests to all grazing interest, were to be entirely stopped, the dense vegetation which would grow up would so choke up the forests that they would become fitted only for wild animals, and inaccessible to the Forest Department. This was an expression of the opinions commonly held in the country at the period, not only by civilian officers and the native community, but also by many Forest Officers as well. And when it is remembered that the forests had been annually burnt by the people from time immemorial it is scarcely surprising that it should have taken some time before the growth of a country opinion began to make itself felt. In fact, it was only due to the extraordinary energy, resourcefulness and tact of the Forest Officers, backed by a section of shrewd and far-sighted civilians, that the new ideas gained ground in the country as rapidly as was ultimately the case. But already the value, as examples, of the beginnings made elsewhere had not been lost upon the Government of India. On this subject they wrote as follows:

"His Excellency in Council hopes that your apprehensions will not be realised. An attempt might be made to devise measures for satisfying moderate requirements of the agricultural population without serious detriment to the forests. It will, His Excellency in Council trusts, be found possible to regulate the grazing of cattle within the limits of the State forests, without necessitating the emigration of the inhabitants. On the other hand, Reports from the Central Provinces seem to show that the exclusion of fires, while favouring the growth of the arborescent vegetation, rather tends to keep down grass and low jungle. Moreover, division and sub division lines must, under all circumstances be cleared through the forests, which will make them sufficiently accessible for all purposes of protection and management." Already a number of lines had been cut through the forests under the conservator's orders with a view to dividing them up into manageable blocks of about equal size. Some of the main lines were to be converted into fair-weather roads in order to facilitate the export of timber. The conservator correctly enumerated the advantages of these lines, thereby displaying the rapid advance which was being made at the period in forest organization in Oudh; viz, they would render possible the valuation of the growing stock in each block or compartment, facilitate the export of timber and other forest produce. In a report on the Kheri Forests, dated 23rd June, 1863, Brandis

had given an estimate of the rate of growth of the sal in that division. Wood had carried on the investigation by counting the rings on a number of stumps and logs. The following is a comparison of the two results, which were recognized as being only preliminary ones:

6' Girth	4'6' Girth1
Brandis, 1863	80 years 50 years
Woods, 1863	95 65

From the result of his felling operations it had become apparent that a large proportion of the mature trees in the forests were unsound, Wood considering that only one-third of the trees would, he feared, be sound. In 1863 it had been estimate that the Kheri Forests would be able to supply 4000 mature trees annually. If Wood's analysis were correct it would considerable affect the annual yield, as it was not proposed to commence regular felling operations yet in the other divisions. For the present Wood's estimates had been accepted and a plan of operations for the two following years had been drawn up for Kheri by the conservator and the inspector general, based on the data available at the time. The plan limited the number of trees to be felled during the period to 2900. Including besides sal two other reserved species of tree, "asna" and "haldu", the wood of which was said to be in demand. The plan also laid down the order in which felling operations were come to be commenced and continued. This plan had been approved. The point of interest in connection with the progress made during 1868-69 can only be alluded to briefly. A ditch 850 yards long had been dug in the Bahraich Division to mark one of the boundaries as an experiment to keep cattle out of the forests. The value of this work, in consideration of its cost, was to be carefully watched. The question of commencing the formation of Khair and Sissi plantations as fuel reserves in selected localities was under consideration. Captain Losack and Mr. Dodsworth are first mentioned as Forest Officers. Wood's annual progress report for 1869-70 is an interesting document drawn upon Brandis new model. Wood was now permanent conservator and considerable progress had been made in Oudh. Wood's work and negotiations in connection with the transfer of the waste lands in Kheri, south of the Sardah River, was meeting with success. The area amount to be 285 square miles, of which 19000 acres had already been made over the department and the Government of the Oudh was anxious that the whole of the tract should be managed by the department as it was better suited for the growth of Sal wood than for ordinary cultivation. Wood had suggested a plan of eventually making use of traction engines to do the principle part of the carriage of timber and fuel. The Government of India approved of the suggestion and the Secretary of State (Argyll) had readily given his acquiescence.

Forest Conservancy in Oudh, when compared to many other parts of India, or even the adjoining North-Western Provinces, had made considerable progress by 1870. A good commencement had been made and the revenue was fairly satisfactory in some districts. Fire protection was still, however, in its infancy and

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forest settlements were giving trouble. There existed few "rights" over large tracts of the forests, the settlement of some areas was incorrectly made and forests were burned with rights which under the law did not exist'. Wood had presented his progress report for the year of 1869-70. Wood's work and negotiations in connection with the transfer of the waste lands in Kheri, south of the Sardah River, was meeting with success¹³. The Government Forests of Oudh Circle consisted of the reserves in the Pilibhit and Gorakhpur Districts belonging to the north-west provinces and the reserves in the Kheri, Bahraich and Gonda Districts in Oudh. All these forests were constituted reserves under Section 39 of the Indian Forest Act of 1878 in February 28th 1879. In 1886 Ribbentrop had presented the report of the position of the Oudh forests administration and this report, based on an inspection of the Oudh Forest Circle. For meeting the requirement of the construction of Railways, heavy felling took place in the Kheri Forest. And then ordered to framing a working plan for the Kheri forests with out any delayed and Ribbentrop was instructed to proceed to Oudh, where he spent a part of March and April 1886. Before dealing with the main points at issue, Ribbentrop has some interesting remarks upon the configuration, soils and sylvicultural requirements of the Sal and one or two other species of the Oudh Forests which may be briefly epitomized. In 1894 the first working plan was prepared for the South Kheri Division. The area of Government Forests in 1886 was as follows: Sal forests, 586 square miles, miscellaneous forests, 89 square miles, Khair and Sissu 245 square miles and grass lands 212 square miles, Total 1132 square miles. In 1890 Eardley Wilmot became Conservator of Forests in Oudh and during the next nine years he undertook the reorganizing of the management of forests. In the Inspector General's "Review of Forest Administration for 1891-92" the backwardness of Oudh in forest organization is commented upon. In 1892-93 the Government of India note the marked progress in the preparation of working plans which had taken place under the guidance of the conservator, and they had also remarked upon the excellent results which had attended in this circle the efforts made to improve during the past four years the organized exploitation of forest produce. The conservator's next task was to make a regular working plan for the area, and part of this work was entrusted to Mr. Keshavanand. He had played excellent work on this field and got good result. And second task taken up by the conservators was the demarcation of the forest boundaries. These boundaries demarcated by the sandstone pillars. The boundary was plainly visible to the public, and prosecution for trespass would lead to conviction in the court. The other problem taken up, which cost an infinity of trouble and labor, was the preparation of the record of rights, a business which had not been settled. All villages within three miles of the boundary and, says Eardley Wilmot, there were many more in the now more populous country, were enumerated, with numbers of houses, cattle, acreage of land, etc., as also their requirements in fuel, grazing etc., from

the forest. Schedules were then prepared recording the annual grants of each to which the people were eligible. In this way the proportion of produce from the forests required for the local community was known and consequently the amount remaining for sale in the open market. This work occupied several years as it required constant reference to the Revenue Officer.

Findings

The proposed study deals with history of forest policies in Oudh region and the significant finding of the study is Colonial Government tried to explain that they made scientific forest policy for the sustainable development of the forest resources but it was not only aim of the colonial government to intervene into forest management they wants to fulfill their demands for Railway sleepers and firewood. And the core of this study is justifying it.

Conclusion

The history of forest policy in Oudh province shows the way in which colonial forest policies were implemented in India. While intervention in forests was an imperative for resource requirements of the colonial economy, the colonial state justified its intervention by evolving elaborate governance apparatus for management of forests. This was done to meet the sustained supply of forest resources, especially timber and firewood. The history of forest policy in Oudh also reveals that sustainable development as a discourse originated in the colonial context by renouncing the native Indian practices of forest management. However, this discourse was created and translated in the form of scientific forestry in the context of acceleration of resource exploitation which was imperative for the colonial economy for it created a new paradigm in transforming Indian economy by gaining political control in India. Even contemporary discourse of sustainable development indeed an attempt to do the same thing but with different tone

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Theatre and the making of Indian Nationalism during the Colonial period

Abstract

Theater has constituted an important part of the cultural life and public entertainment in India with its varied manifestations. The study of theatrical practices is very significant because of the material condition of literacy during the colonial period. As an oral cultural form, it offers not only sites for political awareness but also represented the voices of masses. The paper highlights the changing trend of theatre as a terrain during the colonial period which became central to social and political movements. It questioned and contested the authoritarian structure through aesthetic forms and generated varied responses.

Keyword: Cultural Nationalism ,Dramatic performance Act, Historical plays, Mythological plays ,Parsi theatre, Nutanki, Jattras, Tamasha, Burrakatha, Ramlila

Introduction

Theatre with its varied forms is the most suitable literary genre and medium for the promotion of reformatory ideas. Due to its potential to attract and communicate through entertainment large mass of people. It is a dynamic and mature expression of creative spirit as it synthesizes all arts, drama, dance, music, poetry and literature. The diverse illusions of the written words, spoken voice, vivid gestures, scenic display, riot of color and sound some how creates life in the theatre and this appeals to human mind in an immediate way.¹

This paper reflects the changing trend of theatre in India during the colonial period. Since late nineteenth century (19th cen.) theatre has remained central to social and political movements and as a terrain it questioned and contested authoritarian structure through use of aesthetic forms. However, in Colonial studies the place of theatre is marked by ambivalence and marginality even though it was an important forum for progressive writers and political activists. It remained tied to the national question, and represented and generated highly varied responses.

When Bengal came under the East India Company in 1757, the Colonial encounter resulted in opening of play houses like Calcutta Theatre (1775), the Sansouci Theatre (1839) and Chauranghee Theatre (1813) under the Colonial patronage² and British Theatre formed the part of the culture of Bengal.

Theatre in Bengal in the middle of the nineteenth century infused by two models - modern European drama, which found a strong foot-hold in Bengal during this period and Sanskrit drama. Initially, Theatre was restricted to British Colonial officials but gradually theatrical activity spread among the local literati and men of wealth, who began staging European plays at local theatre. By the late nineteenth century (19th cen.) it resulted in emergence of streams of Urban drama influenced by Anglo-European tradition.³ However, Production and staging of Shakespar's works was part of political strategy of exporting English ideas and culture. As recognized by Edward Said and others, Colonial domination was much a cultural, than as a political process, and reproduction of English plays both as a dramatic and literary text, in theatre and in educational institution in 18th and 19th cen. Calcutta was crucial for cultural colonialism. Even the model for the playhouses, theatrical arrangements, and architectural style came from the Mother country.⁴

Bengali elite gradually became associated with the theatre and started patronizing Bengali theatre; (D.N. Tagore was among the founder of the Chouranghee theatre) which produced Bengali version of Sanskrit classical drama as well as English classical plays. Sanskrit dramas now restore to a reputation of classical excellence because of the praises



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showered upon it by Orientalist scholars like H.H. Wilson who championed Sanskrit literature and translated it into English, that turned westernized Indian elite to Sanskrit drama, revalued it as classical, as part of their nationalist aspirations.⁵

Thus, it was Indian intelligentsia's nationalist enterprise to invent pan-Indian Nation state that was modern, but simultaneously attempted to bring about an imagined nation in to existence through a return to ancient Hindu tradition.

Even though, as Partha Chatterjee⁶ has pointed out, theatre, till 1850s remained the least commended aesthetics from as compared to Novel and Poetry, but things began to change by later 19th cen. The theater began to develop into a broad based medium of entertainment in urban centres like Calcutta, Madras and Bombay and attracted large middle class audience.⁷

The first modern Indian play with social theme, of social criticism was written in English by Reverend Krishna Mohan Banerjee in 1831 - was about the present state of Hindu society in Calcutta, though it was never staged, but first time in Indian drama, the author explicitly criticized the living condition around him.⁸ Michale Madhusudan Dutta was the man, who laid the founding stone of the literary tradition of indigenous (Bengali) dramatic literature in western style. In 1854, Dutta wrote an essay entitled "The Anglo-saxon and the Hindu" In it he hailed the arrival of the English in India with a poetic line translated from Aenied.⁹ "Who is this stranger that has come to our dwelling? ... terrifying us into submission and humbleness to the dust, Who is this..." Dutta in the last part suggests wariness for the colonizers.

Moreover, creativity in Colonial setup permits certain political ambiguity and ambivalence. It resists and allows at the same time causing tension in form and content. This ambivalence of Colonial discourses assumed different shape in playwrights who came after Dutta. They gradually came to defend and inform the presentation of Nationalist discourse on the Bengal stage. In the years between 1850s. Ram Narayan Tarakratna's *Kullin Kulasarvaswa*, and Naba Natak (1857) a protest play, attacking on the prevailing polygamous practice of Kulin sect of Brahmins - as a original Bengali play was staged and started strong trend of social drama. A host of playwrights appeared on the scene with plays on social issues.¹¹

Gunabhi Ram Barua and Hemchandra Barua, Assami playwrights wrote *Ram Navmi* (1857) and *Kania Kirtan* (1861) respectively. *Ram Navmi* was attack on child marriage and *Kania Kirtan* was on opium addiction. The rest of the India caught up with such content in performances during 1860s and 1870s. In Gujarat, Ranchhodhbhai Dave's '*Lalitadukh darshak*' - (1878) depicted women's plight. This predilection for social plays gradually slipped in to making political statements through theatrical means.¹²

Furthermore, once urban theater took root as an institution, it was at least in intention increasingly, if inconsistently, a theatre of resistance rather than collusion.¹³ As a cultural force, for the community or larger geographic region, theatrical production and performances became a site for representation of and also resistance to imperialism.¹⁴

In 1859, Dinbandhu Mitra, a Bengali civil servant wrote *Nildarpan* (The Mirror of Indigo) a political play that exposed exploitative condition of Indigo

plantation of Bengal British Planters. From 1872, when the Calcutta stage went professional as democratized ticketed theatre, *Nildarpan* was the first production - that was blatantly polemical and anti-British.¹⁵ However, *Nildarpan*, contrary to the popular belief, was hardly a revolutionary protest as it was thought to be. The political scheme of the plot owes more to middle class concept of rebellious behavior rather than organized, though unsuccessful uprising, that indigo movement of 1860 actually had been. Its translated version published and distributed in England under the supervision of James Long of Church Missionary Society¹⁶ generated controversy and led to the reforms thereafter, *Nildarpan*, be it Mirtra's Bengali or Long's English version, played role of a catalyst for social change, and set a precedent. More plays of so called social protest, a large number of them in *darpan* style, began to follow suit, which reflected the repressive ills of the society. Notable among them was '*Zamindar darpan*' (Landowner's mirror (1873) by Mir Massarraf Hosan, about peasant rebellion against land owning class, Dakshinaranjan Chattopadhyay's "The Tea planters" mirror (1857) and *Jeldarpan* - on poor condition of British owned jails and terrible life of prisoners in jails.¹⁷ All these plays protested against the atrocities meted out by the Colonial Govt. agencies on the subaltern, rural working class majority of Bengal and ironically the urban gentry also contributed in it quite directly. The dialogue and scenes were laced more with politics than ideological commitment but it obviously romanticized ideas of rebellion and freedom. Within four years, the Bengali public theatre, outraged the Colonial authority so much that they passed the dramatic performance Act in 1876 to curb its provocative, seditious and patriotic tendencies¹⁸ The Act was the recognizable sign of tension between the Colonial state and theater as an urban institution. In Nandi Bhatia's¹⁹ view, it is possible to talk about the rise of Nationalist drama after 1860 and by 1876, theater in India had indeed become an expression of political struggle against colonial rule and a space for staging critique of the oppression and atrocities inflicted upon the Colonial subjects. Thus it began to function as an anti-colonial medium at least a generation before the formation of the Indian National Congress officially launched the Nationalist Movement in 1885.²⁰

Moreover, the Pan - India Indian populist theater in nation wide reach emerged in 1880s, when Parsi theater companies, with fairly cosmopolitan style, with Hindustani lingua franca toured all over India or even south-east Asia and east Africa. Modern drama ran on commercial lines, that was open to every one without any barrier of class, caste, region. Though it had commercial objectives but it did serve an unacknowledged, unconscious unifying nationalist end in many ways - peaked between 1880s and 1930s.²¹ Most plays staged by the commercial theaters moved away from any kind of overtly political activism but projected images of nation that could be imagined even under the Colonial rule. While staging of historical plays, undercurrent was always nationalistic. Even advertisement of the play by the creative director producer Girish Ghosh testifies this possible imagination of Nation.²²

The advertisement reads "Play on Akbar, - The greatest Statesman, the Life and Times of Emperor Akbar" The character was used as a trope to play up the national feeling and patriotic sentiments of audience

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without incurring the rage of the Raj. Bengali Theatre now moved towards conceiving a conveniently idealized nation that could flourish even under colonial domination.²³

Furthermore, Hindi theatre (in Banaras and nearby regions of Northern India) also contributed from 1881, when Bhartendu Harishchandra²³, the founding father of modern Hindi Theatre invested all his eighteen plays with nationalistic and reformative views, thus deviating from the tradition of Parsi theatre. He composed *Ander Nagri* (Lawless state) a satirical play to communicate his ideas with innovative form, breaking from the traditional classical Sanskrit plays. Though he used both classical Sanskrit and western theatrical influences for Hindi drama.²⁵ Jay Shanker Prasad and Radheshyam Kathavachak, representative of historical plays in Hindi, glorified the great Hindu past. Jayshankar Prasad's historical plays on *Chandergupta* (1931) and on other ancient Indian dynasties communicated and referred to Indian history.²⁶

The National and Mythological plays became dominant even in Marathi drama as in Hindi, which also included religious values and '*dharma*' towards the Nation that demanded anti colonial action.²⁷ Furthermore, Tagore, the pivotal figure of Modern Indian Theatre, used theatre innovatively and advocated and initiated cultural nationalism and stand against cultural imperialism. He stormed the bastion of domestic realism and picturesque entertainment - both of which followed the western lead and proposed more imaginative stage craft - which was modelled after Sanskrit aesthetics. In the seminal essay - *Rangmanch* (1902) he took a stance of rebellion against cultural imperialism. He wrote "--- the theater that we have set up in imitation of the west are too elaborate and in them the creative richness of poet and player are overshadowed by the wealth of the capitalist ... so artist of his craft and skill should get rid of the costly rubbish of the western style stage ." Tagore's choice of Topic was on most decline themes like critiquing major religion in *Malini* (1869), attack on orthodox Hinduism; *chandali* (1933) dealt with untouchability *Jasher Dash* (1933) a satire on Hinduism. He composed series of plays between 1908-1934 which was staged in an open air sets in Shanti Niketan. His classics pleading on harmony with nature in *Muktadharma* (1922) *Rakta Karvi* (1924) dealt with ecological and environmental awareness and warning against exploitation of natural resources respectively.²⁸ Moreover, Tagore's winning of noble prize in 1913 also indirectly modernize Indian theatre by bringing it in the attention of international audience by translation and world premier of his play *Dakghar* (The Post office) This also facilitated international translation of regional Indian language plays which had not received much prior attention.²⁹

Parth Chatterjee argues that these aspects of Colonial theatre, working on the themes of social , national and cultural elements were influenced by the intellectual proposition and literary output of the Nationalist writers and their texts composed on National identity and surveys treating India as single entity. Colonial Theatre, as conglomeration of different theatrical traditions - classical, western, lyrical, folk etc. represented as an aesthetical whole, developed in to a broad based medium of entertainment for large audience.³⁰ But similar to the contradiction and problematic of Nationalist ideology, the discourses of this

period, that involves glorification of mother India, heritage, civilization but exclude Muslims from the parameters of the nation, erase women and subalterns from the thematic concerns, also influenced playwrights. Hence this trajectory from the written text was usually followed in the theater.³¹

However, the popular commercial theater which was already on the cultural scene from the end of the 19th cen. disseminated ideas and information addressing themes regarding socio-political issue, untouchability, shaped the vision of National theatre. It soon came to be used as an crucial instrument in the Nations' struggle for independence during Colonial India's high nationalist phases, when Gandhi launched his revolutionary Satyagraha. While, Press and political organization influenced the literature, for the bulk of people, popular theatre served as a means of mass communication to erode the colonial ideological hegemony.

It became the medium, which packaged ideas of nationalism and social reform with the main ingredients of music and mythological themes which had a significant impact.³² Various forms of theater, as a cultural mechanism was instrumental in analyzing social and political conflicts and shaped the modern political dimensions in India.

The trend of staging of performances by commercial and itinerant drama companies of Parsis and Marathis were followed by number of local theater organization in south India, which reached out to move wider and varied audiences after 1920s. This trend, coupled with a growing interest in English literature and study of Sanskrit Classics created new interest in educated city based youths who joined theatre as playwrights and artists. By 1920s, the number of local itinerant companies was considerable and theatre emerged as a single largest mass entertainers. But it did not remain only for recreation.³³ With the beginning of National movement and intensification of political activities National struggle for independence became the concern of the popular theater. Nationalist saw in them a much needed tool to spread their message effectively, widely. This led to the politicization of popular theatre in this period.

Moreover, social reform movement as a necessary element in the development towards nationhood was in progress. Gandhiji's declaration of Belgram Congress (1924) that social reform programme should be taken up by the Congress seriously as it is essential for *Swaraj*. Social reformer also used theatre as campaigner for eradicating social evils.

The stirring up of political activity in the country following Jallianwalah Bagh massacre in 1919, the country wide opposition of Rowlatt Act and Non - Cooperation movement triggered the process of politicization of the popular theatre and brought stage artists in the main stream of the society, and inaugurated a new phase in the world of mass entertainment.³⁴

The initiative came from the southern region, the presidency of Madras in the early years of 20th cen. A number of drama companies operating in Guntur, started staging intense political documentary drama, dealing with events that followed Jallianwalah Bagh massacre. The Play - "*The glory of Panchali*" depicted people's dissatisfaction with Hunter Committee Report. Punjab was personified as a women, whose hands and feet tied by O'Dwyer. The Play featured National leaders, Gandhi, MotilalNehru, Taiyabjee, explained *Satyagraha*

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movement.³⁵ Another Play, which attracted lot of attention from the public as well as colonial administration was *Swarajya Swapnam* (the dream of self rules) produced by Tilak Natak Samajam, local organizations of Guntur. The play propagated boycott of foreign goods, its economic implications in a very simple way. The police reported³⁴ that the drama excited the felling of audience against colonial imperialism. It also recorded that the drama had such an intense impact on the audiences that surpassed the effects of several non-cooperation meetings. The popularity of the play alarmed the district administration which responded with the use of section 10 of Dramatic performances Act, requiring all plays before productive performances to be registered and approved by the district administration.³⁶

Further, this method of political propaganda through cultural performances of theatre became very popular and used both by nationalist and social reformers for communicating messages for large audiences. Many Amature drama enthusiasts also began to come up with political social dramas. Guntur *Sarasa Vinodini Sangam* staged play on life of Tilak and Gandhi. Theatre groups were organized and sent in the interiors when Government hardened its stand in cities by proscribing all political plays.³⁷ In Madras city, S. Satyamurthy, supporter of the performing art, creatively used this art for national purpose. Condemning elite apathy towards popular art, he declared - we will sing our own way to freedom. The popular theatre in this era of direct political propaganda, introduced political comments and symbols of Nationalism which was taken to the interior corners of the country by the itinerant theater groups. Moreover, stimulus to the popular theatre to widen its scope in political communication was imparted by the execution of Bhagat Singh and other revolutionaries. National leadership like Nehru, RajGopalchari also appreciated the work of the theater in the Nation's cause and in 1928 visited the office of Tamilnadu Actors' Association in Madras, when Government proscribed its performances.³⁸

This New trend predominated even in those theatre groups which earlier staged religious, mythological plays. They started staging plays preaching self rule, symbols of like *Charka, Khaddar* from 1930s.

However, to face the Government wrath, these theater groups devised new strategies by changing the title of the proscribed plays. The Lalita Natya Mandali of Guntur, encouraged by the people's response even dared to stage dramas laced with nationalist feeling even without prior permission of the district administration.³⁹

The innovations and varied forms to suit the local contexts and circumstances, used by the popular theater to reach out to the broad base varied audiences as folk music, ballads, *Harikatha*, street plays, with social political themes.⁴⁰ Songs accompanying plays, served very definite purpose of creating awareness about political issues. Earlier Tamil poet Subramaniyam Bharti had shown the way in using popular songs for political purpose served as a model.⁴¹ Another theatrical from Pin Pattu, formed by backstage singers in plays used as a backbone of stage performances for political propaganda. This form was used during picketing activities.

During 1920s, the left emerged as a dominant socio - political group in India. With its Marxist socialist ideology, it mobilized various sections of society especially workers and peasants. The new left trend and

its radical anti - colonialism charged the imagination of elites and masses alike.

The political - economic circumstances of 1940s intensely intacted on determining the new trend in aesthetic perception and forms. The Cultural Movement linked with these circumstances, developed not only in urban centres of Eastern India but also in the periphery (of Bengal Assam, Manipur). The localized spontaneity infact led to the formation of a central organization - Indian People's Theatre Association (IPTA).⁴²

On 2nd June, 1941, Germany attacked Russia and for Communist Party of India (CPI), this transformed the imperialist war into people's war. An Anti - Fascist people's war line (to support British war efforts) was adopted after much debate by the CPI. This political line led to lift the ban on the party in 1942, by the British government. It was declared legal and leaders were released from the jails. Legalization brought organizational advantage for them. Although, Communists continued to hold meetings and Conferences for pro-war propaganda and anti-Fascist resistance. But it was becoming increasingly difficult to conduct it effectively in the face of the Congress and CSP opposition (as being accused of Government's agent) and to counter the tide of populist Nationalism released by the August Movement of 1942.⁴³

During the period of people's war (1942-45) communists expanded and strengthened the organization, as they were able to work for long period without any attack by the British Government. The slogan of anti-Fascist peoples' war however, incomprehensive to the masses (peasants and workers) did have a realization among intellectuals, aware of the world current. Thus for popularizing the people's war thesis among the masses and to interpret and colonial struggle a new, the left oriented organizations like friends of soviet Union, Anti Fascist Writers and Artists Association, comprised of well known intellectuals and writers, played active role in rallying the urban middle class.⁴⁴ It was in these years that Marxism acquired a significant influence over the cultural life of the middle class of Calcutta. With the intensification of Japanese aggression in the east and bombing of Chittagoan in the inner most district of Bengal, cultural squads were set up by the party to propagate anti-Fascist-Nationalist line among the masses. *Janajuddha* reported that people's defence army in Chittagoan, were singing songs and staging plays to spread the message of resistance. Anti Japanese people's play, anti-Fascist songs, and plays were organized by AFWAA (Anti Fascist Writers and Artist Association) in the remote areas of Bengal was reported by *Janajuddha*.⁴⁵ A Kisan Sabha member and Folk artist, Nibaran Pandit wrote anti-Fascist songs in the form of *Kabigan* to spread the message among the rural areas. These localized cultural effort used for political purposes gained momentum and made intense appeal among the politically sensitized rural audience where communist base was already strong.⁴⁶ However, the task of establishing contact among less conscious audience were also consciously undertaken by the party through this pattern of propaganda by culture squad and touring squad. In 1942, a Student squad from Calcutta visited inner most districts of Bengal, Assam (1944) for boosting the morale of people in areas under Japanese threat. Those artists who directed the performances, were associated with the ideology of communism. Artists like Shambhu Bhattacharya directed dance performance

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with Jyotirendra Moitra's songs and produced cultural performance for propagation of messages.

In Bengal, Benoy Roy, singer and organizer of the cultural squad unit, recruited local talent utilizing the communist's influence among the peasants and workers, taught people's war songs to number of activists. Moreover, talented singers from Assam, sylhet like Khaled Chaudhary and others performed on songs on themes of anti colonialism and Nationalism. Local cultural units were also formed from among the urban workers, like tramway men and corporation employees. These artists used folk forms of *Jarigan*, *palakirtan* to disseminate the political messages.⁴⁷ Plays with anti-Fascist Nationalist theme were produced by Anil D' Silva and staged for the audience. Bombay women's squad performances on Bhagat Singh's Martyrdom showed similar effort from outside Bengal. These cultural performances, at the local level which was open to varied section of people, communicated political messages very effectively.⁴⁸

Further, the devastating famine of Bengal in 1942 inspired many progressive writers and artists. Binoy Roy organized Bengal cultural squad to sensitize about the impact of famine on the people and for relief work to collect money for the victims. This squad travelled throughout the country, presented performance '*Bhookha Hai Bengal*'. Usha Dutta was part of the squad. The Central squad visited Punjab in Nov. 1943 to collect aid for the famine stricken Bengal. This was followed by the second squad which visited Bombay Gujarat Maharashtra in April 1944 and raised considerable amount of fund for relief work. The most popular item of performance common to both trips were "*Mai Bhookha Hoon*"— a play by Binoy Roy and Usha Dutta's *Hunger dance* which created wave of sympathy for Bengal in those areas.⁴⁹ Other cultural groups were also formed. The efforts of the youth cultural institute of Calcutta in 1940-42, setting up of people's theatre at Bangalore by Anil O'Silva in 1941, who also assisted in formation of people's theatre in Bombay in 1942. These various progressive cultural groups and theater groups functioned successfully in disseminating messages. Hence, need was felt to organize them at National level. P.C. Joshi, the then secretary of the CPI, played an important role and Sajjad Zahir also contributed in the formation of Indian people's theatre Association in 1943.

From 1942-46, the influence of communist grew in the certain areas of national struggle and for theatre movement (IPTA) too, this was the period of growth. As a cultural wings of the CPI, IPTA succeeded in the task of promoting radical nationalist consciousness. The party secretary P.C. Joshi, the biggest patron of IPTA, helped in pioneering imaginative ways of utilizing folk forms for promoting consciousness. It was able to attract veritable galaxy of talent like Balraj Sahni, Khwaja Ahmad Abbas, Kaifi Azmi and others. Various innovative forms and subjects were used by the organization to reach out to the people. Through the idiom of street plays based on issues and stories directly concerned with the people such as hunger, famine, poetry, communal violence, feudal and colonial exploitation feature constantly in plays to create impact on the society which was deeply divided by class, caste and religion.⁵⁰

IPTA's central Troup produced dance drama — *Bharat Ki Atma* (Spirit of India and *Amar Bharat* (India Immortal) made historic contribution. '*Spirit of India*' was a patriotic pageant than a mere balled. It had a *Katha* like

commentary, composed by Prem Dhawan and sung by Binoy Roy. It depicted misery of the people under imperialism, feudalism and capitalism. The play ended with a note of hope of arousing unity among the people. 'Immortal India', another balled, narrated the colonial exploitation and suggested possible ways to release from it. Its underlying anti-imperialist message also pleased National leaders like Nehru. *Jabanbandi* — a one act play on famine and *Nabana* (New Harvest) were the important dramas on theme of Bengal Famine produced by the central unit of IPTA. *Nabana* is a folk cultural festival of Bengal to celebrate the harvest. This Bengali drama directed by Sombhu Mitra, portrayed the evils of the Bengal famine of 1943 and the alleged indifference of British rulers, and richer strata of the Indian society towards the plight of millions dying from the famine. The play *Nabana* created realism through visuals, and linguistic details of peasant life which was familiar to the rural audience and created intense impact. In 1944, the *Nabana* team was formed to disseminate the message with different forms of theatre, specific to or those which suited the various class of audience. Jyotirmoi Moitras' *Navjeevaner Gan* (dance drama) with traditional folk form, Dr. Andhra's *Burrakatha*, *Harikatha*, folkdance of North India, folk songs in Marathi, Magai Ojhas' Assamese folk instrumental music also found place in the movement. Shadow plays and extempore plays were also experimented during this period.⁵¹

Moreover, the important rallying point for the development of theatre movement was provided by the convening of conferences of different mass organization of the Communists. During the time of the 1st conference of the CPI, cultural activities formed a significant part but at this stage, there was no policy on cultural activity at the party level. The performance space, venue and occasion was provided by the conferences of Kisan Sabha (in different regions) AFWAA, IPTA with large and varied audience which provided impetus to the theatre movement. Two AFWAA conferences were held in Calcutta in 1944-45. At these conferences, Calcutta IPTA preformed plays like *Jabnanbandi* and *Mai Bhookha Hoon*. Kishan Sabha conferences at Bihta in Bihar (1942), Bazwada in Andhra (1944), Natrakona in 1945 were the occasion for cultural performances.⁵²

IPTA began to set up its local branch from 1944 in Calcutta, Mumbai and Assam. The popular IPTA items were performed by local artists who often created their own version of popular IPTA item. Local branches of Assam staged plays on Bengal Famine. In Hoogly, Dayal Kumar used *Panchali* form and Dulal Roy adopted *Kirtan* to disseminate messages to local audience. Bombay Squad's talented artists Annabhau Sathe and Gavankar, gave new life to *Tamasha* and *Powada* forms to carry it among Bombay workers.⁵³ IPTA gave new direction to the Indian theatre and took upon itself the challenge to bring theatre to the people with the objective of building awareness about social responsibility and national integration. With its nationalist and socialist flavour it made theatre a broad based national concern.

Hence, Indian Theatre and its varied forms and genres which are the part of larger plural whole, manifested all kinds of commonalities, interrelationships, reflected essential cultural identity, disclosed the underlying units and connectedness across chronological regional linguistic boundaries. Its remarkable plurality and diversity defended Indian identity and Indianness.

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Heritage Tourism sites in Birbhum District of West Bengal : Its Present Condition and Protentialities



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Abstract

To tour is to venture. Tourism is an activity done by an individual or a group of individuals, which leads to a motion from a place to another. From a country to another for performing a specific task, or it is a visit to a place or several places in the purpose of entertaining which leads to an awareness of other civilizations and cultures, also increasing the knowledge of countries, environmental, political, cultural or religious cultures, and history. Thus, Tourism geography covers a wide range of interests including the environmental impact of tourism, the geography of tourism, leisure economies, management concerns and locations of tourist spots. The overall purpose is to gain an appreciation of the past. 'Heritage' and 'Culture' have become interchangeable and elastic terms. In the context of the arts for example, the use of the term culture relates to how a society's history, beliefs, values, traditions and icons are manifested in an artistic format. Heritage tourism helps make historic preservation economically viable by using historic structures and landscapes to attract and serve travelers. Heritage tourism focuses on certain historical facts, as opposed to economically developing the site and surrounding area. Visiting heritage places can be part of a range of activities undertaken by tourists or it can be the sole reason for travel for people with a high level of interest in natural and cultural heritage.

Key words : economically, entertaining, environmental, civilizations,

Introduction :

The land of the "red soil" is also called "the land of the brave." or Virbhumi.¹ The land of red soil", i.e. Birbhum is noted for its topography and its cultural heritage which is unique and is some what different from that of the other districts in West Bengal. Birbhum district is an administrative unit in the Indian state of West Bengal. It is the northernmost district of Burdwan division-one of the three administrative divisions of West Bengal. The district headquarters is located at Suri. The name Birbhum comes probably from the term Land (Bhumi) of the Brave (Bir).² The capital of the Bir kings was Rajnagar Or Nagar.³ According to the works of Gourihar Mitra that the district bears the name of Bir kings, who ruled in the area.⁴ But, another theory says, the word "Bir" in Santali language which means forests,⁵ and therefore, Birbhum could also mean a land of forests.⁶ History of Birbhum District goes back a long way, almost as far back as the 5th century B.C. At the dawn of history, a part of the district (as it now exists) appears to have been included in the tract of the country known as "Rarh", and the part was included in the tract called "Vajjabhumi."

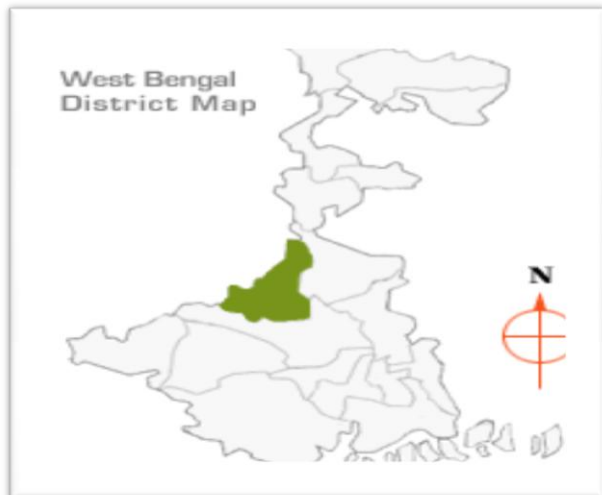
Rarh was part of the territory ruled over by the Mauryan Emperors,⁷ and was subsequently included in the empire of the imperial Guptas, Shasankas, last sovereign king of Bengal and Harshavardhana. In the middle of 12th Century A.D. after dismemberment of Harsha's Empire, the whole area included under the Pala kingdom and formed a part of it until when the overlordship passes to the Sena kings. In the 13th Century A.D. the district passed under the rule of the Muhammedans, and according to some authorities, Lakhanor (or Lakhnour), an important frontier post of Musalman territory, and lay within its limits.⁸ It is true, the whole area of the study belonged to Magadha Kingdom during 14th & 15th century.⁹

2. Study Area

Birbhum is the northernmost District of Burdwan division. It is Located between 23° 32' 30" and 24° 35' 0" north latitude and 88° 1' 40" and 87° 5' 25" east longitude Birbhum and about 4,545 square kilometres (1,755 sq mi) in area. The District is sharing border with Dumka District to

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the North, the jungles of the Santal Parganas on the west, 11 Pakur District to the North, Bardhaman District to the South, Murshidabad District to the East, from which it is separated by the Ajay river. River Ajay forms the southern base whereas the apex of the triangle points to the north. 12 The river forms the boundary between the districts of Birbhum and Bardhaman. 13



3. Objective of Area

The main objectives of the study are-

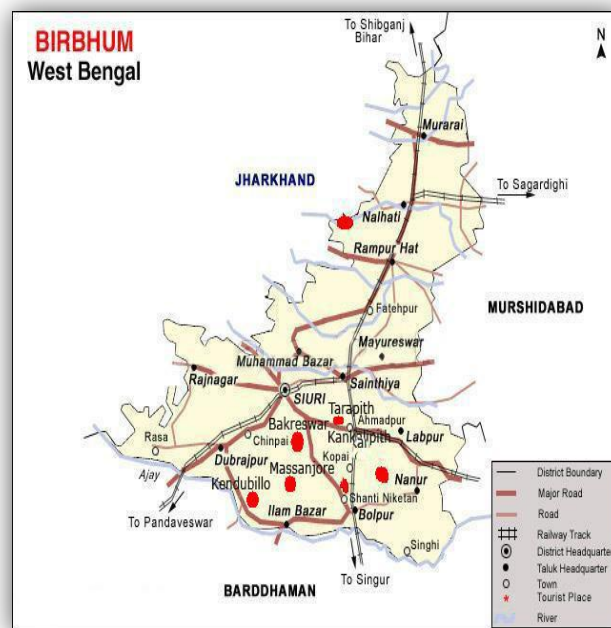
- To highlight the legendary history of Birbhum District
- To highlight places of tourists interests.
- To find out the problems of tourism development .
- To give the suggestions for the tourism development.
- To consider anticipated future growth, aspirations and opportunities in the surrounding landscape.
- To support research in tourism environment related areas.

4.Data Base and Methodology:

The study is based on field observation and secondary data. The secondary data have been collected from various Govt. Departments Website, District Library, Vivekananda Library, Internet, Various Research Society of Bibhum, Gazetteers of the Birbhum, books and Journals issued from Bibhum District.

The study has following phases-

- Information collection from secondary sources,
- Collection of primary information through field work
- Analysis and discussion on heritage tourism potentiality.



8.Suri Sadar Subdivision: Suri Sadar subdivision is a subdivision of the Birbhum district in the state of West Bengal. Which consists of three municipalities, Suri, Dubrajpur, Sainthia, and seven community development Blocks.

8.1 Suri Block - I: A wonderful location to visit, Suri is also known as Siuri, a place for those who want to relish the charm of rich cultural heritage and beauty of Birbhum. This place is famous as a hidden jewel of West Bengal. 14 It boasts of a glorious past in the by gone era, the rich culture heritage and ancient monuments promising the facts. The name of Suri comes from the word 'Shuri', the ancient caste of the area.

8.2 Suri Block - II This block consists of rural areas with six gram panchayats, -Abinashpur, Domdama, Koma, Banshanka, Kendua and Purandarpur. Headquarters of this block is in Purandarpur.

8.3.Sainthia : This block consists of one census town, Ahammedpur and rural areas with 12 gram panchayats. The headquarter of the area is located at Sainthia. Visit to interest: Temple of Nandikeswari: The best tourist place is Nandikeswari. This temple was constructed in 1903. 15 It is 179 km from Howrah. A piece of marble, positioned in between a pipul and banyan tree, is worshipped by the followers. There are also deities of other gods and goddesses. The name of deity probably comes from the name of Bhairav. 16

8.4.Rajnagar: Rajnagar was founded by Bir Singh, a great Hindu Raja in ancient times on whose name the district Birbhum was formed. Rajnagar or Nagar most interesting place and also known as an ancient capital in the District, is situated within pargana Haripur. It is located at a distance of 15 miles from west of Suri. 17 Prior to the arrival of the Muhammadans, Nagar was the capital of the Hindu princes of Birbhum. 18

As per legend, Rajnagar was founded by Bir Singh in ancient times. In 1206, Rajnagar was occupied by Muhammad Shiran, a general of Muhammad Bakhtiyar, and annexed by Ali Mardan, probably in 1211. However, Pathans do not seem to have enjoyed undisputed control over the entire district or area.

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In the middle of the 16th century the entire district was brought under the administration of the Mughals through numerous wars waged on this 'Gateway of Bengal'. The later Muslim Zamindars of Rajnagar, known as "Nagar Raj", were feudatories of the Mughals.¹⁹

Bakreshwar:

Village Bakreshwar in Suri Sub-division is situated 59 km from Shantiniketan 18 kms South West of Suri and 6 miles north-west of Dubrajpur railway station on the Andal Sainthia branch of the Eastern Railway. ²⁰ The word Bakreshwar comes from the name of Lord Shiva worshipped in the locality.²¹ Bakra means bent or curved. Ishwar means God.²² Mythologically it is said that in Satya Yuga during the marriage ceremony of Lakshmi and Narayan, Astabakra Muni²³ (then known as Subrata Muni) was insulted by Indra. The muni was so enraged that he developed 8 cripples in his body Ashtabakra Muni was blessed by Lord Shiva here after many years of Tapashya (meditation). ²⁴

Bakreshwar is also a place of geological interest with many hot springs. There are ten hot springs here. They are:

- Paphara Ganga.
- Baitarini Ganga.
- Khar kunda: The water in this spring is of 66 degrees Celsius.
- Bhairav kunda: The water in this spring is of 65 degrees Celsius.
- Agni kunda: Agni means fire. The water in this spring is at 80 degrees Celsius.
- Dudh kunda: Dudh means milk. The water of this spring attains a dull white hue during early morning probably due to ozone concentration. The water in this spring is at 66 degrees Celsius.
- Surya kunda: Surya means sun. The water in this spring is of 61 degrees Celsius.
- Shwet Ganga, Brahma kunda & .Amrita kunda.

8.5. Khoyrasole: Khoyrasole Block consists of rural areas with ten gram panchayats. Headquarters of this block is in Khayrashol. There is no located any heritage places but most of the area of the block is rural.

8.6. Dubrajpur: Dubrajpur was an ancient town, situated in the south of Shah Alampur Pargana.²⁵ It is a little settlement and have a big Shiva temple in the Pahareswar hill area. There are numerous huge rocks in the Numbers of granitic rocks are found in the same area. There is a Goddess of Kali temple built by Gopinath Hadi in 1296, Bengali era.²⁶ The granite is gray and composed of glassy quartz pink, gray feldspar and black mica. Two significant rocks are recognized as Mama & Bhagne (Uncle & Nephew).

The beauty of the place is very much pleasing. Travellers from different places come to visit there everyday.

Hetampur: The settlement of Hetampur is situated near Dubrajpur and 14 miles to the south-west of Suri. ²⁷ The founder of Hetampur is Hatem Khan. ²⁸ It was formerly within the Zamindari of the Raja Bahadur of Hetampur. ²⁹ It is well-known for the past Historical heritage and famous for Rajbari. Hetampur has a number of good tanks, ³⁰ one of those Govindasayar which surrounded by human settlement and on the northern side of the sayar there is a heritage Degree College named Krishna Chandra College, established on 27th June in 1897. ³¹ Padma Sundari, queen of Ramranjan is established the College by the name of her father in law. The Ranjan Palace of Hetampur,

made in the style of Hazarduari of Murshidabad is one of the chief tourist spots here, is a beautiful specimen of art and architecture. ³²

8.7. Md. Bazar: A village in the police station of the same name, is situated 7 miles to the north of Suri, headquarter of Birbhum District. ³³ Mahammad Bazar block consists of rural areas with 12 gram panchayats. Headquarters of this block is in Patalnagar.

Visit to interest: There is located a famous Peer Mazaar, named Makdum Saheb at Makhdumnagar near Md. Bazar and 18 Km. from Suri town. ³⁴

9. Bolpur-Sub Division: It consists of one municipality and four community development blocs, Bolpur–Sriniketan, Ilambazar, Labhpur and Nanoor. The four blocks contain 40 Gram Panchayats. The subdivision has its headquarters at Bolpur.

9.1. Bolpur–Sriniketan block: This block consists of rural areas with nine gram panchayats and the Headquarters of this blocks is Sriniketan. As its history it was a small village in 1851-52 in pargana Shoopoor. ³⁵

Santiniketan: It is situated near Bolpur, in the Birbhum District of West Bengal, Santiniketan is a small town famous world-wide, as it was the hometown of the Nobel Laureate Rabindranath Tagore, a Bengali polymath. ³⁶

Sriniketan: Merely 3 km from Santiniketan, the university town in West Bengal, is Sriniketan, a rural reconstruction center that was established in 1922. Apart from this, major attractions in Sriniketan include Kala Bhavana, Rabindra Bhavana, Uttarayan Gardens and Deer Park.

Birbhum offers explorers and those in quest of excitement and thrill an excellent opportunity to indulge in adventure escapade. Located near Shantiniketan, in Bolpur subdivision of Birbhum District, Ballabhpur Wildlife Sanctuary was established in 1977.

Kankalitala: It is situated 7 KM. from Bolpur in the village, Bengutia, in the station Prantik.³⁷ Devi Kali in the appearance of Devi Kankali is admired in this temple. ³⁸ This temple is believed to be an extremely holy place by the Hindus. A festivity is also held yearly throughout the April.

It is one of the fifty two pithas or sacred where a part of the dismembered body of Sati fell. In this case the waist (Kankal), hence the name. It is one of the fifty two pithas or sacred where a part of the dismembered body of Sati fell. In this case the waist (Kankal), hence the name.

9.2. Ilambazar : This Block is situated 39 KM. south-east of Suri, 16 mile from Dubrajpur³⁹ and 20 KM. south west of Bolpur on the northern bank of the river Ajay which forms the boundary between Birbhum and Burdwan. ⁴⁰

Headquarters of this block is in Ilambazar. A considerable place of trade and the headquarters of a police circle, situated in the southern portion of the ancient Shah Alampur Pargana. ⁴¹ The English assumed the direct administration of the district in 1786 and the British East India Company had a factory at Ilambazar. At that time the French East India Company also made a foray in the Ilambazar area. ⁴²

Joydev-Kenduli: Jaoydev is an old village and gram panchayat in Ilambazar community development block in Bolpur subdivision of Birbhum District of Bengal. It is situated on the bank of Ajoy river⁴³ and 24 mile from Suri and 12 mile from Dubrajpur station. ⁴⁴ Local people are known by the name Kenduli. ⁴⁵

It is renowned as the birth place of great Sanskrit poet Joydev who flourished in 12th Century and composed the well known Geet-Govinda, a Sanskrit Lyrical poem.⁴⁶ The Radhabinode temple has exquisite terracotta carvings⁴⁷ some depicting Ramayana scenes on the

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wall of the temple.⁴⁸ The temple was built by the queen of Burdwan, named Nairani Devi in 1605 A.D. ⁴⁹ Annual-Mela is held in the village Kenduli in the last day of Bengali month Pous and first 2 days of Magh⁵⁰ and is attended by thousands of pilgrims including Bauls. The fair is at least 50 years old and serves as a great congregation for Bauls of Bengal.

9.3. Nanoor: 47 Kms. from Suri and 29 Kms from Ahmadpur by road. Headquarters of this block is in Chandidas Nanoor. Famous for birth place of Chandidas, a famous lyric poet of 14th century. ⁵¹ Nanoor is a town with a police station in Bolpur subdivision. It is developing as a craft centre with NGO support. Visit to interest: There is a temple dedicated to Devi Basuli at Nanoor.⁵² The Navaratna temple at Brahman dihi, and the Chand Roy temple and four Shiva temples at Uchkaran are amongst the temples under the protection of the state archaeological department.

9.4 Labpur: Labpur is a little gateway near Bolpur-shantiniketan in Birbhum district. The entire place is its virgin natural beauty. Labpur village is covered in greenery, but is quite developed.

Visit to interest: The beautiful temple of Fullara is just 50 km from Bolpur linked with Nanur/ Kirnahar and adjacent to the labpur station, where myths and legends abound. ⁵³ The temple is almost a hundred years old and believed to be one of the 51 piths of Goddess, where Sati's dead-body fell. The myth is that, the lip of Sati cut down at Fullara. The temple is surrounded by dense foliage, giving the place a mysterious look.⁵⁴ A huge pond nearby enhances the beauty of the destination.

Ahmedpur: Ahmedpur is a town in the Suri Sadar subdivision of Birbhum District. There is railway Station at Ahmedpur on the Bardhaman-Sainthia section of Sahibganj Loop. Ahmedpur is a village panchayat under Sainthia panchayat of Birbhum Zilla Parishad. The town is well known in the area for its sugar mill, rice mills, some of which manufacture bran oil⁵⁵ and as one end of the vintage narrow gauge railway. It hosts a growing local business centre, being well connected with Kolkata and other cities of West Bengal via railway.

10. Rampurhat subdivision: Rampurhat is a subdivision of Birbhum District of West Bengal. It consists of two Municipality, Rampurhat and Nalhati and eight community development blocks.

10.1. Rampurhat-I: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Rampurhat. Charles Hamton, contractor of British East-India Company came to live at Rampurhat on the eve of the 1st World War and renovated the area. ⁵⁶

10.2. Rampurhat-II: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Rampurhat.

Tarapith: Tarapith a holy religious place, is situated in a village Tarapur under Rampurhat Police Station of Rampurhat Sub-Division in the district of Birbhum. The common local opinion is that it is really a Pith and Basistha selected this place for worshipping Sati because it was a pith. It is visited everyday by a good number of devotees. Here pilgrims constitute a vast chunk of domestic tourists. The Tantric Hindu temple is dedicated to goddess Tara, a fear some Tantric aspect of the Hindu Divine Mother the chief temples of the Goddess-oriented Shakta sect of Hinduism. ⁵⁷

Zafar Ali Khan is one of the Peer Mazar, located at Margram, under Margram P.S. The common local opinion is that Zafar Ali Khan was one of the relative of Mughal

Emperor Aurangzeb and he came there to punish the outraged local ruler, manpat Singh. ⁵⁸

10.3. Nalhati-I: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Nalhati, which is situated to the north east of the Rampurhat subdivision. ⁵⁸ It is situated near Nalhati Railway Station on the Howrah Sahebganj loop line of Eastern Railways.⁵⁹ It is famous for Nalateswari Temple.⁶⁰ It is so called because Nala or throat of Sati fell here as known by tradition.⁶¹ Another report says that it was a Lalat or forehead that fell here. ⁶² It is regarded as a Pithas i.e. one of the 52 places where parts of Sati's body fell. ⁶³ It is located on a small & beautiful hill.

10.4. Nalhati-II: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Lohapur. Visit to interest: There is situated a phalus or symbolic representation of Lord Shiva beneath of a big tree at Baneswar village 1 mile from famous Jeen Dighi near Lohapur area. ⁶⁴ Bana Raja of Kirat was established the holy place at the same time. ⁶⁵ Bhadrapur is a Memorial village of Maharaja Nanda Kumar, ⁶⁶ within Bhadrapur Panchayat, there is a 'Guhyakalika' temple established by the king himself⁶⁷ and also located a peer mazaar under a Banyan tree. ⁶⁸ Southern-side of the village there is situated the big Rajpalace of Maharaja Nanda Kumar and beside the palace two big tanks named 'Ranisayar' and 'Gurusayar' remained abandoned. ⁶⁹

10.5. Mayureswar-I: This block consists of rural areas with nine gram panchayats, viz. Baraturigram, Dakshingram, Mollarpur-I, Bajitpur, Jhikodda, Mollarpur-II, Dabuk, Kanachi and Talowan. Headquarters of this block is in Mollarpur. Once Mollarpur was a capital of Mollo Kingdom. Molleswar Shiva temple was built by the Mollo King in 1124. ⁷⁰

Visit to interest: The temple of Dabukeshwar at Dabuk is a holy village under Mayureswar-I block of Birbhum district. This Dabukeshwar temple is the highest temple built keeping in mind its huge architecture and space in Birbhum district.⁷¹ It was constructed in 1287 Bengali era.⁷²

10.6. Mayureswar-II: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Kotasur.

Visit to interest: The village also has the temple of Goddess "Palashbasini" and of Goddess "kali of Dwarbasini", "Kundalatala", once frequented by Nityananda, still exists in this village. There is a Shiva temple named Kaleswar, is situated under Mayureswar Police Station, Birbhum on the Road from Sainthia to Kandi, Murshidabad turning right from Kaleswar more 3 km distance to the Temple.

10.7. Murarai-I: This block consists of rural areas with seven gram panchayats. Headquarters of this block is in Murarai.

Visit to interest: Two muslim saints graves are located there in the locality, one is Kopa-Pirasthan and other is Nyangta Peer. The first is situated at Kopa village, two KM. from Chatra Station in Murarai P.S. and another is at Rudranagar 4 KM. from Chatra Station. ⁷³

10.8. Murarai-II: This block consists of rural areas with nine gram panchayats. Headquarters of this block is in Paikar. Visit to interest: Mahabub Shahar Mazaar is located at Edrakpur village 5 KM. from Paikar under Murarai Block-II. Another Mazaar named Kalapeer situated at Sumsumerpur village in the same Block.

11. Causes of Backwardness in Tourism.

The main causes of backwardness in tourism of the district are-

- The tourist spots are connected with pocket routes

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its cultural heritage and unique topography which is quite different from the other districts in West Bengal.

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- The history of Hetampur and Rajnagar are unwritten registry. So, it is not highlighted to the national and international tourists.
 - Most of the Tourist places are not protected by the Govt., above all, it is true that many places are not interested to local visitors due to anti-social activities.
 - Some Heritage places are not highlighted to outside due to the fact that there is lack of communication of local people to outside.
- 12. Government Efforts:**
- Government has taken initiative to the development of some of the Tourist spots in Birbhum Districts like other places of West Bengal. These are-
- The Government of West Bengal is desirous of promoting Birbhum as an ideal tourist. It aims at developing specialized tourism products such as: Pilgrimage tourism i.e. Tarapeeth, Nalhati and other important places.
 - Some of the locations already chosen for the disbursement of funds are Nalhataswari of Nalhati, Nandekeswari of Sainthia, Gopal Nagar of Mohammed Bazar and Bakreswar of Suri.
 - These locations have been hindered by communication problems and the lack of toilets, drinking water, and other basic services, as far as attracting tourists was concerned.
- 13. Suggestions for the Tourism Development:**
- The suggestions for the heritage tourism development in this region are-
- Tourism has been declared as an Industry by the State in 1996. The Government in an effort to promote the same has formulated a number of schemes to encourage Tourism.
 - Transport and communication should be developed.
 - The legendary history and the heritage tourist spots should be highlighted to other districts and states.
 - Both the State and Central government should take proper steps for the development of tourism.
 - The local people should also come forward for the highlight of tourist's places and their development.
 - In recent years, the growth of tourism has slowed, due to lack of communication.
- 14. Findings of the Study**
- The major findings of the study are-
- The Birbhum district bears a legendary past history.
 - Most of the tourists places of the district are located in pocket routes.
 - There is huge potentiality of heritage tourism development.
 - The tourist spots are not so highlighted to the outside tourists.
 - The recent excavation sites are very important to researchers, students and tourists.
- 15. Conclusion:** Birbhum is very well connected to the other districts in West Bengal. The Panagarh-Moregram Expressway linking Grand Trunk Road (NH 2) Apart from this, there are several other entry points for the place as well. Regular bus services from Kolkata, Siliguri and other cities connect Birbhum to all the districts in West Bengal. Tourism in Birbhum district lies in visiting the various ancient temples located here. Of particular interest here are the various pithas that are found here. Pithas are said to be the sites where one of the many dismembered body parts of Sati fell. Apart from these a number of Shiva temples are also found strewn in the district. Birbhum is distinguished for
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Emotional Intelligence Enhances Self Concept and Academic Achievement of Students

Abstract

The world used to talk relentlessly about IQ till the time an entirely new phenomenon about human personality 'Emotional Intelligence' came to light and which has engaged attention of all Psychologists, Educationists and Sociologists alike. The present study is a modest attempt on the part of investigators to understand Emotional Intelligence and to investigate its impact on the self-concept and academic achievement of students. The study is based on the analysis of pre-test and post-test scores received after introducing self-designed Emotional Intelligence Rating Scale; Self-concept Test developed by Sherry, Verma and Goswami (1971) to suit the need of the study and self-designed modified Achievement Test. It was found that Emotional Intelligence enhances the self-concept and academic achievement of students.

Keyword:

1. **Emotional Intelligence** : It is the ability to overcome depression, frustration and distress; the ability to control impulse; to regulate one's moods; to emphasize and to hope. It is the competence to organize one's core emotions.
2. **Self-Concept**: Self-concept is a set of attitudes to the self i.e. (a) self-image; (b) cognitions and feelings about various facets of this image; and (c) likely responses to self-conceptualizations which include physical ability and appearance, academic competence, emotional stability and adequacy of social relationships, personal satisfaction, worth and effectiveness. It involves feelings of self-acceptance; self-liking; and self-respect.
3. **Academic Achievement**: Academic Achievement is simply the academic performance of an individual measured through grades obtained in oral and/or written examination.

Introduction

In today's world, genetic make-up is the most researched area. Scientists are probing the human brain in an attempt to discover the biological origins of human temperament. Bottled up in men are great emotional forces which have got to be given an outlet in a way which is positive and constructive, and which warms the heart and excites the imagination. (Susan Cain, 2012). Great developmental psychologists of twentieth century, Jerome Kagan and Nancy Smidman (2004) studied the emotional and cognitive development of children and found "low-reactive" and "high-reactive" infants. They predicted that the infants in the "high-reactive" group were most likely to grow into quiet teenagers. Also, psychologists frequently discuss the difference between "temperament" and "personality." Susan Cain (2012) effectively clarifies the concept saying, "Temperament refers to inborn, biologically based behavioral and emotional patterns that are observable in infancy and early childhood; personality is the complex brew that emerges after cultural influence and personal experience are thrown into the mix." Some psychologist's hold that temperament is the foundation, and personality is the building. Kagan's (1998) research reveals a link between infant temperaments and adolescent personality styles. While observing children's behaviours in strange situations, Kagan's research team measured their heart rates, blood pressure, finger temperature and other properties of the nervous system which stand controlled by a significant organ inside the brain called the Amygdala located deep in the limbic system. This is sometimes called



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the “emotional brain” Susan Cain (2012). The amygdala works like the brain’s emotional switchboard, receiving information from the senses and then instructing the rest of the brain and the nervous system how to respond. A child, having high reactive amygdala, would have higher heart rate, widely dilated eyes, lighter vocal chords, more cortisol (a stress harm one in his saliva-the more jangled his likely to feel when he confronts something now and stimulating (Susan Cain, 2012). The high reactive children tend to think and feel deeply about what they have notice, and the bring an extra degree of nuance to everyday experiences. Hence, the children with high reactive amygdala obviously tend to learn more than the children who have low-reactive amygdala, thereby letting us to believe that emotional literacy enhances academic performance of students.

Amygdala is an almond-shaped cluster of interconnected structures perched above the brainstem, near the bottom of the limbic ring (Goleman, 1996). There are two amygdala, one on each side of the brain, nestled towards the side of the head. In the evolutionary process, cortex and the neo-cortex too developed. These limbic structures organize and command most of the brain’s learning and remembering. Goleman (1996) holds that amygdala is the specialist for emotional matters and all passions depend on it. The ideas of the limbic system as the brain’s emotional center was introduced by neurologist Paul MacLean (1990). Joseph LeDoux (1992) discovered the key role of the amygdala in the emotional brain. He further refined the limbic system concept, showing that some of its central structures like the hippocampus are less directly involved in emotions, while circuits linking other parts of the brain, particularly the prefrontal lobes, to the amygdala are more central. The model of Emotional Intelligence was first proposed by Peter Salovey and John D. Mayer (1990).

Current research reveals that each emotion may call on distinct brain areas and that there is not a neatly defined single “emotional brain” but rather several systems of circuits that disperse the regulation of a given emotion to farflung, but co-ordinated parts of the brain. But, LeDoux’s (1993) research explains how the amygdala can take control over what we do even as the thinking brain, the neocortex, is still coming to a decision. Thus, the workings of the amygdala and its interplay with the neocortex are at the heart of emotional intelligence. Amygdala plays a pivotal role when impulsive feeling overrides the rational mind. The amygdala triggers releases of dopamine that activate attention and signals sensory areas for vision and attention; it reshuffles cortical memory systems so that knowledge and memories relevant to a particular emotional urgency come to the reactive position. The amygdala is also a storehouse of emotional memories and retains emotional flavor attached to such memories (Larry Cahill, 1994). Amygdala plays a vital role in childhood and emotional memosies are stored in the amygdala as rough, wordless blueprints for emotional life. Much of the adulthood emotional outbursts and chaotic

feelings can be studied with the help and analysis of childhood emotional memories stored in the amygdala. However, apart from the genetic disposition of high-reactivity, there are environmental, societal and economic factors that can enhance or hamper emotional competence. Many children have dissonant aspects to their personalities which can change profoundly over time which shows that there are many routes to emotional competence including the biological route. If attentive teachers teach children in safe environments, even the low-reactive children can grow up to be high achievers and can learn to use their appetite for risk and assertiveness wisely. In fact, if teachers can read students’ cues and respect their individuality; are warm and firm in placing demand on children without being harsh or hostile; promote curiosity, the students are very likely to enhance their performance on all fronts. Also, another groundbreaking theory called “the Orchid hypothesis” by David Dobbs (2009) holds that many children are like dandelions, able to thrive in just about any environment whereas high-reactive types are more like orchids and wilt easily, but under the right conditions can grow strong and efficient. The causes of emotional malaise have to be looked into before devising any emotional literacy programme.

Emotional illiteracy had/has proved costly for all societies, cultures and communities. Even the most advanced nations have been suffering a lot. Daniel Goleman (1996) holds, “In 1990, compared to the previous two decades, the United States saw the highest juvenile arrest rate for violent crimes ever; teen arrests for forcible rape had doubled; teen murder rates quadrupled, mostly due to an increase in shooting.” The disturbing statistics point out that mental illness is a common cause of disability among adolescents because there is no dearth of such cases taking place in other countries like India and China. Unless things change, the children of tomorrow are likely to be traumatized and go astray. And the instrument of change is-----Emotional Competence -----which can work as a fine intervention. Goleman (1996) points out the following common causes of emotional malaise:

- i) Withdrawal or social problems: preferring to be alone; being secretive; sulking a lot; locking energy; feeling unhappy; being overly dependent.
- ii) Anxious and depressed: being lonely; having many fears and worries; needing to be perfect; feeling unloved; feeling nervous or sad and depressed.
- iii) Attention or thinking problems: unable to pay attention or sit still; day dreaming; acting without thinking; being too nervous to concentrate; doing poorly on schoolwork; unable to get mind off thoughts.
- iv) Delinquent or aggressive; hanging around kids who get in trouble; lying and cheating; arguing a lot; being mean to other people; demanding attention; destroying other people’s things; disobeying at home and at school; being stubborn and moody; talking too much; teasing a lot; having a hot temper.

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Although there appears to be no settled definition for the term 'Emotion', yet the Oxford English Dictionary defines emotion as "any agitation or disturbance of mind; feeling; passion; any vehement or excited mental state" Also, the Oxford Advanced Learner's dictionary of Current English defines emotion as "stirring up, excitement, of the mind or the feelings; excited state of mind or feelings". However, researchers continue to argue over what precisely emotion stands for. Some of the commonly recognized primary emotions, according to Goleman (1996), are thus stated:

- i) Anger: fury, outrage, resentment, wrath, exasperation, indignation, acrimony, animosity, annoyance, irritability, hostility, and perhaps, at the extreme, pathological hatred and violence.
- ii) Sadness: grief, sorrow, cheerlessness, gloom, melancholy, self pity, loneliness, dejection, despair, and when pathological, severe depression.
- iii) Fear: anxiety, apprehension, nervousness, concern, consternation, misgiving, wariness, qualm, edginess, dread, fright, terror, as a psychopathology, phobia and panic.
- iv) Enjoyment: happiness, joy, relief, contentment, bliss, delight, amusement, pride, sensual pleasure, thrill, rapture, gratification, satisfaction, euphoria, whimsy, ecstasy, and at the far edge, mania.
- v) Love: acceptance, friendliness, trust, kindness, affinity, devotion, adoration, infatuation, agape.
- vi) Surprise: shock, astonishment, amazement, wonder.
- vii) Disgust: guilt, embarrassment, chagrin, remorse, humiliation, regret, mortification and contrition.

There may be many more expressions of emotional disposition. The debate on how to classify emotions continues. However, for the sake of precision the investigators have followed Paul Ekman (1992) and Goleman (1996) for core emotions. Ekman holds, "specific facial expressions for four of them (fear, anger, sadness, enjoyment) are recognized by people in cultures around the world." The scientific model of the emotional mind offered by Paul Ekman also concurs with Seymour Epstein's (1994) model of "experiential unconscious". The emotional mind is far quicker than the thinking mind. The "first impulse" in an emotional situation is from the heart, not from the head. There is also a second kind of emotional reaction which first arises in our thought before it leads to feeling. This kind of emotional reaction is more deliberate and cognition plays a key role in its arousal. Seymour Epstein (1994) points out, "while the rational mind makes logical connections between causes and effects, the emotional mind is indiscriminate, connecting things that merely have similar striking features." Richard Herrnstein and Charles Murray (1994), while acknowledging the primary importance of IQ, also recognize that a student having high IQ in Math score does not make him a mathematician and there are other characteristics that influence life skills. Goleman (1996) calls these "other characteristics as emotional

intelligence: the ability to overcome depression, frustration and distress; the ability to control impulse; to regulate one's moods; to empathize and to hope. Analysis of available research in the area suggests that emotional intelligence can at times be more powerful than IQ. Goleman (1996) Claims, "And while there are those who argue that IQ cannot be changed much by experience or education, crucial emotional competencies can indeed be learned and improved upon by children ----if we bother to teach them." In fact, higher IQ at school is no guarantee of success and satisfaction in life. Karen Arnold (1992) explains, "I think we have discovered the dutiful----people who know how to achieve in the system. But valedictorians struggle as surely as we all do. To know that a person is valedictorian is to know only that he or she is exceedingly good at achievement as measured by grades. It tells you nothing about how they react to the vicissitudes of life."

The emotional malaise has reached alarming proportions, especially in teens in our country. The brutal rape of a girl in a Delhi bus on December 16, 2012 is a glaring example of juvenile cruelty. The State of Haryana does not lag far behind where several cases of teachers' sexually abusing minor girls in schools have been reported. Even the most advanced nation in the world----- the United States of America----- has witnessed violence, drug-addiction succeeds teenage pregnancies and sexual abuse in schools. The plight of today's children can be analysed from day to day problems they are facing at the level of emotional competencies. An American study (Thomas Achenbach and Catherine Howell, 1989), reported by Goleman (1996), conducted from 1970 to 1980 reveals that children were doing more poorly on social problems, anxiety and depression as well as aggressiveness. It shows a clear deficit in emotional competence. The emotional plight of children in other countries like Netherlands, China, Germany, Australia, France, and Thailand is also indicative of a strange clam before a storm as reported in the comparison across nations in the area of childcare by Urie Bronfenbrenner (1992). Aggressiveness in children is also a global phenomenon which makes them more emotionally vulnerable (Kenneth A. Dodge, 1991). There may be other factors leading to violence and criminality, yet emotional deficiency is at the root of such evils. Gerald R. Patterson (1993) observed, "the anti-social acts of a five-year old may be prototypic of the acts of the delinquent adolescent."

But there is abundance of studies which demonstrate that negative emotions like aggression, violence and depression can be corrected or prevented through well-designed school programmes in the area of emotional intelligence. One such programme designed on anger control was designed and executed at Duke University Goleman, (1996) in which school troublemakers were imparted training in anger control through training sessions for forty minutes twice a week for six to twelve weeks. The performance of the experimental group was found satisfactory as compared to the other group who had

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been equally aggressive but were not given the benefit of anger control training sessions. Maria Kovacs and Leo Bastiaens (1994) have held that depression should not just be treated, but prevented also because mild episodes of depression in a child can augur more serious episodes later in life. Kovacs (1994) further holds that children who have a minor depression are more likely to have it intensify into major depression, because depression interferes with their memory and concentration making it difficult to pay attention in class and retain what is taught. He found a direct correlation between the length of time a child had been depressed and his/her academic achievement. Gregory Carke (1993) observed that teaching children more productive ways of looking at their difficulties lowers their risk of depression. Judith Garber (1993) observes that special after-school classes seemed to have cut the risk of depression in half. Learning sociability and liking classmates is vital to emotional growth. However, ill-designed programmes on emotional growth can do more harm as observed by Goleman (1996), "many schools have begun to offer programmes to prevent sexual abuse, teaching kids, for example, to know the difference between good and bad touching, alerting them to the dangers, and encouraging them to tell an adult if anything untoward happens to them. But a national survey of two thousand children found that this basic training was little better than nothing ___or actually worse than nothing-----in helping children do something to prevent being victimized, whether by a school bully or a potential child molester." Hence, a well designed comprehensive training programme, including related emotional and social competencies could prove more corrective and preventive of emotional malaise. All ingredients of emotional intelligence, viz. self-awareness; identifying, expressing and managing feelings; impulse control and delaying gratification; and handling stress, anxiety, fear and depression; need to be included in such comprehensive programme even if the programme aims to target one particular emotion. These core emotional and social skills can provide remedies for most, if not all, the problems faced by today's students. Such aspects of training in emotional intelligence are almost completely unavailable in Indian schools.

Rationale of the Study

The review of related literature reveals that we are still following traditional classroom learning system in India barring some service done here and there for practical training in Emotional Intelligence. The body of research surveyed by the investigators further reveals that students, appropriately trained to control fear, anger, anxiety and depression, gain a lot on academic front. Also, with comprehensive training programmes in Emotional Intelligence, the incidence of violence, suicidal attempts as well as the menace of ragging could be easily contained. Feeling encouraged from the results of comprehensive practical training in all ingredients of Emotional Intelligence elsewhere, the investigators felt the urge

of applying the same in Indian classroom. Hence the present investigation

Hypothesis of the Study

1. There is significant relationship between Emotional Intelligence and academic achievement of secondary levels students.
2. There is significant relationship between Emotional Intelligence and self-concept of secondary level students.

Objectives of the Study

1. To find out the number and percentage of students falling under different levels of Emotional Intelligence self-concept and academic achievement.
2. To find out the relationship between Emotional Intelligence self concept and academic achievement.

Methodology and Procedure

Survey method was used in the study. In view of the nature and purpose of the study, the researchers perused related literature, examined various tools, and developed an Achievement Test after weighing out difficulty value, item discrimination and reliability of the Test-items. Text books of various school subjects were consulted in the process and assistance was sought from school subject experts and test construction experts. The test contains fifty items with 'correct' and 'not correct' responses in the cognitive domain. Pre and post experiment test scores were documented. Likewise, the self-concept test developed by Sherry, Verma and Goswami (1971) was adopted with certain variations according to the need of the study and the same was translated in English. The draft of self-concept test. Thus prepared was got evaluated for accuracy and purpose from experts in the field. The final draft contained fifty items covering Mental health, temperament, academic status, habits, behavior and emotional status. It was applied before and after the experiment on experimental as well as control groups. To measure the Emotional Intelligence of secondary school students the researchers adopted a suitably modified version of Emotional Intelligence Rating Scale for Special Education Teachers developed by Poornima (2010). In fact, the investigators picked up Rating Scale Pattern of Poornima (2010) and designed fifty items based on self-awareness self-management, social skills and impulse control and handling of destructive emotions like stress anxiety, fear and depression conflict resolution, assertiveness. The items were got evaluated from educational experts in the field of value education. The final draft, after incorporating valuable suggestions from experts, was introduced at pre-test and post-test stages in Experimental group and control group. A comprehensive programme in Emotional Intelligence was devised based on active ingredients of prevention and corrective components of Self-Science curriculum (Soleman, 1996) and value Education programme framed by NCERT. This comprehensive training programme was implemented for experimental group only for three days a week for eight weeks.

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Sample

100 students (Boys and Girls) of 8th class (second semester) from four schools of Sonapat district in Haryana were selected on the basis of random sampling.

50 Students were assigned to the control group and 50 were assigned to the experimental group.

Discussion and Results

The data collected for the study was analyzed and interpreted by computing Mean, Standard Deviation (S.D.), Correlation and 't'-value. The pre-test scores of control Group and Experimental Group on Emotional Intelligence, Self-concept and academic achievement are given in Table 1 below :

Table -1 : Pre-Test Scores of Control Group and Experimental Group on Emotional Intelligence, Self-Concept and Academic Achievement

N=50	Control Group			Experimental Group		
	Low	Medium	High	Low	Medium	High
Emotional Intelligence	12 (24%)	30 (60%)	8 (16%)	11 (22%)	31 (62%)	8 (16%)
Self-Concept	11 (22%)	31 (62%)	8 (16%)	12 (24%)	29 (38%)	9 (18%)
Academic Achievement	11 (22%)	31 (62%)	8 (16%)	12 (24%)	27 (54%)	11 (22%)

Table -1 clearly exhibits that there is no significant difference between the control group and the experimental group, before introducing the comprehensive programmes in Emotional Intelligence to the Experimental Group, on Emotional Intelligence, self-concept and academic achievement levels of the sample. Thereafter, lessons in comprehensive programme were given to 50 students of the Experimental Group for three days a week for eight weeks whereas the control group was taught under traditional method in the prescribed syllabus for all the eight weeks during which the experimental was conducted. Then, the same tests were applied on control group as well as Experimental Group and the data collected is tabulated in Table 2 below.

Table -2 : Pre-Test Scores of Control Group and Experimental Groups on Emotional Intelligence, Self-Concept and Academic Achievement

N=50	Control Group			N=50 Experimental Group		
	Low	Medium	High	Low	Medium	High
Emotional Intelligence	10 (28%)	31 (62%)	11 (22%)	3 (6%)	18 (36%)	29 (58%)
Self-Concept	9 (18%)	30 (60%)	11 (22%)	2 (4%)	19 (38%)	29 (58%)
Academic Achievement	9 (18%)	30 (60%)	11 (22%)	2 (4%)	17 (34%)	31 (62%)

Table 2 reveals that no significant difference was noted between Pre-test and post-test results of the Control Group whereas the difference in scores of Pre-test and Post-test in Experimental Group was found to be significant at 0.01 level. The enhanced Emotional Intelligence of the experimental group, after the experiment, was found to have enhanced the self-concept and academic achievement of students. These results concur with the findings of Gregory Clark (1993), Paul MacLean (1990), Larry Cahill (1994) and Goleman (1996) who have established

through extensive studies that children equipped with high emotional intelligence prove to be more confident about themselves and are high-achievers because they are less affected by depression and other negative distractions. Hence, the hypothesis of the study stand accepted because Emotional Intelligence enhances the academic achievement and self-concept of students. This study implies that 'Goleman's (1996) way of teaching the students in emotional intelligence can reduce the incidence of violence, depression and frustration among younger generation and can help them become better and successful citizens of tomorrow. The study is very useful initiative for teachers to introduce comprehensive programmes in Emotional Intelligence alongside traditional teaching, especially in India, in schools, Colleges and Universities.

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Periodic Research

Empowerment of Scheduled Caste Women through Panchayati Raj Institution

Abstract

Many Sociologists are working in the field of women empowerment. Traditionally rural women are weaker than urban women in the society. Panchayati raj is an institution by which some people exercise the power. The provision of reservation for scheduled cast as well as other cast women in panchayati raj system is a part of the process of women empowerment.

Keyword: Women empowerment, Socio- Religious, Inabilities

Introduction

Empowerment is the process of awareness and capacity building, leading to greater participation, to greater decision-making power and control, and to transformative action (Karl, 1995). Empowerment is the process of challenging existing power relations and of gaining greater control over the sources of power. The goals of women's empowerment are to challenge patriarchal ideology, to transform the structures and institutions that reinforce and perpetrate gender discrimination and social inequality, and to enable poor women to gain access to and control over both material and informational resources. Empowerment is not externally bestowed upon people but instead, the women need to be agents of their own empowerment; outsiders and outside organizations can only help create the conditions favorable to women's empowerment and can support the process that works in these directions.

The roots of empowerment are global. In both the first and the third world, the phenomenon is firmly rooted in opposition to oppression, as anti colonialism and Marxist theory. Aspects of empowerment have been important in third world movements of women for civil rights. The world "empowerment" represents a concept, which has no definite definitions as Julian Rappaport (1984, 2) writes, "the idea is more important than the thing itself. We do not know what empowerment is but like obscenity, we know it when we see it."

Many studies and definition are also important for improvement concept like Lee Staples (1990) also linking process and outcome. He describes empowerment as a spiral or dialectic process. Robert Hess in (1984) discussed that the strength and cohesiveness of the group is a key component in the process of empowerment. These studies show that the power to make decision and to control one's own life is key to empowerment. Empowerment is particularly complex because it is multidimensional and takes place in every walk of life, home, community, organizations and political realm. Components of empowerment are so many at the personal psychological level and the group level.

2. Scheduled Caste

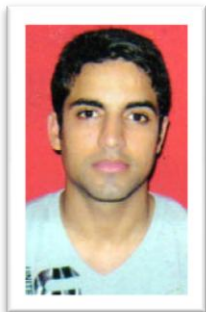
(i) Historical Context-

Traditionally, Indian society has been based on structured caste inequality, of which hierarchy and 'purity-pollution' has been the guiding principle. The society was divided into four Varna's – Brahmin, Kshatriya,



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Vaishya and Shudra, wherein Brahmins have been at the top and Shudras (the untouchables) at the bottom. Each Varna consisted of many casts and each cast was further divided into many sub-castes. There were specific rules and regulations regarding social and religious life. Caste members were not allowed to follow the occupations other than those prescribed by the institutor of caste. The untouchables were known as Atishudras or Avarnas and treated as outcasts. Their social statuses in society were very low, stigmatized and their occupations were menial in nature and so treated as polluting. They had no right to property, land, education and religious rituals like that of upper castes. Thus, they were forced to live in pathetic conditions for centuries. They were subjected to a social, economic and cultural suppression and exploitation. There is, however, great controversy among the scholars regarding the origin of caste and untouchability.

Scheduled castes signify a group of caste, though recognized now constitutionally, but have a legacy in the caste system in India. The origin of caste system dates back to the age of Rig Veda. It is an institution of great complexity having its roots deep in history and even today it governs the lives of few hundred millions Hindus in several important spheres of social life. There is a reference to the word 'Varna' in the Rig Veda. Sociologists like M.N. Srinivasan (1969: 265) have tried to understand the division of society into fivefold hierarchy with Brahmin at the head, followed in order by Kshatriyas, Vaisyas or traders, Sudras or servants and laborers and lastly, the untouchables. The first three groups (castes) are called 'Twice Born' (Dvij) as they alone are entitled to undergo the ceremony of 'upnayana', which contributes its spiritual rebirth. Only the 'twice born' castes are entitled to study the 'Vedas' and the performance of Vedic rituals on certain occasions. Caste in this sense is referred to as Varna and has an all India applications. The idea of caste as the fivefold division of society represents a gross over simplifications of society. The real unit of castes is not one of the five varnas but 'Jati' which is a very small endogamous group practicing a traditional occupation and enjoying a certain amount of cultural ritual and juridical autonomy. The attempt to fit the 'Jatis' or any region in to fivefold hierarchy is very difficult affair. But it is possible everywhere to say who the Brahmins are and who are untouchables, of course there is a great confusion in the middle region. Thus the present scheduled castes historically have been indentified in all regions of India of India in the caste system as untouchables.

Ram Sharan Sharma (1983) has tried to explore the origin of lower social order of Indian society. He appears toughest the information of survival class, which has been reduced to the present status of scheduled castes. He, has clarified the nature of Indian society as alien meaning thereby of different nature. There had been as he observes, and there would remain a double standard of socio-political and economic structures for the ruling class

and the ruled over masses, for for alien scheduled castes. There have been some deliberate efforts and clear-cut indications to keep them separate in wall of life. The voices of the caste subordination were carried to a more destructive height among the Hindus, then among the people of any other religion. There appears to be a firm conviction that the caste system in India is not too much old. The social stigmas have been established by very peculiar, alien force to maintain their superiority. There is no description of any castes, like we have a list of scheduled castes, in any of the Vedas. R.S. Sharma quoting inscriptions speak of a mixed caste called 'maître', may be identified off with maître caste of Vallabhi who appears in the inscriptions of 5th century A.D., although they may have existed earlier. In his epigraphic examinations of some the other contexts he would place the existence of these groups in the 5th century A.D. or later.

V.S. Shastri (1992), in his work on the, has discussed the philosophical basis of the terms sudras who could perform Vedic rituals on the basic of writings of some Russian writers. He argues that the Sudras were not slaves. Sudras were not slaves. Sudras were originally Kshatriyas. This thesis has also been established by Dr. Ambedkar entirely depended upon the translations and such sources material is only such where he could prove his purpose of establishing the origin of sudras from the higher ranks of the society.

(ii) Constitutional Status-

Scheduled caste refer to a particularly section of Indian Hindu society, which is socially, politically and economically deprived since last thousands of years in India. It is basically statutory terms and consists of a large number of deprived castes. The term scheduled casts was first time introduced in the government of India act 1935 to mean such castes, races or tribes which correspond to the cases of persons formally known as "depressed classes".

After independence the term scheduled casts is used in the constitution of India to specify the untouchable. The term scheduled casts is defined in article 366(24) as follows "scheduled casts means such casts, races or tribes or parts of groups with in such caste, races or tribes as are deemed under article 341 to be scheduled casts for the purpose of this constitution".

The term 'scheduled casts' to cannot depressed classes was coined by the Government of India Act 1935. The term was defined as follows: "The 'scheduled casts' means such a castes, races and tribes. Corresponding to the classes of persons formerly known as 'the depressed classes' as His Majesty in council may specify".

The Indian Independence Act of 1947, defined the as "The 'scheduled casts' means such castes, races and tribes or parts or groups within castes, races tribes, parts or group which appear to the Governor General to correspond to the classes of

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persons formerly known as the 'depressed classes' as the Governor General may by order specify".

After Independence, the term "scheduled casts" is used in the constitution of India to specify the untouchable.

The term "scheduled casts" is defined in article 366(24) as follows:

"Scheduled casts means such casts, races or tribes or parts of groups with in such cases, races or tribes as are deemed under article 341 to be scheduled casts for the purpose of this constitution".

The criterion for specifying "scheduled casts" is precise and simple. The stigma of untouchability is the declared for classifying scheduled casts.

Socio- religious disabilities associated with the caste system have been made the basis for classifying scheduled castes. Accordingly, the constitution order (scheduled casts) 1951, the scheduled casts lists (Modifications) order, 1956, were issued by the president in consonance with article 341. In spite of having a specific criterion for classifying scheduled casts –the test of untouchability some ambiguities have been pointed out in the formulations of scheduled caste lists. The need carefully examination of the lists has been greatly felt by the commissioner for scheduled casts and scheduled tribes.

3. Seventy third Amendment acts

The constitution (73rd Amendment) Act, was passed for the purpose of providing constitutional status to Panchayats, by the Parliament of India in December 1992 and come force since April 1993. For the first time a national framework for the panchayat system has been stipulated in the Indian Constitution.

The Act enshrines in the new part ix of the Indian constitution certain basic feature of the panchayat system. "A list of specified subject matters for which the panchayats may be empowered forms the new eleventh schedule of the constitutions. The main provisions of the act are summarized here:

- (i) The Gram Sabha (village Assembly) shall be set up in every state, comprising person registered in the electoral rolls relating to the village lying within the area of village panchayat. It shall exercise such powers and performs such functions as the state legislature legally provides.
- (ii) A three-tier panchayats system shall be constituted in every state it shall comprise panchayats at the village, intermediate and district level: however a state with populations not exceeding twenty lakhs may not have the intermediate level panchayat.
- (iii) Membership seats in the panchayats at all levels shall be filled by direct elections from territorial level panchayat.
- (iv) The state legislative may provide for representative of the chairperson of village panchayat in membership of the intermediate panchayat and of chairperson of intermediate panchayat in membership of district level panchayat.

- (v) The state legislative may provide for inclusion of membership of parliament (MPs) and members of legislature (MLAs/MLCs) in the membership of the intermediate and district level panchayats.
- (vi) In all panchayat directly elected membership seats shall be reserved for (1) scheduled castes (SCs) and scheduled tribes (STs) in proportion to their respective population in total population in a panchayat areas; one-third of these reserved membership shall be for SC and ST women; (ii) women not less than one-third of such seats, including the seats reserved for SC and ST women .
- (vii) Office of chairperson of panchayats at all level shall be reserved for SCs and STs in the proportion to their respective population in a state; not less than one-third of the chairperson office shall be reserved for women.
- (viii) The state legislative may provide the reservation of membership seat chairperson offices in the panchayats for backward class's citizens.
- (ix) The normal terms of every panchayat shall be five years; if dissolved earlier, fresh election shall be complete within six months of the expiry date of dissolution.
- (x) A person disqualified under any law of election to the legislature of state or under any law of the state shall be disqualified for being chosen as a member of panchayats.
- (xi) A state election commission shall be appointed by the state governor and shall be visited with authority for supervising, directly and controlling preparation of electoral roles and conduct of all elections.
- (xii) The state legislature may legally endow the panchayat with such power an authority as may be necessary to enable them for function as institution of self government; legal devolution of powers and responsibilities upon panchayats at the appropriate level by the legislature may enable panchayats to prepare plans for economic development and social justice as well as implement schemes concerning these plans as entrusted to them, including matters listed in the eleventh schedule.
- (xiii) The state legislature may authorize a panchayat to levy and collect taxes, duties, tolls and fees as well as may assign to a panchayat taxes, duties, tolls and fees divide by the state government and also provide for the grants-in-aid from the state government to the panchayat.
- (xiv) The state governor shall appoint a finance commission within one year of the commencement for the constitution seventy-third amendment act and then after every five years to review financial position of the panchayats and make recondition for its improvement and for principles which would govern distribution between the state and the panchayat taxes .etc livable by the state and for grant-in -aid to the panchayats and determination of taxes, etc which the panchayats be authorized to levy and collect .

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4. Research Methodology and Area of Study

Many Social Scientist have done their studies on the important issue of women in village panchayats. A sample of scheduled caste women leaders were drawn from Muzaffarnagar district of Uttar Pradesh. The Responded were personally interview by the researcher—through observation and interviewed schedule for the collection of primary data. To study the changes of scheduled caste women leaders due to implementation 73rd amendment structural and functional approaches has been used. Scheduled Caste Village Pradhan and the members of village panchayat have been used as respondents in the study.

5. Finding the study

73rd Amendment to constitution has provided a political space for the marginalized groups in panchayats. It has resulted in social identities and developed political awareness among them that created an urge to become a part of main stream political, economic and social life. Sometimes, even after duly getting elected the lower caste (scheduled caste) are not allowed the power and status they deserve. As a consequence, there has been a sharp increase in violent manifestations of castes.

Major findings of the study are as follows;

(i) Political background

Political background also pushes a person to take part in politics. Traditionally scheduled caste people are deprived to political power since a long time but after implementation of 73rd amendment to constitution scheduled caste women started to take part in politics.

Table 1

Political background of studied scheduled caste women leaders

Political Background	Numbers	Percentage
More than three generation	00	00.00
Less than three generation	01	02.50
Only Parents	05	12.50
No Political Background	34	85.00
Total	40	100.00

The scheduled caste political leaders who elected in the village panchayats elections has no political background more than three generations and only one scheduled caste elected women leaders found who had political background from less than three generation while a big proportion of scheduled caste women leaders in village panchayats who have not political background but elected in village panchayats election 34(85.00%). It is clear from the interpretation of data that a big proportion of scheduled caste women have not any political background. It is clear that it is the result of 73rd amendment to constitution for panchayati Raj institutions.

(ii) Behaviour of the husband

The status of women depends by and large on the behavior of husband. If the behavior of husband is good that he does not indulge in chastisement, housing, turning out his wife from the house, insulting his wife and drinking liqueur and harassing his wife, then wife may enjoy a good status. If the husband indulges in any or all of the above activities, then the life of his wife becomes hell and women cannot even think a high status. In this background an attempt was made to behavior of husband. The responses regarding behavior of husband towards his wife are shown as follows-

Table – 2

Behaviour of husband to scheduled caste women leaders

Behaviour	Numbers	Percentage
Most Supportive	32	80.00
Normally Supportive	06	15.00
Less Supportive	02	05.00
No Support	00	00.00
Total	40	100.00

The above table shows that most of elected scheduled cast women leader's husbands are supporting in their work related to village panchayat. It is clear that majority of respondent enjoy their works due to their husband support.

(iii) Active Participation

After independence India society started with standing of panchayati Raj. Because there were no chance for weaker section (scheduled caste) women for held power in village panchayats. So there was no prop ability of participation of scheduled caste women in panchayati Raj. But after 73rd constitutional amendment implementation situation become changed, scheduled caste women started to fight for power capturing with the participation of women in village panchayats.

Table-3

Active participation of scheduled caste women leaders

Participation in Election Process	Numbers	Percentage
Most Active	28	70.00
Generally Active	06	15.00
Some Active	04	10.00
No Active	02	05.00
Total	40	100.00

The scheduled caste political leaders of village Panchayats responded that most active participation in elections process were 28 (70.00%), the leaders who generally participations in elections process were 06 (15.00%) and 04 (10.00%) scheduled caste women leaders participated sometime. The leaders who did not take part in elections process were 02 (05.00%). It is clear the interpretation of data more scheduled caste women leaders played active role in elections process.

It may be notice that reservation of seats for scheduled caste women in the village panchayats through 73rd amendment constitutions has made their significant presence and started changing the

traditional socio-political structure of the rural society. It has also to use the women empowerment and development.

Consequently a great change has been seen in scheduled caste women through the new panchayats system. Those scheduled caste women leaders enjoy the confidence of the village are preferred to be elected to local bodies.

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The Big Five Personality traits among the students



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Abstract

The article consists of a deep and thorough study of big five personality traits in students. Personality traits are defined as the relatively enduring patterns of thoughts, feelings and behaviors that distinguish individuals from one another. Whether personality traits continue to develop in adulthood depends in part on how one defines "relatively enduring." In the past, some researchers took that phrase to mean—and some empirical literature to indicate—that personality traits stopped changing in adulthood. Personality variables are relevant to career choice and job satisfaction has been considered by several personality theories. Indian education has undergone a paradigm shift. There have been fundamental and irreversible changes in the economy, outlook of business and industry, government policies and in the mindset of the Indians in general. It is extremely relevant in today's scenario to link personality, its implications to success in education. Education is one of the most prominent and accurate places to understand of individual differences. In today's scenario, it is difficult to think of learning without looking at the relationship between the personality type, teacher interface and actual performance in the classroom. At the same time it can be used to effectively make tomorrow's successful persons and leaders understand the virtues of their core behavioural style. Conclusion of their studies would also help to understand the effect of academic studies on personality. Such investigations may contribute to the evaluation of the NEO Five Factor Model in understanding vocational choices.

Keyword : Personality traits, Neuroticism, Relative Enduring

Introduction

Personality

Personality is the unique way in which each individual thinks, acts, and feels throughout life. A fundamental question in personality research is how many basic dimensions are needed to describe individual differences in personality. Over the past decades researchers have made substantial progress in answering this question by using hierarchical models that group behavioral measures into higher-order clusters. One well-known example of such a hierarchical model is the Big Five (Digman, 1990; McCrae & Costa, 1999), consisting of Openness to experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. These basic factors can explain and predict individual differences over a wide range of settings, including mental health, job satisfaction, and work performance (e.g., Barrick & Mount, 1991; Judge, Heller, & Mount, 2002).

Big Five Personality Traits

Personality is a critical psychological mechanism that guides a behaviour. Genetic and environmental influences determine the set of psychological characteristics comprising personality (Schaffer 2005). Among many personality theories, trait models emphasizing individual differences in thoughts, feelings, and behaviours assume that personality consists of several dispositions. Since personality traits tend to form a stable pattern of reactions in any given situation, they can explain the mechanisms of an individual's information behaviour with little variability (Phares 1991). A widely used personality model, McCrae and Costa's NEO Five Factor Model, or "Big Five Model" (1990), consists of the personality components: neuroticism, extroversion, and openness to experience, agreeableness, and conscientiousness. The Big Five consist of agreeableness, conscientiousness, extraversion, openness to experiences, and neuroticism (Srivastava, 2010). The Big Five personality traits are defined as follows:

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- 1). Agreeableness reflects individual differences in concern with cooperation and social harmony;
- 2). Conscientiousness concerns the way in which we control, regulate, and direct our impulses;
- 3). Extraversion is characterized by a pronounced engagement with the external world;
- 4). Openness to Experience distinguishes imaginative, creative people from down-to-earth, conventional people; and
- 5). Neuroticism refers to the tendency to experience negative feelings (Cohen & Swerdlik, 2005; Johnson, 2010).

The Big Five Personality traits among students

An individual's personality trait is a relatively steady indicator of one's behavior; it underlines a stable style of thinking, feeling and acting (Mc Crae & Costa 1997). As discussed by Mount and Barrick (1995), "it appears that many personality psychologists have reached a consensus that five personalities constructs, referred to as the big five, are necessary and sufficient to describe the basic dimensions of normal personality". The NEO five-factor model of personality is obtaining construct validation, recognition, and practical consideration across a broad domain of fields, including clinical psychology, industrial-organizational psychology, and health psychology. The NEO FFI works well for college students and adults and two of the five traits openness and Conscientiousness is of particular interest to educational psychology (Costa et al). People who are open to experience are imaginative, unconventional and curious. Individuals high on openness is modestly related to measures of intelligence and more strongly related to divergent thinking and creativity (Mc Crae,). Conscientiousness is an aspect of what was once called character; high C scores are scrupulous, punctual, and reliable. Students high on conscientiousness are well-organized, purposeful and persistent and there is evidence to suggest that these traits lead to higher academic achievement. Extraversions are sociable, prefer large groups and gatherings and are assertive, active and talkative versus the extent to which the individual is reserved, timid and quiet. They are generally upbeat energetic and optimistic. Salespeople represent the prototypic extraverts in our culture and are strongly correlated with interest in enterprising occupations (Costa, McCrae, & Holland). Agreeableness is primarily a dimension of interpersonal tendencies. He or she is sympathetic to others and eager to help them and believes that others will be equally helpful in return. The contrast, the disagreeable is egocentric, skeptical of others intentions and competitive rather than cooperative. High neuroticism represents hostility, depression, self-consciousness, impulsiveness, and vulnerability to stress as well as anxiety. Neuroticism is significantly related to negative affect and lower life satisfaction (Costa & Mc Crae,). The central psychosocial crisis of the adolescent years is identity versus role confusion (Erikson, 1963). During the transition from childhood to adulthood, adolescents

struggle to find an integrated sense of self; identify their roles, values, talents, and beliefs; and blend them into a cohesive and unique sense of who they are. The growing and developing youths, faced with this physiological revolution within them, and with tangible adult tasks ahead of them are now primarily concerned with what they appear to be in the eyes of others as compared with what they feel they are, and with the question of how to connect the roles and skills cultivated earlier Far East Research Centre www.fareastjournals.com 68 in life with the occupational prototypes of the day (Erikson). Psychosocial development theories had its origin in the work of Erikson's. Such theories address developmental issues or tasks that occur throughout one's life, as well as ones pattern of responses. Chickering & Reisser, (1993) proposed seven dimensions of developmental tasks for university students in the United States: (a) developing competence, (b) managing emotions, (c) developing autonomy, (d) establishing identity, (e) freeing interpersonal relationships, (f) developing purpose, and (g) developing integrity. Later in 1991 some psychologists, proposed the six psycho-social dimensions thought to be appropriate in ascertaining the quality of protégé maturity and that have been measured in this study are explicated by (1991) as, Efficacy means the conviction that one can successfully execute the behaviour required to produce a desired outcome. Cooperativeness is the ability to work jointly with others in advancing group goals in a relatively impersonal organizational framework Individualism refers to the belief in the centrality of others personal development, expression and goals as contrasted to the relatively complete submergence of self in defiance to family and clan type needs. Its essence is being autonomous without being uncooperative. Perseverance is maintaining a course of action despite obstacles. While knowing and thinking about the means to achieve a stated goal, both in the short term and especially in the long term is being referred as Planfulness. Responsibility is considered as acceptance of the belief, that the individual is accountable for his or her actions. Sanderson and Cantor (1999) supported the notion that there are substantive age-related differences in the aspects of personality that are related to the task and interpersonal strategies people use when approaching similar situations. Individuals confront a series of issues that are common but deal with it uniquely. To summarize, in consonance with the theory of psychosocial maturation, there is a weight of research evidence that suggests the nature of personality expression (i.e., inter personal strategies, ways of relating) may change as individuals' age to reflect a more well-adjusted and socially adept set of propensities.

Materials and Methods

The contents have been taken from relevant books and articles, research paper, forms of journals and websites. The method used is empirical, and no practical work has done.

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Results and Discussion

Personality is a critical psychological mechanism guiding an individual's behaviour. A fairly consistent psychological mechanism across contexts, personality has been examined to understand users' thoughts, feelings, and behaviours. Those who maintain optimal thoughts, feelings, and behaviours demonstrate strong competencies in education. Thus, it is useful to ask which personality traits are observed more often among people demonstrating successes in education, profession choice, academic achievement, career building and information use.

The big five dimensions are negative emotionality, extraversion, and openness to experience, agreeableness, and conscientiousness. Each of the Big Five dimensions is like a bucket that holds a set of traits that tend to occur together. The definitions of the five super factors represent an attempt to describe the common element among the traits, or sub factors, within each "bucket". Negative emotionality concerns the degree to which the individual is insecure, anxious, depressed, and emotional versus the degree to which the individual is calm, self confident and cool. Extraversion concerns the extent to which the individual is gregarious, assertive and sociable versus the extent to which the individual is reserved, timid and quiet. Openness to experience defines individuals who are creative, curious, and cultured versus those who are practical with narrow interests. Agreeableness concerns the degree to which individuals are cooperative, warm and agreeable versus the degree to which they are cold, disagreeable and antagonistic. Conscientiousness measures the extent to which individuals are hard working, organized, dependable, and preserving versus the degree to which they are lazy, disorganized and unreliable.

Personality and academic motivation

Only a handful of studies have examined personality and academic motivation. Ross, Rausch, and Canada (2003) found that the Big Five explained significant variance in cooperative, hypercompetitive, and personal development motivational orientations. Individuals high in conscientiousness, extraversion, and openness show the strongest learning goal orientation (Payne, Youngcourt, & Beaubien, 2007), whereas high neuroticism and low extraversion students are most likely to experience a fear of failure and pursue avoidance performance goals. Komarraju and Karau (2005) found that engagement motivation (thinking and desire for self-improvement) was best explained by openness and extraversion, and achievement motivation (persisting and competing), neuroticism, and openness. Avoidance motivation (debilitating anxiety, withdrawing, and disliking school) was associated positively with neuroticism and extraversion, and negatively with conscientiousness and openness. Similarly, achievement motivation has been associated positively with conscientiousness and extraversion, and negatively with neuroticism, impulsiveness, and fear of failure. Individual differences in students' achievement goals have also been documented. Students seeking performance

goals, especially performance avoidance goals, tend to experience evaluation apprehension, view difficulties as threats, and are likely to give up. In contrast, those seeking mastery goals enjoy learning, perceive difficulties as challenges, and are persistent. Ideally, a combination of mastery and performance goals is positively related to performance, interest, and motivation. Thus, there is initial documentation of some influences of personality on academic motivation and achievement goals, though our understanding is clearly rather preliminary.

Personality and academic achievement

The larger and richer literature on personality and academic achievement suggests that conscientiousness has a consistently positive association with (grade point average) GPA beyond that explained by SAT scores (Conard, 2006), high school GPA (Nofle & Robins, 2007), or IQ (Duckworth & Seligman, 2005). Conscientiousness also predicts academic success including exam performance and GPA. Besides conscientiousness, both openness and agreeableness are positively related to academic performance (Farsides & Woodfield, 2003), and neuroticism is associated with impaired academic performance. Nofle and Robins (2007) also report that conscientiousness is the strongest predictor of academic performance, and the other four traits have weak or mixed relationships with GPA.

Most recently, researchers note that grit and self-discipline go beyond IQ in explaining academic success. An individual's work drive also explains significant variation in GPA beyond that explained by the Big Five and intelligence (Ridgell & Lounsbury, 2004). Traits representing prudence, self-control, dominance, and perfectionism, as well as academic discipline and commitment to college, are significant predictors of GPAs and remaining in school. Academic performance is also higher among sociable, emotionally stable, and introverted individuals. Thus, after controlling for ability, certain aspects of personality and motivational orientations clearly do contribute to academic success.

Personality and profession choice

Empirical evidence has suggested that the choice of different professions does seem to be associated with specific personality types (Tokar, Fischer, & Mezzydlo-Subich, 1998). According to this line of findings, hysterical individuals are attracted to literary and theatrical careers and enjoy leisure activity which encourages social interaction, use of intuition, and emotional and expressiveness.

Obsessive individuals, on the other hand, prefer professional and leisure activities in which technological skills are required and obsessive traits are rewarded. Engineers, continuing with these findings, are predominantly obsessive, accountants seem to be particularly paranoid, theater and drama students are extremely hysterical and narcissistic, and students of medicine share the latter's propensity for narcissism (Silver & Malone, 1993). Kline and Lapham (1992) found that students of engineering and the natural sciences are also highly obsessive

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and that students of art and social science students are sociable and sensitive to sensory experiences, whereas Harris proposed that students of natural science are particularly accurate. According to Wilson and Jackson (1994) physicists are introverted, reserved, cautious, and unsociable in comparison to professionals in the fields of industry, research, and instruction. Ambition, achievement, and low affection are typical of marketing students, according to Matthews and Oddy (1993), whereas in Granleese and Barrett's (1990) study, accountants were found to manifest introversion, conformity and sociability. Three Israeli studies indicated that students of engineering and natural sciences students are more authoritarian than psychology and philosophy students, natural science students are more authoritarian, religious and right-wing than social science students (Rubinstein, 1997), and that students of interior and product design are significantly more creative and less authoritarian than both behavioral science and students (Rubinstein, 2003).

Conclusion

This study had indicated that healthy personality traits are important factors in determining educational stage. The model that emerged from the study also provided insight into the ways that healthy personalities can promote students' wellbeing, while unhealthy one like neuroticism can negate it. The findings of this study are also useful for parents, psychologists, school guidance counselors and social workers in aiding their understanding of students' behaviours and helping them achieve more academically and transit successfully to education, profession and career stage. In conclusion, this study offers additional support to the claim that personality patterns may play a part in vocational decision making processes. That would also help to understand the effect of academic studies on personality. Such investigations may contribute to the evaluation of the NEO Five Factor Model in understanding vocational choices.

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Periodic Research

Senescence and its ramifications in The realm of morale and depression

Abstract

The present study was conducted to investigate the two important correlates (Morale and Depression) of old age or senescence. Subsequently it was decided that a rigorous research work on depression and morale of old people in the institutions of Jammu would yield some lucrative results. The age group decided for the study was 60-80 years. The study consisted a sample of 30 (15 old males and 15 old females) from an old age home situated in Amphalla, Jammu. Results indicated that the level of Depression was high in institutionalized females than the males whereas the level of morale was high in institutionalized males than females.

Keyword: Depression, morale, senescence and gender.

Introduction

The ageing process is a biological reality which has its own dynamics, largely beyond human control. However, it is also subject to the constructions by which each society makes sense of old age. In many parts of the developing world, chronological time has little or no importance in the meanings of old age. Other socially constructed meanings of age are more significant such as the roles assigned to older people; in some cases it is the loss of roles accompanying physical decline which is significant in defining old age (Gorman, 2000).

Rather than a period of decline, late adulthood is now seen as a stage in which people continue to change—to grow in some areas and, yes, to decline in others. Primary aging or senescence, involves universal and irreversible changes due to genetic programming. In contrast, secondary aging encompasses changes that are due to illness, health habits, and other individual factors, which are not inevitable (Feldman, 2011). Chen, Mullan et al, (2011) conducted a longitudinal study to investigate the change trajectories of depressive symptoms and disability in older adults, as well as their associations over time. The findings demonstrated that disability is a stronger predictor of depressive symptoms than depressive symptoms are of disability.

Adjustment remains a continuous process throughout the life of the individual and finally ends up with its death. During the process of ageing, the physical functions of the body slowly deteriorate demanding greater coping skills on the part of the ageing person to adjust to the environment. In addition, there are problems caused by others in the society because of their unfavourable attitudes (Grimby & Wiklund, 1994). Various psychological components (depressed mood, loneliness) and physical components (fatigue, pain) experienced in old age effect quality of life (QoL) in nursing homes. Grimby & Wiklund, (1994) found that the strongest factors contributing to low QoL according to were depression and loneliness, i.e. the psychological aspects of QoL were found to be experienced by old age people. Similar findings have been reported in other studies too (Jensen et al. 1994; Lindgren et al., 1994; Newsom & Schulz, 1996; Fassino et al., 2002; Steen et al., 2001).

Depression is one of the most common psychiatric disorders that afflicts older adults, even though it is not a normal aspect of aging. Chronic depression has both physical and mental consequences that may complicate an older adult's existing health condition and trigger new concerns. There is evidence that some natural body changes may increase a person's risk of experiencing depression. Recent studies suggest that lower concentrations of folate in the blood and nervous system may contribute to depression, mental impairment and dementia. As a psychiatric disorder, depression includes emotional and physical symptoms. Aging often is accompanied by losses—the loss of occupation, the loss of a spouse, the loss of financial security, the loss of prestige and status, the loss of friends or relatives. Sometimes a major loss in one of these areas

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precedes depression (Silk, 2013). Ku, Fox et al. (2011) studied the reciprocal associations between changes in physical activity and depressive symptoms in a population-based sample of Taiwanese older adults. They reached on the conclusion that the physical activity engagement in later life is associated with a lower risk of subsequent depressive symptoms, but the reverse association is not supported.

In general, self concept and self-esteem appear to be relatively stable with aging. This may reflect a growing coherence of the life story with aging. By late life, the life history report is an important indicator of wellbeing, especially for elderly persons in institutions. But the health problems that affect morale most adversely are those that cannot be coherently incorporated into a life story (Sullivan, 1997). Benito, Louis et al (2010) assessed the association between morale and mortality.

Morale was assessed using the Philadelphia Geriatric Center Morale Scale. They concluded that the low morale may be an independent predictor of mortality in the elderly. Similarly Anthony (2007) identified the factors that influence the self-advocacy expressions of elderly African Americans using Multi-dimensional Health Locus of Control Scale and the Philadelphia Geriatric Morale Scale. Statistically significant differences were found between males and females and educational levels on the Powerful Other Subscales.

Methodology

VARIABLES

Independent variables: Old age and Gender.

Dependent variables: Depression and Morale.

Objectives

To assess the level of depression among institutionalized males and females of Jammu.

To assess the level of morale among institutionalized males and females of Jammu.

Hypotheses

There will be no significant difference in the level of morale among institutionalized older males and females of Jammu.

There will be no significant difference in the level of depression among institutionalized older males and females of Jammu.

Experimental Design

A 2X2 factorial design consisting of two independent variables (Old age and Gender) and two dependent variables (Depression and Morale) was used in the study.

Method

Participants

The present study consisted of 30 participants (15 old males and 15 old females) from an old age home situated in Amphalla, Jammu. The age range of participants was 60-80 years.

TOOLS

Geriatric Depression Scale (GDS) was first created by Yesavage et al., (1982) and has been tested and used extensively with the older population. It is a brief questionnaire in which participants are asked to respond to the 30 questions by answering Yes or No in reference to how they felt on the day of

administration. Score of 0-9 are considered normal, 10-19 indicate mild depression and 20-30 indicate severe depression.

Validity/Reliability: The GDS was found to have 92% sensitivity and 89% specificity when evaluated against diagnostic criteria. The validity and reliability of the tool have been supported through both clinical practice and research.

The Philadelphia Geriatric Center (PGC) Morale Scale provides a multidimensional approach to assessing the psychological state of older people. It has been developed by M. Powell Lawton and his staff in 1972 and revised in 1975 at the Madlyn and Leonard Abramson Center for Jewish Life (formerly the Philadelphia Geriatric Center) in response to longer, more complicated tools, some of which conceptualize morale as one-dimensional. The PGC Morale Scale is designed to provide a measure of morale appropriate for very old or less competent individuals, as it uses simpler wording in its items and less complex response formats. Scoring is straightforward: It has 17 items.

Validity (Quantitative): The PGC Morale Scale correlates strongly with the most comparable alternative, The Life Satisfaction Index (LSI). A correlation of 0.57 was obtained with LSI and 0.74 with LSIZ. Factor analysis of the scale identified three main factors, namely, agitation, dissatisfaction and attitudes towards one's own aging with alpha internal consistency coefficients of 0.85, 0.81 and 0.85 respectively.

Reliability (Quantitative): Test-retest reliability ranged from 0.91 after five weeks to 0.75 after three months.

Procedure

The total sample of the study was 30 (15 old males and 15 old female) which was collected from an old age home situated in Amphalla, Jammu. In the initial visit permission was taken from the concerned authorities of the old age home. The whole study was conducted in a period of one month by visiting every alternate day.

Results

The present study was undertaken in order to analyze depression and morale among the institutionalized males and females of Jammu. After data collection and scoring, the data were put to statistical analyses so that the formulated hypotheses could be tested.

TABLE-1
Mean, S.D and t-Values For Morale Among Elderly Males and Females.

Category	Mean	S.D	t-value	Significance level
Male	10.93	1.65	4.01	Significant at both levels
Female	7.8	2.4		

The above given data in the table shows that in case of morale the mean of the elderly males is 10.93, whereas that of females is 7.8. And the t-value is 4.01. By referring the table of critical values of t, the value at 0.05 level is 2.05 and at 0.01 level it is 2.75. This shows that there exists a significant difference between the elderly males and females in case of morale. Hence the hypothesis is rejected.

Table-2

Mean, S.D and t-values for Depression Among Elderly Males And Females

Cate gory	Mean	Sd	t-value	Significance level
Males	16.73	3.36	3.80	significant at both levels
Femal es	21.6	3.52		

From the second table it was found that the mean of depression of old males is 16.73 and that of females is 21.6. Where in the t-value was 3.80. By referring the table of critical values of t, the value at 0.05 levels is 2.05 and at 0.01 levels it is 2.75. This shows that there exists a significant difference between the elderly males and females in case of depression. Hence the second hypothesis regarding the level of depression among institutionalized males and females is also rejected.

Discussion

The results of present study showed that in case of depression the mean of old males was 16.73 and mean of old females was 21.6. And the t-value was 3.80. By referring to the table of critical values of t, the value at 0.05 level was 2.05 and at 0.01 level was 2.75. Evidently there exists a significant difference between the old males and females on Geriatric Depression Scale (GDS). Hence the first hypothesis with regard to depression is rejected. And in case of Lawton's Morale Scale (LPGC) the mean of the old males was 10.93, while the mean of females was 7.8. And the t-value was 4.01. Hence by referring to the table of critical values of t, the value at 0.05 level was 2.05 and at 0.01 level was 2.75. Subsequently the second hypothesis with regard to morale is also rejected. The review of related literature provided a number of studies which corroborated with the results of the current study. Whereas there were many whose results/ findings were antagonistic to the results of the present study. Several of the corroborating studies were like this:- Wahyudi, Setiate et al. (2010) investigated the risk factors for depressive symptoms in geriatric outpatients. Multiple logistic regression showed that the variable which independently associated with depressive symptom changes was uncontrolled chronic kidney disease and that the uncontrolled chronic kidney disease was a risk factor for depressive symptom changes in geriatric outpatients. Mancini, Quinn, (1981) examined

morale in regard to 16 health indicators. Probability techniques were used to draw a sample of 104 non institutionalized people, 65 years of age and older. Morale was divaricately related most to the individual measures of fatigue, comparative health level, visual acuity, and general self-rated health. A multiple regression analysis indicated that morale was reported to be higher among those who felt more rested upon wakening in the morning, who had better visual abilities, and who saw their health level as being at least as good as in the past. Loke, Abdullah et al. (2011) examined that the relationship between morale measured by the Philadelphia Geriatric Morale Scale (PGC) and disability, social support, religiosity, and personality traits and the results show that all instruments showed clear relationships with PGC, with WHODAS-II and DUSOCS performing well. For PGC domains, attitude toward aging and lonely dissatisfaction trended together, while agitation did not. Subsequently, the results of present study were that the mean of depression of old males is 16.73 and mean of depression of old females are 21.6. Where the t-value was 3.80. By referring the table of critical values of t, the value at 0.05 levels is 2.05 and at 0.01 levels it is 2.75. This shows that there exists significant difference between the old male and female on Geriatric Depression Scale (GDS). Hence the first hypothesis of no significant difference in the level of depression among institutionalized older males and females is rejected. And in case of Lawton's Morale Scale (LPGC) the mean of depression of the old male is 10.93, while the mean of female is 7.8. And the t-value=4.01. By referring the table of critical values of t, the value at 0.05 level is 2.05 and at 0.01 level it is 2.75. Hence the second hypothesis of no significant difference in the level of morale among institutionalized males and female of Jammu is rejected.

Conclusion

The present study indicated that the Depression level was high in institutionalized females than the males on Depression (Geriatric Depression Scale) but the level of Morale was high in institutionalized males than females on LPGC (Lawton's Philadelphia Geriatric Center).

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Social Values as reflected in the Manusmṛti and its relevance

Abstract

The Manusmṛti, which is divided into twelve chapters, deals almost every aspect of human behaviour of the individuals of the human society. The life of an individual is a well-planned scheme, and for a better harmony and progress of the society. Every individual should maintain his life according to this scheme. Likewise, every individual should perform his duties according to his inborn merit and ability for the smooth progress of the society. This is the philosophy behind Manu's *Varna* and *Asrama* systems of life. Everybody should do his enjoined duties in his course of life and, this is, what is called *dharma*. *Dharma* is a guiding force of life which is, if protected protects and the vice versa. Social, political, economic and religious aspects of human life are governed by this *dharma*. *Dharma* is not some mere observances of some religious rites preached and practised by some religious heads but a discipline of life of an individual which is a prime need for preserving values in human society. It is an essential condition for regulating the conduct of human life in a right direction. It is an inextricable part of life for an individual and thereby it is the central theme behind all the rules of the Manusmṛti. Manu's rules cover almost every aspect of human behaviour. We shall, therefore, try to find out in this paper some universal social values or ideals as revealed in the Manusmṛti.

Keyword: Manusmṛti, *Dharma*, observances, economic

Introduction

Values in the Manusmṛti

In Manu's rules we observe the following principles which tend to regulate human behaviour in the society for the better interest of human life.

I) Truthfulness in speech:

The central theme of Manu's codes is *dharma* or moral duty. Truthfulness in speech is one of the essential requirements for upholding *dharma* in the society. Manu is aware of advocating the truthfulness in speech. Truthfulness has power of its own. Manu says that it is truth that purifies the mind and one should speak only those words which are refined by truth.¹ It is truth which increases faith among the members of the society and falsehood increases betrayal. For a better human relationship, truthfulness in human conduct is a demanding factor. Manu says that he, who desires virtue, should always use sweet words.² Manu upholds the value of truthfulness in speech saying that one should not speak an unpleasant truth which increases the mental agony of others. According to Manu, this is the eternal virtue (*sanātana dharma*).³

In the matter of dispensing justice, truthfulness in speech has a great role to play. Judges are to depend on statements of the plaintiff, defendant and the witness. Finding out of the exact truth behind a law suit depends upon the true statements delivered by each of the above parties and particularly of the witness in front of a judge. Therefore, truthfulness in speech is the guiding force for a court of justice. Manu was aware of this fact and therefore, he says that rather one should not attend a court of justice, but once someone attends there, he must speak the truth. One, who keeps silence or speaks a lie or falsehood in a court of justice, becomes guilty of vice.⁴ In a court of justice truth should not be pierced by untruth. Therefore, a witness should never speak a falsehood in a court of justice. Otherwise he shall go to the hells after his death.⁵

II) Non-Violence (*ahimsa*):

Ahimsa (non-violence or non-injury to others) is an universal belief which is deeply rooted in Indian tradition. *Ahimsa* is such an ideal

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which sustains some other noble ideals in human mind such as forgiveness (*ksama*), compassion (*daya*), truth (*satya*) etc. And above all it brings purity of mind. The doctrine of *ahimsa* (non-injury) in Manu's rule is well established is evident from several references found in the 5th chapter of his law-book. Manu says that meat cannot be obtained without killing living beings which is detrimental to the attainment of heavenly bliss and hence one should avoid eating meat.⁶

Manu says that he is a great sinner who, though not worshipping the gods and manes, wants to increase the bulk of his own flesh by taking the flesh of other animated beings. Though Manu sanctions some lawful slaughterings of animals in some special religious practices and which he terms as divine acts and is free from vices, yet he shows much lenient view towards not killing and taking of animal's flesh.⁷ Manu says a lot in favour of his lenient view towards not killing of animals for flesh. Manu's etymological significance of the term '*mamsa*' (flesh or meat) shows his utmost devotion to *ahimsa*.⁸

The etymological significance of the term '*mamsa*' is otherwise a psychological menace to them who are involving unlawful killing of animals for meat. In another content Manu states that animals like horse, elephants etc. which are used for travelling should be of sound health and they should not be whipped as far as possible (Manusmṛti, IV.68). Manu is even concerned over cutting or destroying of trees and plants without a lawful reason. Manu treats this kind of activity as *himsa*.⁹

ii) Dharma (moral duty): *Dharma* plays an important role in Manu's social theory. In the Manusmṛti, the term *dharma* is frequently used in several senses. Out of these, the two senses of the term are noteworthy. Firstly, *dharma* represents justice or righteousness. Justice consists in application of law in eighteen titles of law suits which may arise among the subject.¹⁰ *Dharma*, in the sense of justice or righteousness is a sustaining force, which, if it is violated, destroys, and if it is preserved, preserves us, and therefore, *dharma* should not be violated.¹¹ Secondly, it represents duty, the duty of every member of the four social orders. For instance Manu says that whatever may be the relation, either a father or a priest, a king should punish him who does not discharge his own duty (*svadharma*) in social life.¹² In another context Manu says *danda* (rod of divine law) is *dharma*.¹³ It is *danda* which is the chief instrument of upholding *dharma*. It is above all and even a king is not above it.¹⁴

The sense of one's own duty (*svadharma*) and righteousness, on which Manu emphasizes more by the term *dharma* in his great law-book, are two urgent needs for which our society is crying for. We would like to refer to the comment made by C.S. Venkateswaran while he observes "*Dharma* contributes to the preservation, progress and welfare of human society, and in a wider sense, of the whole world."¹⁵ In short, *dharma*, according to Manu, is not mere pretext with some badges but right conduct of

human behaviour for the welfare of the whole creatures.¹⁶

IV) Good conduct : The purity in conduct of life of every individual is a primordial condition for preserving values. Manu's term for 'good conduct' is *sadacara* which has been handed down from generation to generation among the twice-born castes and the mixed castes.¹⁷ Good conduct (*sadacara*) has a positive role in moulding and regulating human character. According to Manu right conduct is the root of progress of life. It is good conduct through which one achieves the desired objects and a man of bad conduct is condemned in this world and suffers perpetual misery.¹⁸

Manu's codes for good conduct are not confined only among the subjects but also applicable to the king. Manu says that a king should diligently avoid ten bad habits originated from lust and other eight bad habits originated from anger, because these open the path of destruction.

V) Honesty: Honesty is one of the universal values which plays an important role in uplifting human values. It teaches one to be just in conduct. Honesty represents cultivation of some virtues which tend to moral and intellectual growth and lead one to the path of righteousness. We observe that honesty is highly inculcated while Manu frames the codes of conduct. Honesty remains in good conduct. Manu's rule for the conduct of the four stages of life for different social orders (*Varnas*), the rules framed for the conduct of a king and all other rules which are framed for regulating the conduct of social and individual life highly uphold honesty in its truest sense. None should deviate from the respective rules of conduct of its own.¹⁹ Manu stresses on honesty in speech, in testimony, in trade and commerce, in married life and so on. Because, value remains in honesty. Manu tries to remove all evils from the society. This is possible when the individuals of the society maintain honesty in their conduct. Gambling with dice and betting, thefts, drinking of wine etc. are some evil practices which decay the standards of morality and honesty among the members of the society and ultimately it degrades value. Manu tries to discourage these evil practices by his rules.²⁰

VI) Tolerance: The spirit of tolerance is one of the principal values enshrined by Indian tradition. It is a virtue which tends to cultivate mental and moral progress in human mind. Herold H. Titus comments—'Tolerance is a disposition to recognise and permit beliefs and practices differing from one's own. ...Without a degree of tolerance, mental and moral progress is impossible.'²¹ It is a virtue in human mind which teaches to respect the whole creatures of the universe. It teaches to respect others. Manu's codes are aware of in this respect. Manu says—someone should not hurt the feeling of others even though he is oppressed by others. One should not speak even a single word to anybody which is harsh and pauses the door to heaven.²²

VII) Human feeling to the disabled and distressed person:

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Human feeling towards the disabled and distressed persons also finds place in Manu's rules. Manu says that one should not ridicule those who are physically handicapped, illiterate, old, devoid of physical beauty poor and of low birth for their destitution.²³ A person, who taunts men of deformity, is liable for punishment by the king.²⁴

VIII) Checking of covetousness:

Checking of covetousness is another important factor which tends to uphold values in the society. Excessive greed or covetousness causes decay in morality and increases corruption and exploitation in society. It decays not only the morality but also destroys the balance of the Nature. In this regard we would like to refer to Swami Yuktananda while he observes –“It is man who is now accused of causing damage to the ecosystem by his domination, his greed for instant gain. When man is motivated by a value drive of instant gain he is pushed to the edge of destruction; abundance turns into scarcity affecting all. The desire to become richer at any cost drives him to self-destruction”.²⁵ Manu's consciousness against a covetous way of life is available in his law book. Manu says that real happiness remains in self-contentment and discontentment leads to misery. Therefore, a seeker for real happiness must restrain himself from pursuing of more wealth except his minimum need.²⁶ It seems to indicate that real happiness remains in simple and honest way of life. The four social orders are enjoined with some specific duties and professions of its own and they should perform their respective duties and follow their ordained professions.²⁷ None should follow the professions of others motivated by greed or covetousness.²⁸ Manu enjoins that one should live by doing even vile works allotted according to his own order than to accept the profession of a superior order for his livelihood.²⁹ Manu was apprehensive of the evil effect that may arise in social life from hoarding of wealth by an unworthy person.³⁰ It seems that Manu wanted to check the unhealthy competition that may arise out of greed for hoarding wealth among the four social orders of the society. The duties and profession ordained for the four social orders are for the good of the society and not for hoarding wealth.

IX) Charity (*Dana*) :

Charity or *danakarma* is a pious activity which promotes the high ideal of human values. It benefits both the giver and the bonafide receiver and promotes peace and harmony in the society by favouring economic equilibrium.³¹ Manu says that charity is the highest *dharma* in the *kaliyuga*.³² Charity or *danakarma* increase the feeling of compassion in human mind which is a prime need for preserving social values. The Manusmṛti enumerates different kinds of charity (*dana*) and the meritorious results of it.³³

X) Respect for the elders:

Respect for the elders has a great value towards the cause of humanity. The older section of the society, especially in ancient times, when knowledge was handed down through informal communication and personal experience, was the

repositories of knowledge and experiences.³⁴ Manu enjoins to pay due respect to this section of people. The Manusmṛti suggests to respect the aged people even by a king.³⁵ One should not disregard a preceptor, a father, a mother and an elder brother.³⁶ A son is highly indebted to his parents which could not be repaid even in a course of hundred years. Manu enjoins a lot of duties to be performed by a son to his preceptor and parents.³⁷ The contribution of the elders to the society and to the mankind could not be denied. Respect to the elders is an essential condition for a healthy human society. They are the valuable source or treasure of knowledge and experiences. Manu was aware of this side and enjoins to pay due respect to the elders.

XI) Value attached to Manu's code of punishment and expiatory Rites:

Manu's rules for punishment and the expiatory rites are some positive measures to check evil practices and moral degradation in the society. Prof. V.S. Agrawal comments –“ Crime committed at any level in society deserve to be dealt with severely and the codes of Manu propounds an unmistakable attitude in this respect..... The majority of Manu's dicta, found in the twelve Books of his code, are of a very edifying nature aiming at the highest exaltation of moral and spiritual values as they become incarnate in the choicest section of the people.”³⁸ Gambling of dice, drinking, stealing of others property, accepting of bribes by royal officers, adultery and many more evil practices cause degradation or erosion of moral values in the society. Manu enjoins sufficient measures to check these evil practices.⁴⁰ In Manu's rule, an offender had to suffer double punishment for an offence. An offender had to suffer punishment first according to the rule of law as well as expiatory rites according to the rule of *Karmaphala*. An offender seems to commit a sin as well as crime. By inflicting double punishment, an offender is warned of not to commit an offence by means of both the rules of law as well as the rule of god or *Karmaphala*.⁴¹

XII) *Varna* and *Asrama* system and work culture:

Manu says that men are the highest amongst the intellectual creatures.⁴² Being the highest of all creatures, they should have some responsibility towards the human society as well as towards the living beings. In fact the existence of the whole creation of the world depends upon the just and positive activities of the members of the human society. Manu's *varna* and *asrama* system uphold that each of the four *varnas* should perform its own duties according to its inborn merits and qualities for the smooth running of the social machinery. The central theme behind the scheme of *varna* and *asrama* was obligation towards one's own duty. None should deviate from the path of its own duties according to the *varna* and *asrama*.⁴³ The *varna* and *asrama* scheme of life is a division of labour according to the merit and skill of the four groups of the society in their different stages of life. Kewal Motwani holds view that division of four social groups results an integrated social order in which all the needs of a harmonious life are provided for.⁴⁴ J.R. Gharpure comments that

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civilization is founded upon mutual service and each of the four groups of the society serves the society by its particular capacity.⁴⁵

XIII) *Rajadharma* and Political norms:

S.N. Gupta comments—"If life is to be valued, economic means will have to be managed for its sustenance and a well ordered society and a good government are to be managed for a peaceful social living."⁴⁶ For a good government, the Political norms should be well guided with the notion of servicing attitude to the subjects. Manu's kingship (*rajadharma*) plays an important role towards the right direction in this respect. The duty of a king is to follow and discharge all the duties related with kingship and to employ all his servants in doing good to his subjects.⁴⁶ The duty of a king should be guided by righteousness which is the preservative force of all. A king is not above the rule of law.⁴⁷ Manu visualises the idea of a good government represented by an ideal king within the frame of righteousness for the welfare of the human society.

Over and above these noble ideals, we have found in Manu's rules some other ideals which have some everlasting values in human society of all ages. These are prohibition against taking liquor, righteousness honesty in acquiring wealth, due respect and due protection of women-folk, equal treatment to a daughter as well as a son, prohibition against exploitation etc.

Conclusion :

Manu's rules for governing social organizations are based on some principles which have some everlasting values towards the cause of humanity. It may be spiritual, moral, ethical, economic, political or social value. But, each of these values tends to uphold values in the human society. The observances of these principles of great values are some conditions for the maintenance of social good as well as the social organizations. Manu, through his codes, teaches that members of the society should cultivate these virtues of eternal value. These principles may be some positive helps for moulding human character and conduct. A man of right conduct is expected to devote himself for the cause of human interest. Someone may ask what is the benefit from these values in this century? We would like to answer that without cultivating these values a man can not claim himself to be a perfect man. Values or good ideals never become old. Most of the rules of Manu advocate some ethical, moral and spiritual values which are some pressing needs of our society. Individualism has been the growing tendency of our present society. Today, the inclination to excessive individualism results extreme consumerism. As a result, the present society seems to run after a philosophy of extreme materialism. Today, the idea of human or social welfare is given a secondary importance and personal interest or gain has been given the primary importance. This philosophy of the individuals of the society is certainly detrimental to the human society. In this context, the universal ideals of the Manusmṛti may be some positive guidelines to recover the good ideals of

ancient past which uphold the interest of human society. Truthfulness, non-violence, work culture, good conduct, human feeling to the disabled and distressed persons, honesty in every sphere of life, charity, observances of one's own *dharma* (duty) etc. are some universal ideals which have some everlasting relevancy in all ages of human history for upgrading social interest.

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2. satyaputam vadedvacam/ Ibid. VI.46
3. vakcaiva madhura slaksna prayojya dharmamicchata/ Ibid.II.159
4. satyam bruyat priyam bruyanna bruyatsatyamapriyam..../ Ibid,IV.138
5. Ibid,IV.138
6. sabham va na pravestaryam vaktavyam va samanjasam/ abruvanbibruvanvapi nara bhavati kilvisi// Ibid, VIII.13
7. Ibid, VIII.13
8. yatra dharmo hyadharmena satyam yatranrtena ca / hanyate preksamananam hatastatra sabhasada// Ibid, VIII.14
9. Ibid, VIII.14
10. saksi drstasrutadanyadvibruvnnarya samsadi/ avangarakamabhyeti pretya svargacca ksiyate// Ibid,VIII.75
11. Ibid,VIII.75
12. phalamulasanairmedhyairmunyannanam ca bhojanaih/na tatphalamavapnoti yamamsaparivarjanat// Ibid,V.48
13. Ibid,V.48
14. Manusmṛti, V.31-32;V.39-51
15. mam sa bhaksayita'mutra yasyamamsamihadmyaham/ etanmamsasya mamsatvam pravadanti manisinah// Ibid,V.55
16. Ibid, XI.143,145,146.
17. Ibid, VII,3-8
18. dharmo eva hato hanti... mano dharmo hato'vadhit// Ibid,VIII.15
19. Ibid, VIII.335
20. yato dandah prakrstatejasvarupah/ Kulluka on Manusmṛti,VII,28
21. Manusmṛti, VII.17-18,27-28
22. Cultural Heritage of India, p.287
23. Manusmṛti,VI.66-67
24. tasmin dese ya acara..... sa sadacara ucyate/ Ibid,II.18
25. acarallabhate hyayuh... duracare hi puruso loke bhavati ninditah// Ibid,IV.156-157
26. Ibid,VI.37
27. brahmahatya surapanam steyam...// Ibid,XI.55;
28. sura vai malamannanam papam ca...// Ibid,XI.94;
29. Also IX.221-228
30. Ethics for Today, P.474
31. naruntudah syadarto'pi na paradrohakarmadheh/ yasyayodvijate nalokyam tamudirayet// Ibid,II.161
32. Ibid,IV.141
33. Ibid,VIII.274
34. Values and Ourselves, p.68
35. santosam paramasthaya sukhārthi samyato bhavet/ santosamulam hi sukhām duhkhamulam viparyayah // Ibid,IV.12

36. Ibid,I.87-91
37. Ibid.X.92-96,129
38. varam svadharma viguno na parakyah
svanusthitah/ paradharmena jivan hi sadyah
patati jatitah// Ibid,X.97
39. sakenapi hi sudrena na karyam
dhanasancayam/ sudro hi dharmamasadya
brahmananeva vadhate// Ibid,X,129
40. Cultural Heriotage of India,PP 290-191
41.danamekam kalau yuge/ Ibid,I.86
42. Ibid,IV,229-233
43. Sosial change in India,P.75
44. brddhamsca nityam seveta vipran vedavidah
sucin/ brddhasevi hi satatam raksobhirapi
pujyate//Manusmrti,VII.38
45. Ibid,II 225-226
46. Ibid.II 227-237
47. Women in Manu and His seven Commentators,
introduction, p.XIII.
48. Manusmrti,VII 123-124, IX,221 FF
49. Aspects of the Social and Political System of
Manusmrti, P.89
50. Manusmrti,I.96
51. Ibid,VI.35-37
52. Manu Dharma Sastra, P.35
53. Teaching of Dharmasastra, p.52
54. Indian Concept of Value, p.40
55. 'evam' caran sada yukto rajadharmesu
parthivah/hitesu caiva lokasya sarvan bhrtyan
niyojayet//Manusmrti,IX.324
56. yato dandah prakrstatejahsvarupah...ato
rajadharmarahitam nrpameva
putrabandhusahitam nasayati/Kuluka on
Ibid,VII.28

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Construction of skill test in handball for college male students

Abstract

In the last few decades sports have gained tremendous popularity all over the globe. The popularity of sports is still increasing at a fast pace and this happy trend is likely to continue in the future also. When one looks at the history of the modern Olympic Games has increased steadily.

Handball, a dynamic team game, is played by both sexes. This sport requires a high degree of skill, excellent body condition and a well coordinated team effort to conquer the opponent. Handball is one those rare games that is easy to learn, but difficult to perfect. The essential rules are easy to understand and strategy may be developed in course of play. Essentially a game of running, throwing and catching, it is played with enjoyment on the first attempt by a beginner of any age.

Skill testing in sports has always been done emphasis on the sports and games like basketball, soccer, cricket, and volleyball, tennis in physical education curriculum created a keen interest in the evaluation of skills in those games and sports especially in 1920's.

Skill test may be used as an aid to teach the particular game or sports. Sometimes an individual may excel in the skill test but fail in actual game situation or vice- versa. Therefore, skill test must be constructed keeping the game situation in view.

Keyword: Handball, Skill test, Soccer, Strategy, Skill.



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Introduction

In the last few decades sports have gained tremendous popularity all over the globe. The popularity of sports is still increasing at a fast pace and this happy trend is likely to continue in the future also. When one looks at the history of the modern Olympic Games has increased steadily. The total number of participating countries and sportsmen has also increased steadily. Several new sports like Sky diving, Skating, Motor racing, Handball have also come into existence and are quite popular with the masses.

Modern team handball has also been called as continental European and Olympic handball. This sport has also been originated from Soccer and has evolved under the influence of Basketball and yet is a unique Olympic sport. It is fun to play and exciting to play, the fast break, the fleet and varied hand movements in passes and shots and spectacular leaps and drives into the air followed by the lightening reactions of the goalkeeper. It is essentially a simple game of well learned fundamentals, executed swiftly in response to rapid developing situation.

Handball, a dynamic team game, is played by both sexes. This sport requires a high degree of skill, excellent body condition and a well coordinated team effort to conquer the opponent. Handball is one those rare games that is easy to learn, but difficult to perfect. The essential rules are easy to understand and strategy may be developed in course of play. Essentially a game of running, throwing and catching, it is played with enjoyment on the first attempt by a beginner of any age.

Although enjoyed by an individual at any fitness level, it is a game of movement where running plays a dominant role and therefore requires a good cardio-respiratory condition. It also develops in its participants speed, agility, strength and power. Handball is suitable for participant of any built, size or height. It is played with exactly the same rules by male and females except for the size of the ball and the length of the game. It is a good off-season activity for those engaged in other sports and may be used as a lead up to other team games.

In modern handball a player is required to be on the move continuously for a certain period of time (60 to 70 min) varying his pace from slow to fast or medium and vice-versa, and many times jumping,

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hopping and changing directions in movement which puts a great deal of demand in term of physical efforts on the part of each player.

Often a handball player finds himself where he must:

1. Break out quickly
2. Sprint short distance
3. Repeatedly run quickly (20 to 30 m)
4. Stop repeatedly from full speed
5. Jump in to the air to catch, pass, shoot, intercept or block the shot
6. Quickly change direction to beat an opponent
7. Make rapid sideward, forward and backward movements in defensive and offensive play
8. Make speedy movements of arm and legs in order to guard opponents or gain possession of ball

Handball is a game which demands high standard of physical fitness and mastery of technique which are complicated. In addition to this, excellent coordination and anticipation is required. To achieve this, it is necessary that the players are inducted into this game quite early and lot of work is put on for achieving goal by way of long term physical and technical plan. This can be achieved best through various preparatory and lead up games. By adopting this method, the children's not only develop feeling of the ball and basic technique without playing the actual game slowly they develop mental picture of the game and develop lot of interest for the actual game of handball.

Increasing popularity of handball has created a demand to put the game in a better scientific thought. Therefore the coach and teachers have endeavored to coach and teach the participants with method and material which would enable them to play the game with more enjoyment and efficiency, for assessing their general handball ability and predicting there performance a definite and appropriate evaluating procedure is needed. A handball skill test serves this purpose in a meaningful ways.

History reveal that as human become more civilized they also become more scientific, and subsequently sought more exact way to mature. For many decade knowledge and skill in the area of measurement have been considered important for graduate study in the field of physical education and sports. But today measurement skill and knowledge are also demand and necessary part of professional preparation of physical education teacher, athletic coaches, sports medicine specialists, and sports management professionals.

Skill testing in sports has always been done emphasis on the sports and games like basketball, soccer, cricket, and volleyball, tennis in physical education curriculum created a keen interest in the evaluation of skills in those games and sports especially in 1920's.

Skill test may be used as an aid to teach the particular game or sports. Sometimes an individual may excel in the skill test but fail in actual game situation or vice- versa. Therefore, skill test must be constructed keeping the game situation in view.

Handball is a very popular game and as such there is a need of developing skill test for the game. Researcher has not found a single skill test in handball; hence, the researcher has undertaken the present study on construction of simple and feasible test in handball.

Aim of Study

Aim of study is to construct a skill test in handball for college male students, so that it could be beneficial for the coaches and physical education teacher and also for the handball player to assess himself.

Variables

Independent Variable –

1. Throw for accuracy
2. Speed dribble test
3. Dribble and shoot test
4. Distance throw
5. Wall bounce test

Dependent Variable – Performance ability

Sample

Fifty male handball players from Jiwaji University, L.I.P.E., Gwalior and D.A.V.V., Indore were selected as subjects for this study. They all had represented their universities in west zone Inter- varsity tournament. The average age of the subject ranged from 18 to 25 years.

Results and Discussion

General handball playing ability of the subjects was assessed by a panel of three experts who were technically qualified in handball. All the experts were asked to give marks to the subjects from zero to ten.

The evaluation was done by the experts through observing the performance of the subjects in the real game situation.

Test selection

By the search and discussion with the experts, it was decided that performance in fundamental skill, could be measured objectively and could prove a valuable guide for predicting the ability of player in a game situation.

By reviewing book on methods of teaching physical education and sports, test and measurement in physical education and sports, research report and discussion with the experts, the following skill test were selected for constructing the test battery.

1. Throw for accuracy
2. Speed dribble test
3. Dribble and shoot test
4. Distance throw
5. Wall bounce test

Procedure for collecting data

Subjects were given detailed instructions about the purpose of the study and detail of all the tests were explained to them along with demonstration of each test item. They were given sufficient number of trials to enable them to become familiar with the test.

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Data was collected based upon their performance in throwing for accuracy, speed dribble test, distance throw and wall bounce test. The test were conducted on three days, at Indore and L.N.I.P.E., Gwalior respectively.

Procedure for administrating test

Test was conducted by the researcher himself. The score of each test was recorded by the researcher. Each subject was given adequate instructions of all the tests. They were asked to do their best.

Throw for accuracy

Purpose

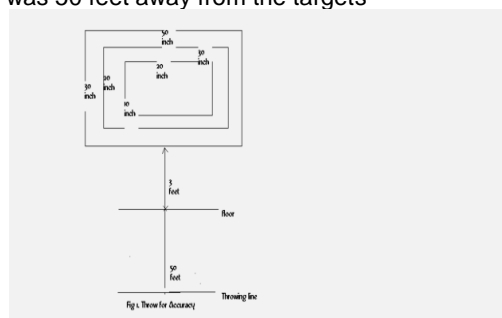
To measure the throwing accuracy of handball players.

Equipment

Handball, measuring tape, score sheet

Administration of test

The target as shown in figure 1 was a series of rectangles of various sizes, arranged one inside the other with the dimensions 50 inches by 30 inches, 30 by 20 inches, 20 by 10 inches. The target was drawn on the wall 3 feet above the floor and the throwing line was 50 feet away from the targets



Scoring

Each subject was given three chances and sum of the points in three chances was taken as score.

Speed dribble test

Purpose

To test the speed of the dribble with the ball in zigzag and straight line

Equipment

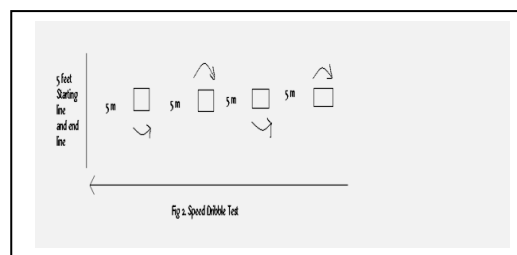
Handball, hurdles (chair), measuring tape and stop watch.

Administration of test

Four hurdles (chair) were placed in a line 5meters apart, with a distance of 5 meter from the starting line to the first line to the hurdle. The length of starting line was 5 feet. The subject started from the right/ left of starting line, dribbling around in a zigzag manner through the hurdles and as he crossed the forth hurdle, the subject started dribbling straight line as shown in figure 2. Two trials were given with one minute rest.

Scoring

Best of two trials in seconds was recorded as the score.



Dribble and shoot test

Purpose

To measure the shooting accuracy of the handball players

Equipments

Handball, measuring tape and score sheet

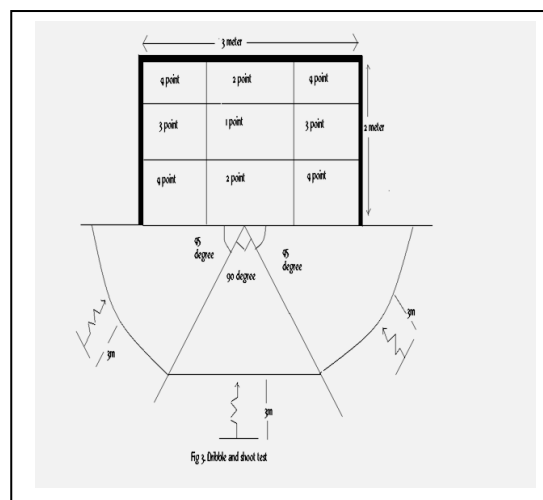
Test administration

A target similar to the handball goal post was marked on a plane wall with the scoring 4,3,2,1 as shown in figure3. A nine meter semi circle is marked. The semi circle was divided into three parts (center—90°, left—45°, and right—45°)

As shown in figure3. The subject was given two chances from each side to shoot the score. He dribble from 3 meter area behind the semi circle and was asked to shoot at target without stepping over nine meter shooting circle. He was allowed to take jump and land in the circle after releasing the ball.

Scoring

Total score of six chances from three angles was taken as the score.



Distance throw

Purpose

To measure the throwing ability of handball players.

Equipment

Handballs, measuring tape and score sheet.

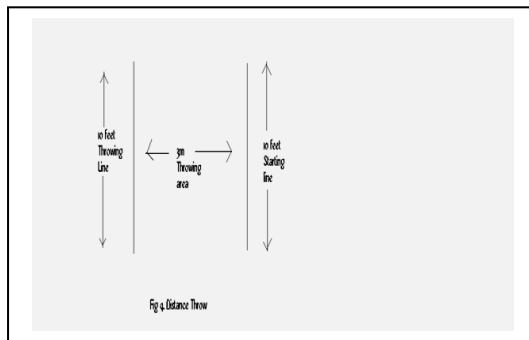
Test administration

A throwing line (10 feet long) was drawn on the ground and 10 feet long line was drawn 3 meter behind the throwing line and subject was allowed to throw the ball as far as possible from this 3 meter throwing area without crossing the throwing line as shown in figure 4. Two trials are given.

Scoring

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Maximum distance covered in two trials was taken as his score.



Wall bounce test

Purpose

To measure the chest pass and collection ability of handball players.

Equipment

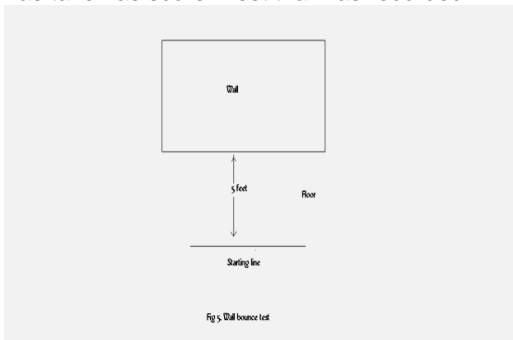
Handballs, measuring tape, stop watch and score sheet.

Test administration

Subject stood with his toes behind a line which was marked five feet away from a wall as shown in figure 5. On the signal, subject was asked to throw the ball on the wall (Chest pass with both the hands) and collect the rebound behind the line. If ball fell between restricted area subject was allowed to collect the ball, come back behind the starting line to start again. Batting was not allowed. Two trials of one minute were given.

Scoring

Number of legal chest passes in one minute was taken as score. Best trial was recorded.



Statistical procedure

To establish scientific authenticity of the different test items of the handball skill test, Product moment correlation, multiple correlation, and regression analysis were used.

Analysis of data and results of the study

The statistical analysis of data collection on different items of the handball playing ability has been presented in this chapter. This chapter also includes the procedure adopted for establishing scientific authenticity of the handball skill test.

Procedure adopted for establishing scientific authenticity

Reliability

The reliability of each test item chosen by the researcher was established using test retest method. Twenty subjects were tested on each test item of the handball on two different days with an interval of one day in between. The obtained values of coefficient of correlation were higher from the value of coefficient of correlation of 0.444 needed for significance at 0.05 level of confidence with 18 degree of freedom.

Objectivity

The objectivity of each test item was computed by testing the subject on each test item of handball skill test on two days with an interval of one day in between as it was done in case of establishing reliability. At the first instance the test was administered by the researcher himself and after a day's interval the test was repeated by Shri Manish Jaiswal, sports officer, IPS academy, Indore and at Gwalior by Shri Ashish Pulkar, lecturer, L.N.I.P.E., Gwalior. The score obtained on two days were correlated and analysis of data pertaining to this is presented in table 2.

Table 2

Objectivity coefficient of the different test item of handball skill test

S.NO.	Test Items	Coefficient of correlation
1.	Throw for accuracy	0.668428*
2.	Speed Dribble test	0.760311*
3.	Dribble and shoot test	0.73089388*
4.	Distance throw	0.753167657*
5.	Wall bounce test	0.719549*
6.	Whole test	0.558888*

*Significance at 0.05 level of confidence.

The analysis of data in table 2 shows that in each test item the subjects have shown consistency of performance which is evident from the value of coefficient of correlation. The obtained values of coefficient of correlation were higher than the value of coefficient of correlation 0.281 needed for significance at 0.05 level of confidence with 48 degree of freedom.

Validity

For establishing validity of the raw scores of each test item, the raw data was converted into Z-scores and then into standard scores. The standard scores for each subject for all the five items were added up to obtain on handball skill test items were correlated with handball playing ability scores of the subjects rated by a panel of handball experts. Analysis of data relating to this is presented in table 3.

Table 3

Validity coefficient of the different test items of handball skill test

S.NO	Test Items	Coefficient of correlation
1.	Throw for accuracy	0.396887*
2.	Speed Dribble test	0.381292*
3.	Dribble and shoot test	-0.12858*
4.	Distance throw	0.118817*
5.	Wall bounce test	0.348383*
6.	Skill test with handball playing ability	0.493867*

*Significance at 0.05 level of confidence.

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Analysis of data pertaining to validity shows that the test items had low correlation of throw for accuracy; speed dribble test, wall bounce test and overall skill test were higher from the value of coefficient of correlation of 0.281 needed for significance at 0.05 level of confidence with 48 degree of freedom.

For computing multiple correlations, the first step was to compute inter correlations among the various test items. Further, Multiple correlation was computed and the analysis of data is presented in table 4 and 5 respectively.

Table 4 :Zero order correlation Matrix

	C	X1	X2	X3	X4	X5
C	1	0.396887	0.381292	-0.12858	0.118817	0.348383
X1	-	1	0.266888	-0.019283	-0.138774	-0.01852
X2	-	-	1	-0.18047	-0.03292	0.14716
X3	-	-	-	1	-0.12499	0.019013
X4	-	-	-	-	1	0.35438
X5	-	-	-	-	-	1

C- Judges rating

X1- Throw for accuracy

X2- Speed dribble test

X3- Dribble and shoot test

X4- Distance throw

X5- Wall bounce test

Table 5 : Coefficient of multiple correlations

Dependent variable	Independent variable	Coefficient of multiple correlation
C- Performance ability in handball	1. Throw for accuracy 2. Speed dribble test 3. Dribble and shoot test 4. Distance throw 5. Wall bounce test	$R_c = 0.718776613$ 3*

*Significance at 0.05 level of confidence.

Multiple Regression Analysis

The multiple regression analysis performed to develop equation for the prediction of handball playing ability on the basis of skill test resulted in the following equation

$$X_c = 0.42294174 X_2 + 0.34115512 X_1 + 0.032241881 X_4 + 0.075165096 X_5 - 0.034395438 X_3 - 1742.594614$$

X_c = Performance ability X_1 = Throw for accuracy

X_2 = Speed dribble test X_3 = Dribble and shoot test

X_4 = Distance throw X_5 = Wall bounce test

Discussion of findings:

The finding of the present study indicated that the reliability and objectivity coefficients of different test item as well as the test item taken together was significant at 0.05 level of confidence. The above finding may be because of the fact that all the items were constructed in a systematic order keeping the opinion of the experts as well as consulting literature. Besides the above factors,

uniform instructions were given to the subjects and the similar procedure was followed in the administration of the test. Hence, significant correlation was obtained for reliability and objectivity. Negative correlation was found in dribble and shoot test probably because subjects tried to shoot the ball at corner to get high score and thus resulted in ball going outside. Distance throw did not show significant correlation with playing ability because throwing alone is not a major skill which affects the performance. Multiple correlation value obtained $R_c = 0.718776613$ shows that the combined contribution of all the five test items contribute significantly towards playing ability.

Therefore, the handball test battery constructed by the researcher is reliable, objective and valid. Hence the test meets the criteria of scientific authenticity.

Results of the multiple regression analysis presented in the preceding section of this chapter seems to indicate that it is possible to make prediction regarding handball playing ability on the basis of Throw for accuracy, speed dribble test, dribble and shoot test, distance throw, and wall bounce test.

Conclusion:

Within the limitations of the present study it may be concluded that the handball skill test battery constructed meets the criteria of scientific authenticity, that is, the test items are reliable, objective and valid. Therefore, test battery constructed may be used for assessing the handball playing ability of college students.

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शिक्षित महिलाओं के बदलते स्वरूप एवं आर्थिक स्वतंत्रता



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अनादिकाल से वर्तमान तक देश में परिस्थिति के अनुसार समाज में समय-समय पर स्त्रियों की स्थिति में परिवर्तन तथा उनके उत्थान के लिये मांग उठती रही है। आर्यों के भारत में आने के प्रारंभिक दिनों के पूर्व वैदिक काल में स्त्री तथा पुरुषों को समकक्ष माना जाता रहा है और यह स्थिति लगभग उत्तर वैदिक काल तक चलती रही। इस दौरान स्त्रियाँ सामाजिक, राजनीतिक, आर्थिक व धार्मिक कार्यों में पुरुषों के साथ बराबरी की भागीदारी करती रही हैं। हिन्दू शास्त्रों में भी उन्हें शक्ति का प्रतीक दुर्गा, धन का प्रतीक लक्ष्मी और विद्या का प्रतीक सरस्वती और अन्न की प्रतीक अन्नपूर्णा माना जाता रहा है। स्मृति काल में ब्राह्मण धर्म में कट्टरता के कारण पुरुषों ने अधिकारों की प्राप्ति की लालसा में स्त्रियों के अधिकारों का दायरा सीमित कर दिया और स्त्रियों को मात्र पुरुषों का आदेश मानने वाली अनुचरणी बना दिया गया। उनको पुरुषों के अधीन रहना पड़ता था। उनको सामाजिक, राजनीतिक, आर्थिक क्षेत्रों में काम करने की स्वतंत्रता तथा घूमने पर प्रतिबंध था किन्तु खेतीहर शिल्पी तथा कामदारों की स्त्रियाँ पुरुषों के समान कृषि शिल्प, कला एवं मजदूरी आदि के क्षेत्रों में स्वतंत्रतापूर्वक कार्य करती थीं किन्तु उनको भी पुरुषों के अधीन ही काम करना पड़ता था। मध्यकाल तथा मुस्लिम काल में भी स्त्रियों की स्थिति और बिगड़ गई जिसमें सुधार के प्रयास आंग्ल शासन काल में किये गये। किन्तु ये सुधार तभी किये गये जबकि सामाजिक तथा धार्मिक सुधारकों ने इसकी मांग की। वास्तविक रूप में तो स्त्री उद्धार तभी किये गये जबकि सामाजिक तथा धार्मिक सुधारकों ने इसकी मांग की। वास्तविक रूप में तो स्त्री उद्धार की मांग उन्नीसवीं शताब्दी में ही की गई। भारतीय समाज एवं संविधान में नारी के सुधार हेतु विभिन्न प्रयास किये गये। स्वतंत्रता के पश्चात स्त्रियों की दशा में क्रांतिकारी चेतना आई।

आज सभी क्षेत्रों में स्वयं जीविका उपार्जित करने वाली स्त्रियों की संख्या बढ़ती जा रही है। शिक्षा, उद्योग, व्यापार, व्यवसाय तथा सरकारी सेवाओं में उनकी संख्या दिन-प्रतिदिन बढ़ती जा रही है। आर्थिक क्षेत्र में आत्म निर्भरता ने स्त्रियों के विचारों को भी पर्याप्त स्वतंत्र कर दिया है। अनेक स्त्रियाँ संगठित रूप से अपने-अपने उद्यम चला रही हैं। अनेक स्त्रियाँ लघु एवं कुटीर उद्योगों में भी जुड़ी हैं जिससे महिलायें प्रत्यक्ष व अप्रत्यक्ष रूप से आर्थिक क्रियाओं में योगदान हमेशा से देती रही हैं। कुछ समय पूर्व तक वे घर के कार्यों में हाथ बटाने के साथ-साथ कुटीर उद्योगों व खेती-बाड़ी व पैतृक व्यवसाय में अपना आर्थिक योगदान देती थीं। आज भी ग्रामीण क्षेत्र की महिलाएं कृषि, पशु व्यवसाय, हैण्डलूम आदि में काफी अनुपात में भागीदारी निभा रही हैं तो वहीं शहरी क्षेत्रों में महिलाएं सुविधाओं व क्षेत्रों के विकास व बढोत्तरी के कारण अन्य क्षेत्रों जैसे – इलेक्ट्रॉनिक्स, चिकित्सा, प्रशासनिक, विधि, उपभोक्ता, उपदान तथा संगठित क्षेत्रों में उद्योग में भी अपनी हिस्सेदारी निभा रही है। अब वे पूर्णतया पुरुषों पर निर्भर नहीं हैं। महिलाओं के उद्धार में भारत सरकार एवं प्रदेश सरकारों एवं महिला संगठनों द्वारा महिलाओं को प्रत्येक क्षेत्र में अग्रसर करने के लिये, उनकी रक्षा के लिये, उनके अधिकारों के लिये सराहनीय कार्य किये गये हैं जिसके फलस्वरूप महिलाएं अपने अधिकारों एवं कर्तव्यों के प्रति सजग रहकर कार्य करने लगी हैं। महिलाओं में आर्थिक स्वतंत्रता के लिये सागर जिले की 60 प्रतिशत महिलाओं का सर्वेक्षण किया गया है। जिसका विवरण शोध आलेख में प्रस्तुत किया गया है।”

मुख्य शब्द : क्रांतिकारी चेतना, आर्थिक योजना, महिला सशक्तिकरण प्रस्तावना

अनादिकाल से वर्तमान तक देश में परिस्थिति के अनुसार समाज में समय-समय पर स्त्रियों की स्थिति में परिवर्तन तथा उनके उत्थान के लिये मांग उठती रही है। आर्यों के भारत में आने के प्रारंभिक दिनों के पूर्व

Periodic Research

वैदिक काल में स्त्री तथा पुरुषों को समकक्ष माना जाता रहा है और यह स्थिति लगभग उत्तर वैदिक काल तक चलती रही। इस दौरान स्त्रियाँ सामाजिक, राजनीतिक, आर्थिक व धार्मिक कार्यों में पुरुषों के साथ बराबरी की भागीदारी करती रही हैं। हिन्दू शास्त्रों में भी उन्ह शक्ति का प्रतीक दुर्गा, धन का प्रतीक लक्ष्मी और विद्या का प्रतीक सरस्वती और अन्न की प्रतीक अन्नपूर्णा माना जाता रहा है। स्मृति काल में ब्राह्मण धर्म में कट्टरता के कारण पुरुषों ने अधिकारों की प्राप्ति की लालसा में स्त्रियों के अधिकारों का दायरा सीमित कर दिया और स्त्रियों को मात्र पुरुषों का आदेश मानने वाली अनुचरणी बना दिया गया। उनको पुरुषों के अधीन रहना पड़ता था। उनको सामाजिक, राजनीतिक, आर्थिक क्षेत्रों में काम करने की स्वतंत्रता तथा घूमने पर प्रतिबंध था किन्तु खेतीहर शिल्पी तथा कामदारों की स्त्रियाँ पुरुषों के समान कृषि शिल्प, कला एवं मजदूरी आदि के क्षेत्रों में स्वतंत्रतापूर्वक कार्य करती थीं किन्तु उनको भी पुरुष के अधीन ही काम करना पड़ता था। मध्यकाल तथा मुस्लिम काल में भी स्त्रियों की स्थिति और बिगड़ गई जिसमें सुधार के प्रयास आंग्ल शासन काल में किये गये। किन्तु ये सुधार तभी किये गये जबकि सामाजिक तथा धार्मिक सुधारकों ने इसकी मांग की। वास्तविक रूप में तो स्त्री उद्धार तभी किये गये जबकि सामाजिक तथा धार्मिक सुधारकों ने इसकी मांग की। वास्तविक रूप में तो स्त्री उद्धार की मांग उन्नीसवीं शताब्दी में ही की गई। भारतीय समाज एवं संविधान में नारी के सुधार हेतु विभिन्न प्रयास किये गये। स्वतंत्रता के पश्चात स्त्रियों की दशा में क्रांतिकारी चेतना आई। भारतीय संविधान में इस बात का अनुच्छेद 15 में स्पष्ट रूप से उल्लेख किया गया है कि जाति अथवा लिंग के आधार पर राज्य नागरिकों में कोई भेद नहीं रखेगा। परिणामस्वरूप स्त्रियों ने उन समस्त राजनीतिज्ञ अधिकारों की प्राप्ति की, जो कि पहले पुरुषों को प्राप्त थे। अब वे केवल वोट ही नहीं डालती वरन् चुनाव में खड़ी होती हैं और विजय प्राप्त करती हैं। केन्द्र में लोक सभा और राज्यों में विधान सभा और विधान परिषद में उनका प्रतिनिधित्व बढ़ता जा रहा है। आजकल प्रत्येक राजनीतिक दलों में स्त्रियाँ सक्रिय भाग लेती हैं। इस प्रकार हम देखते हैं कि वर्तमान समय में स्त्रियों की दशा में तीव्रता से परिवर्तन आ रहे हैं। वे पूर्व के समान परतंत्रता की बेड़ियों में नहीं जकड़ी हुई हैं। जीवन के प्रत्येक क्षेत्र में वे सक्रियता से भाग ले रही हैं। उन में आत्म निर्भरता, स्वतंत्रता तथा राजनीतिक चेतना का पर्याप्त विकास हो रहा है। सरकार द्वारा बनाये हुये अनेक कानूनों ने उनकी स्थिति को और सुदृढ़ बना दिया। अब वे पूर्णतया पुरुषों पर निर्भर नहीं हैं। महिलाओं के उद्धार में भारत सरकार एवं प्रदेश सरकारों एवं महिला संगठनों द्वारा महिलाओं को प्रत्येक क्षेत्र में अग्रसर करने के लिये, उनकी रक्षा के लिये, उनके अधिकारों के लिये सराहनीय कार्य किये गये हैं जिसके फलस्वरूप महिलाएं अपने अधिकारों एवं कर्तव्यों के प्रति सजग रहकर कार्य करने लगी हैं। महिलाओं में आर्थिक स्वतंत्रता के लिये सागर जिले के 60 प्रतिशत महिलाओं का सर्वेक्षण किया गया है।

प्रस्तुत अध्ययन सागर जिले में नौकरी/व्यवसाय में कार्यरत महिलाओं का अध्ययन देव निर्देशन विधि से चयन किया गया। अध्ययन के लिये कुल 60 महिलाओं का चयन किया गया जिसमें 30 शहरी क्षेत्र से एवं 30 ग्रामीण क्षेत्र की महिलाओं को शामिल किया गया। इसमें शासकीय/अशासकीय उद्योग व्यवसाय एवं अन्य क्षेत्रों में कार्यरत महिलाओं से आर्थिक स्वतंत्रता तथा उनकी समस्याओं के संबंध में जानकारी ली गई।

तालिका क्रमांक – 1

सर्वेक्षित महिलाओं में शैक्षणिक स्तर के आधार पर वर्गीकरण

शिक्षा का स्तर	शहरी	ग्रामीण	कुल	कुल का प्रतिशत
अशिक्षित	—	—	—	—
प्राथमिक	2	6	8	13.33
मिडिल	7	9	16	26.66
हायर सेकेंडरी	4	7	11	18.33
स्नातक	9	5	14	23.33
स्नातकोत्तर	8	3	11	18.33
कुल	30	30	60	100

स्रोत : व्यक्तिगत तथ्यों का संकलन।

उपरोक्त तालिका क्रमांक-1 में सर्वेक्षित शहरी तथा ग्रामीण क्षेत्र की महिलाओं को शैक्षणिक स्तर पर वर्गीकृत किया गया है जिसमें 13.33 प्रतिशत प्राथमिक, 26.66 प्रतिशत मिडिल 18.33 प्रतिशत हायर सेकेंडरी 23.33 प्रतिशत स्नातक एवं 18.33 प्रतिशत स्नातकोत्तर स्तर की महिलाएं हैं।

तालिका क्रमांक – 2

सर्वेक्षित महिलाओं को व्यवसाय/नौकरी के आधार पर वर्गीकृत

व्यवसाय/नौकरी	शहरी	ग्रामीण	कुल	प्रतिशत
प्रशासनिक अफसर	2	3	5	8.33
शिक्षिका	8	10	18	30.00
क्लर्क	5	4	9	15.00
चपरासी	2	3	5	8.33
घरेलू कामकाजी/महिला	5	4	9	15.00
स्वयं की दुकान/व्यवसाय	8	6	14	23.33
कुल	30	30	60	100

उपरोक्त तालिका क्रमांक-2 में सर्वेक्षित महिलाओं को व्यवसाय/नौकरी के आधार पर वर्गीकृत किया गया है जिसमें 8.33 प्रतिशत प्रशासनिक ऑफीसर 30 प्रतिशत शिक्षिका क्लर्क 8.33 चपरासी, 15 प्रतिशत घरेलू कामकाजी महिला तथा 23.33 प्रतिशत स्वयं की दुकान/व्यवसाय में कार्यरत हैं।

तालिका क्रमांक – 3

सर्वेक्षित महिलाओं में नौकरी/व्यवसाय में जाने की स्वतंत्रता

उत्तरदाता	ग्रामीण	शहरी	कुल	प्रतिशत
हां	13	19	32	53.33
नहीं	17	11	28	46.66
कुल	30	30	60	100

Periodic Research

स्त्रोत : व्यक्तिगत तथ्यों का संकलन।

उपरोक्त तालिका क्रमांक-3 में महिलाओं से पूछा गया कि आपको नौकरी/व्यवसाय करने की स्वतंत्रता है। जिसमें 53.33 प्रतिशत महिलाओं का उत्तर हां तथा 46.66 प्रतिशत महिलाओं का उत्तर नहीं था। लेकिन मजदूरी या घर में लड़-झगड़ कर नौकरी कर रही हैं।

तालिका क्रमांक - 4

सर्वेक्षित महिलाओं में नौकरी/व्यवसाय में जाने से रोकने वाले का संबंध

संबंध	ग्रामीण	शहरी	कुल	प्रतिशत
पिता	3	2	5	17.86
माता	1	1	2	7.14
भाई	2	2	4	14.28
पति	6	3	9	32.14
ससुर	2	2	4	14.28
सास	3	1	4	14.28
कुल	17	11	28	100

स्त्रोत : व्यक्तिगत तथ्यों का संकलन

उपरोक्त तालिका क्रमांक-4 में महिलाओं में नौकरी/व्यवसाय करने पर परिवार के सदस्यों का संबंध को दर्शाया गया है। जिसमें 17.86 प्रतिशत पिता 7.14 प्रतिशत माता, 14.28 प्रतिशत भाई, 32.14 प्रतिशत पति, 14.28 प्रतिशत ससुर एवं 14.28 प्रतिशत सास द्वारा स्वतंत्रता नहीं दी जाती है। जिसमें सर्वाधिक पति का 32.14 प्रतिशत है।

तालिका क्रमांक - 5

सर्वेक्षित महिलाओं में खर्च करने तथा आर्थिक निर्णय लेने की स्वतंत्रता

उत्तरदाता	ग्रामीण	शहरी	कुल	प्रतिशत
हां	11	16	27	45.00
नहीं	19	14	33	55.00
कुल	30	30	60	100

स्त्रोत : व्यक्तिगत तथ्यों का संकलन

तालिका क्रमांक-5 में महिलाओं से खर्च करने तथा आर्थिक निर्णय लेने की स्वतंत्रता के बारे में पूछा गया। जिसमें 45 प्रतिशत का उत्तर हां तथा 55 प्रतिशत का उत्तर नहीं में था।

उपरोक्त सागर जिले में सर्वेक्षित 60 महिलाओं से आर्थिक स्वतंत्रता से संबंधित कई तथ्य सामने आये हैं जो वर्तमान में महिलाओं के आर्थिक स्वतंत्रता तथा नौकरी व्यवसाय करने की स्वतंत्रता तथा उनकी समस्याओं से संबंधित निम्न तथ्य हैं :-

1. ग्रामीण क्षेत्रों में उच्च वर्ग की महिलाओं को घर से बाहर निकलकर किसी प्रकार का कोई श्रम या व्यवसाय करने की स्वतंत्रता नहीं मिलती है। जबकि वहीं निम्नवर्ग, गरीब वर्ग की महिलाओं को श्रम व व्यवसाय करने की स्वतंत्रता मिलती है। लेकिन उन्हें आर्थिक निर्णय लेने (खर्च करने) के लिये अपने परिवार वालों से सहमति लेनी पड़ती है।

2. शहरी क्षेत्रों में उच्च वर्ग की महिलाओं एवं शिक्षित वर्ग की महिलाओं में नौकरी करने व व्यवसाय करने की स्वतंत्रता मिलती है। तथा वे अपने पारिवारिक दायित्वों में भी बढ़ चढ़ कर हिस्सा लेती हैं।
3. जिन महिलाओं को नौकरी/व्यवसाय करने की स्वतंत्रता है लेकिन व अपनी इच्छा अनुसार उन पैसों को व्यय नहीं कर सकती है। यदि उन्हें किसी प्रकार का आर्थिक निर्णय लेना है तो उन्हें परिवार में सहमति लेना पड़ती है।
4. सर्वेक्षित महिलाओं का कहना था कि उन्हें अपना पूरा वेतन अपने पति को देना पड़ता है यदि उन्हें खर्च चाहिये तो वे अपने पति से मांगती है।
5. जिन महिलाओं को घर से नौकरी करने की अनुमति नहीं है ऐसी महिलायें अपनी जबरदस्ती के कारण अपने पति एवं परिवार से अलग रह कर नौकरी कर रही है।
6. सर्वेक्षित महिलाओं का कहना था कि उनके पति और परिवार वाले नौकरी छोड़ने को मजबूर कर रहे हैं लेकिन शासकीय नौकरी होने के कारण उन्होंने नहीं छोड़ी।
7. सर्वेक्षित महिलाओं का कहना था कि वे केवल अपने घर में ही अपना व्यवसाय कर सकती हैं उन्हें बाहर जाने की अनुमति नहीं है।
8. सर्वेक्षित महिलाओं का यह भी कहना था कि उनके पति नौकरी नहीं करते हैं इसलिए वे उन्हें भी नौकरी करने से मना करते हैं क्योंकि वे इसमें अपने आपको अपमानित महसूस करते हैं।
9. जिन महिलाओं के पति नौकरी पर नहीं हैं वे उन महिलाओं को नौकरी करने की अनुमति नहीं देते क्योंकि वे अपनी प्रतिष्ठा स्वाभिमान की बात करते हैं।
10. महिलाओं का कहना था कि उनके पति उनको अपने से बड़े पद पर कार्य करते देखना पसंद नहीं करते।
11. संयुक्त परिवार में जब तक रहते थे तो नौकरी/व्यवसाय की अनुमति नहीं थी लेकिन जब वे अपने पति के साथ अलग रह रही हैं तो वे नौकरी करने के लिये स्वतंत्र हैं।

नौकरी/व्यवसाय में कार्यरत महिलाओं की समस्याएं

1. घर निर्धारित समय पर पहुंचना पड़ता है यदि किसी कारण आफिस में या कार्य स्थल पर विलंब हो जाती है तो उन्हें घर में जबाब देना पड़ता तथा पति की डांट सहनी पड़ती है।
2. यदि किसी साथ में रहने वालों के साथ आने जाने में, उसके साथ बात-चीत करने में अथवा कोई काम पढ़ने पर घर में संपर्क करने से शक की दृष्टि से देखा जाता है।
3. आफिस/कार्यस्थल से घर जाने-जाने में चोरी छुपे निगरानी रखते हैं। जिससे यदि कोई परिचित व्यक्ति मिल जाता है उससे बात करने पर घर में झगड़े होते हैं।
4. सर्वेक्षित कुछ महिलाओं का यह भी कहना था कि उनके पति उनको नौकरी के लिये साथ लेकर जाते

Periodic Research

- हैं तथा साथ लेकर आते हैं जब तक वह नौकरी करती हैं तब तक वह वहाँ रुके रहते हैं, जो उन्हें अच्छा नहीं लगता।
- सर्वशिक्षित महिलाओं का कहना था कि उन्हें नौकरी करने के लिये पति/परिवार वालों के अनुसार चलना पड़ता है। नौकरी/व्यवसाय वे पति के अनुसार चयन करती हैं। अपने अनुसार नौकरी का चयन नहीं कर सकती हैं।
 - आज जितनी भी महिलाएं हैं चाहे वह किसी भी प्रकार की नौकरी/व्यवसाय कर रही हैं लेकिन वह मानसिक रूप से स्वतंत्र नहीं हैं। उन्हें मानसिक तनाव बना रहता है।
 - आफिस/कार्यस्थल में अचानक निर्णय लेने की बात आ जाती है अथवा कभी कोई सार्वजनिक कार्य, पिकनिक पार्टी संबंधित कार्य आदि में भी उन्हें परिवार से अनुमति लेनी पड़ती है।
 - सामाजिक रूप से भी आज वह स्वतंत्र नहीं है वह घर आते समय या घर से जाते समय भी कोई अजनबी के साथ आने जाने में स्वतंत्र नहीं है क्योंकि यदि उन्हें किसी के साथ समाज और मुहल्ले वाले देखें तो कई तरह के शक एवं तरह-तरह की बातें सामने आती हैं।
 - कहीं एकांत स्थल पर भी वह काम करने से डरती हैं क्योंकि उन्हें वहां भी कई तरह के खतरे सामने आते हैं कि कहीं इज्जत पर कीचड़ न उछाल दे कोई।
 - कई बार उन्हें आफिस/कार्यस्थल पर सहकर्मी से भी खतरा बना रहता है क्योंकि एक महिला होने के कारण तरह-तरह के प्रलोभन देते हैं और उन्हें अपने कब्जे में लेने की कोशिश करते हैं।

उपरोक्त तथ्यों से स्पष्ट होता है कि आज महिलाएं प्रत्येक क्षेत्र में आगे होते हुये भी आज वह पूर्ण रूप से स्वतंत्र नहीं, आज भी महिलाएं गुलामी की जिंदगी जी रही हैं। उन्हें दूसरों के ऊपर निर्भर रहना पड़ता है। उन्हें दूसरों की इच्छा के अनुसार चलना पड़ता है। जबकि उनके साक्षरता के प्रतिशत में कुछ सुधार हुआ। सर्वेक्षण के अनुसार 53.33 प्रतिशत को नौकरी/व्यवसाय करने की स्वतंत्रता मिलती है तथा 46.66 प्रतिशत को स्वतंत्रता नहीं मिलती है। उनकी स्वतंत्रता में प्रतिबंध का सर्वाधिक प्रतिशत उनके पति एवं उनके ससुराल पक्ष का है। जिसम ग्रामीण क्षेत्र का प्रतिशत ज्यादा है एवं शहरी क्षेत्र में कम आर्थिक निर्णय लेने के क्षेत्र में 45 प्रतिशत महिलाएं ही हैं जो घर में किसी भी प्रकार का आर्थिक निर्णय ले सकती हैं। तथा 55 प्रतिशत को आर्थिक निर्णय लेने की स्वतंत्रता नहीं है उनको कई तरह की सामाजिक, आर्थिक, मानसिक पारिवारिक एवं प्रताड़ना जैसी समस्याओं का सामना करना पड़ता है। दूसरी ओर सरकार ने महिलाओं का स्तर उठाने के लिये उन्हें संरक्षण देने के लिये अनेक तरह का प्रयास किया है तथा उन्हें सुरक्षा की दृष्टि से आरक्षण एवं कानून जैसी व्यवस्था भी की गई तथा उन्हें जागरूक करने के लिये तरह-तरह के प्रचार-प्रसार, महिला समितियों का गठन महिला मण्डलों की स्थापना, महिला जागरूकता से संबंधित विभिन्न कार्यक्रम आदि करने के

बाद भी आज महिलाओं की स्थिति समाज में संतोषजनक नहीं है।

आज पाकिस्तान की एक शायरा सारा शगुफ़ता जलते हुए अक्षरों में जो वक्त की दास्तान लिख रही है, उससे इसान का इतिहास शर्मिन्दा है मगर इंसानियत के इतिहास को उस पर नाज है लिखती है :—

मेरा कफन जहरीले धागों से सिया जा रहा है

हर आलोचक, गैर आलोचक मेरे बदन में झांकना चाहता है

मैं किस-किस परचम के बन्द खोलूँ

क्या औरत का बदन से ज्यादा कोई वतन नहीं होता?

यह कैसा घर है?

कि औरत और इजाजत में कोई फर्क नहीं?

मैं कभी दीवारों में चिनी गई,

कभी बिस्तर में चिनी जाती हूँ

औरत जब अपनी पहचान अपने माध्यम से नहीं पा सकी, तो वो मर्द के माध्यम से पाने लगी और यहीं से मानसिक गुलामी की दास्तान शुरू हुई। इसी से औरत और औरत का रिश्ता एक रकाबत का रिश्ता बन गया और उसकी ताकत ईर्ष्या, जलन और हसद जैसी खामियों में जाया होने लगी।¹

अंतर्राष्ट्रीय स्तर पर भारतीय नारी की स्थिति

अंतर्राष्ट्रीय स्तर पर भी महिलाओं की दशा सुदृढीकरण एवं सशक्तिकरण के लिये अनेक सराहनीय प्रयास किये गये हैं। द्वितीय विश्व युद्ध की समाप्ति के तुरंत बाद 24 अक्टूबर 1945 को संयुक्त राष्ट्र की स्थापना की गई। इनके तत्वाधान में एक अंतर्राष्ट्रीय महिला आयोग का गठन कर इस ओर ध्यान आकर्षित किया गया। आयोग द्वारा महिलाओं की दशा सुधार हेतु व्यापक मसविदा तैयार कर महासभा के सदस्य राष्ट्रों के जनसमर्थन के पश्चात इसकी घोषणा की गई। महिला वर्ष, महिला दशक बालिका वर्ष, महिला सशक्तिकरण वर्ष तथा महिलाओं की स्थिति पर चार विश्व सम्मेलनों का आयोजन एवं अन्य अनेक अंतर्राष्ट्रीय बैठकों सभाओं तथा मानव अधिकार प्रपत्रों का प्रतिपादन किया गया। भारत ने भी नारियों को समान अधिकार दिलाने संबंधी विभिन्न अंतर्राष्ट्रीय कन्वेंशनों, घोषणाओं एवं मानव अधिकार प्रपत्रों का अनुसरण किया है।²

पारिवारिक दायित्वों में वृद्धि

स्व-प्रतिबिम्ब को उभारते हुए अपने पारिवारिक दायित्वों का निर्वाह आज की नारी के लिये एक चुनौती है किन्तु इसे सहर्ष स्वीकारते हुये घर की चार दीवारी के भीतर अपने दायित्वों का निर्वाह कर परम्परावादी नारी के रूप में अपने स्व को अर्थ दे रही है। तो घर के बाहर निकल कर राष्ट्र व मानवता के वृहत दायरे में भागीदारीका निर्वाह कर अपनी सशक्तता का बोध करा रही है साथ ही यह भी कह रही है।

“लांघ दे दीवारें दुनियां की, छोड़ बंधन ये परतंत्रता का, बढ़ आगे डर मत नारी, दूढ़ रास्ता अपनी प्रगति का।”

महिला सशक्तिकरण में बढ़ोत्तरी :

प्राचीन धर्मशास्त्रों में दास व सम्पत्ति के रूप में वर्णित नारी आज अधिकार विहीन नहीं अपितु अधिकार सम्पन्न है। इसीलिए आज कवि यह पंक्ति कहते हैं :—

Periodic Research

“सबला जीवन हाय तुम्हारी यह नादानी,
खुली पीठ है, आँखों में पश्चिम का पानी।”

आर्थिक क्षेत्र में स्वतंत्रता :

आजादी के बाद स्त्रियों में शिक्षा के सुधार के साथ-साथ आत्म निर्भरता की भावना भी आती जा रही है। अब वे पहले के समान पूर्णतया पुरुषों पर आश्रित नहीं हैं। आज सभी क्षेत्रों में स्वयं जीविका उपार्जित करने वाली स्त्रियों की संख्या बढ़ती जा रही है। शिक्षा, उद्योग, व्यापार, व्यवसाय तथा सरकारी सेवाओं में उनकी संख्या दिन-प्रतिदिन बढ़ती जा रही है। आर्थिक क्षेत्र में आत्म निर्भरता ने स्त्रियों के विचारों को भी पर्याप्त स्वतंत्र कर दिया है। अनेक स्त्रियाँ संगठित रूप से अपने-अपने उद्यम चला रही हैं। अनेक स्त्रियाँ लघु एवं कुटीर उद्योगों में भी जुड़ी हैं जिससे महिलायें प्रत्यक्ष व अप्रत्यक्ष रूप से आर्थिक क्रियाओं में योगदान हमेशा से देती रही हैं। कुछ समय पूर्व तक वे घर के कार्यों में हाथ बटाने के साथ-साथ कुटीर उद्योगों व खेती-बाड़ी व पैतृक व्यवसाय में अपना आर्थिक योगदान देती थीं। आज भी ग्रामीण क्षेत्र की महिलाएं कृषि, पशु व्यवसाय, हैण्डलूम आदि में काफी अनुपात में भागीदारी निभा रही हैं तो वहीं शहरी क्षेत्रों में महिलाएं सुविधाओं व क्षेत्रों के विकास व बढोत्तरी के कारण अन्य क्षेत्रों जैसे – इलेक्ट्रॉनिक्स, चिकित्सा, प्रशासनिक, विधि, उपभोक्ता, उपदान तथा संगठित क्षेत्रों में उद्योग में भी अपनी हिस्सेदारी निभा रही हैं।¹ आधुनिक युग में स्त्रियों को सभी आर्थिक क्षेत्रों में स्वतंत्रता प्राप्त हो गई है। सरकारी नौकरियों पर इनके लिये किसी प्रकार की रोक नहीं है। आज सभी क्षेत्रों में स्त्रियाँ देखी जा सकती हैं। सिविल सेवाओं में भी इन्होंने उच्च स्थान प्राप्त कर लिये हैं। स्त्रियों को सम्पत्ति संबंधी सभी अधिकार प्राप्त हो गये हैं। संवैधानिक आधार पर सब स्त्रियों को पिता तथा पति की सम्पत्ति में भी अधिकार प्राप्त हो गया है।

रोजगार के क्षेत्र में स्वतंत्रता :

महिलाओं की राष्ट्रीय अर्थव्यवस्थाओं में 60.80 प्रतिशत तक का योगदान रहता है। अनुमान लगाया जाता है कि महिलाओं के अनुमानित श्रम की नकद वार्षिक कीमत लगभग 4 ट्रिलियन डालर होती है जो विश्व के सकल राष्ट्रीय उत्पादन का एक तिहाई भाग है। भारत में महिलाओं की जनसंख्या का 13.99 प्रतिशत भाग आर्थिक क्रियाओं में वर्षभर संलग्न रह पाता है। 50.77 प्रतिशत महिलाएं आर्थिक क्रियाओं में बिल्कुल भाग नहीं लेती। अर्थात् कुल श्रम शक्ति का 20.22 प्रतिशत भाग कार्यकर्ताओं के रूप में महिलाएं हैं। वर्ष 2001 की जनगणना के आधार पर प्रदेश में 3 लाख स्नातक, 500 कृषि स्नातक, 82000 विज्ञान स्नातक, 3700 इंजीनियर तथा 16000 के लगभग डॉक्टर महिलायें हैं। स्वतंत्रता प्राप्ति के पश्चात काम के घण्टे, वेतन, अवकाश, आदि के संबंध में सुधार होने से शिक्षा के कारण अन्य वर्ग की महिलाओं में नौकरी के प्रति रुचि बढ़ी है। आज शिक्षा स्वास्थ्य चिकित्सा, समाज कल्याण, उद्योग और कार्यालयों में स्त्री कर्मचारियों की संख्या निरंतर बढ़ती जा रही है। आज धार्मिक स्वतंत्रता मिल जाने के कारण उनके आत्म

विश्वास कार्यक्षमता व मानसिक स्तर में प्रगति हुई है। इस आधार पर नारियां पुरुषों के समान समाज में स्थान प्राप्त कर सकेंगी। साथ ही आर्थिक स्वतंत्रता उनको अनेक बंधनों तथा दूषित परिणामों से बचा सकेंगी और उनके अंदर स्वाभिमान की भावना जागृत होगी। स्त्रियाँ फिर अन्यायों तथा अत्याचारों को सहन नहीं करेंगी।

आज वैश्वीकरण ने आधुनिक युवा महिलाओं को ग्लोबल सिटीजन बना दिया है जो आत्मनिर्भर स्वनिर्मित आत्मविश्वासी हैं जिसने पुरुष प्रधान चुनौती पूर्ण क्षेत्रों में भी अपनी योग्यता प्रदर्शित की है। वह केवल नर्स, शिक्षक, स्त्री रोगों की डॉक्टर न बनकर इंजीनियर, पायलट, वैज्ञानिक, तकनीशियन, सेना, पत्रकारिता जैसे नए क्षेत्रों को अपना रही हैं। जीवन के हर क्षेत्र में महिलाएं अपनी योग्यता, क्षमता के बल पर झंडे गाड़ रही हैं। देश के विकास में उनकी भागीदारी ने उन्हें अबला, कमजोर से सबला और समर्थ सिद्ध कर दिया है।¹

सर्वेक्षण से यह तथ्य भी सामने आया है कि उम्र बढ़ने के साथ-साथ उन्हें फैसले लेने की छूट मिलती जाती है। ग्रामीण क्षेत्रों की तुलना में शहरी महिलाओं को यह छूट ज्यादा मिलती है। एसोचैम व इको पल्स के सर्वेक्षण के अनुसार वर्ष 1988 से वर्ष 2004 के मध्य महिलाओं को मिलने वाले रोजगार में 3.35 फीसदी की वृद्धि हुई है। वहीं पुरुषों को इस मामले में 8 फीसदी का नुकसान उठाना पड़ा है। निर्जी सार्वजनिक क्षेत्र में महिलाओं की संख्या वर्ष 1998 में 2.34 करोड़ थी जो वर्ष 2004 में घटकर 2.15 करोड़ हो गई है।¹

अन्तर्राष्ट्रीय श्रम संगठन की महिला वैश्विक रोजगार रिपोर्ट के अनुसार समान काम के लिये अभी पुरुषों की तुलना में महिलाओं को वेतन कम मिलता है। विश्व के कुल 2.9 अरब लोगों में महिलाओं की संख्या पहले से अधिक है। बड़ी संख्या में महिलायें कम वेतन वाले कार्यों में लगी हुई हैं। जैसे खेती, महिलाओं की कार्य क्षमता संबंधी निम्न आंकड़े आश्चर्यचकित कर देने वाले हैं। कुल आबादी में आधी होते हुये भी 70 प्रतिशत महिलायें खेती के कार्य में संलग्न, विश्व के कार्य 60 प्रतिशत कार्य महिलायें संपन्न करती हैं। किन्तु केवल 1 प्रतिशत विश्व भूमि पर महिलाओं को स्वामित्व प्राप्त है और विश्वव्यापी आय में केवल 10 प्रतिशत की भागीदारी है। विश्व के 10 खरब गरीबों में 60 प्रतिशत महिलाएं हैं तथापि आर्थिक रूप से कोई बहुत बड़ा सुधार महिलाओं की स्थिति में नहीं हुआ है। वस्तुतः किसी भी देश का विकास लगभग सभी क्षेत्रों में एवं नागरिकों का कल्याण महिलाओं की सक्रिय भागीदारी के बिना संभव नहीं है। जिन्होंने आधा आसमान सिर पर उठा रखा है, उनकी मूलभूत संसाधनों तक कितनी पहुँच है और सामाजिक, राजनीतिक निर्णय, निर्णय प्रक्रिया में कितनी सहभागिता है। महिलाओं की स्थिति विकास का एक प्रकार का संकेतक भी है। वर्ल्ड इकानोमिक फोरम की रैंकिंग के अनुसार महिलाओं का आर्थिक सशक्तिकरण के क्षेत्र में भारत का स्थान 15 नंबर पर है। श्रम शक्ति में महिलाओं की भागीदारी भारत इंडोनेशिया, मलेशिया जैसे देशों में सबसे कम है। संयुक्त राष्ट्र आर्थिक और सामाजिक

आयाग (एशिया प्रशांत के लिये) के वार्षिक आर्थिक सर्वेक्षण 2007 के अनुसार यदि भारत में महिलाओं की भागीदारी अमेरिका के बराबर हो जाये तो देश का सकल घरेलू उत्पाद 4.2 प्रतिशत की दर से बढ़ेगा और वृद्धि दर 1.08 प्रतिशत बढ़ जायेगी जिससे अर्थव्यवस्था को 19 अरब डालर का लाभ होगा। महिलाओं के लिये रोजगार के अवसरों की सुलभता सीमित होने के कारण इस क्षेत्र को प्रति वर्ष 42 से 47 अरब डालर का घाटा उठाना पड़ रहा है। शिक्षा में लड़के-लड़की के बीच अंतर के कारण 16 से 18 अरब डालर का आर्थिक नुकसान हो रहा है और यदि यह अंतर कम नहीं किया गया तो प्रति वर्ष 30 अरब डालर की अतिरिक्त कीमत चुकानी होगी।⁶ ग्रामीण क्षेत्र में महिलाओं का एक और महत्वपूर्ण पक्ष यह है कि गांवों के आर्थिक विकास में केवल पिछड़े वर्गों और दलित महिलाओं की ही भागीदारी होती है। जबकि सामंती परम्परागत संस्कारों में जकड़े होने के कारण आज उच्च वर्ग की महिलाएं घर के बाहर किसी प्रकार का कोई श्रम या व्यवसाय करने नहीं निकलती हैं। यह स्थिति शहरों की स्थिति से भिन्न है जहां उच्च तथा मध्यम वर्ग की महिलाएं नौकरी या व्यवसाय में पुरुषों के साथ कंधा मिलाकर चल रही हैं, जबकि पिछड़े और दलित वर्ग की महिलायें कम या अशिक्षित होने के कारण रोजगार की प्रतियोगिता से बाहर रह जाती हैं।⁷

अतः इससे सिद्ध होता है कि आज महिलाएं प्रत्येक क्षेत्र में अपनी भागीदारी रखती हैं। किन्तु वो पूर्ण रूप से किसी भी क्षेत्र में स्वतंत्र नहीं है। जिसके लिये सरकार अनेक प्रयास कर रही है उनके शैक्षणिक, स्तर में सुधार, सामाजिक, आर्थिक, राजनैतिक, प्रशासनिक आदि क्षेत्रों में बढ़ चढ़ कर हिस्सा लेने के लिये अनेक कार्यक्रमों का क्रियान्वयन भी कर रही हैं ताकि महिलायें आज पुरुष के साथ बराबरी से कंधा से कंधा मिला कर चल सकें और समाज में अपनी अलग पहचान बनाकर बेहतर स्थान प्राप्त कर सकें।

स्रोत :

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Periodic Research

E-Learning : an emerging trend in teacher education



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Abstract

Education is knowledge and knowledge is power computer and Internet have invaded our lives. The world is undergoing numerous transformation due to rapid development and diffusion of ICT in all walks of life. Arrival of computer and internet in field of education has changed the procedure and patterns of education. New technological terms replaced old terms such as banking into e-banking, booking into e-booking, money into e-booking, money, commerce into e-commerce, education into e-education and learning into e-learning. The development of computer technology has resulted in e-learning & learning is a new sensation in the field of teacher education. The term 'e-learning', in general, refers to learning facilitated and supported through the use of ICT. It can cover a spectrum of activities from supported learning, to blended learning (the combination of traditional and ICT enhanced practices), to learning that is entirely on-line & learning, therefore, is a approach to facilitate and enhance learning through both computer and communication technology. E-learning may also be referred as e-education, paperless education, on-line education and web based education. E-learning means technology based distance learning programs conducted on-line where in the students can communicate with peers and teachers. According to Rosenberg (2001)- "e-learning refers to the use of internet technologies to deliver a board array of solutions that enhance knowledge and performance".

Teacher education is the backbone of a country. In the present changing scenario the 'High-tech' age demands teacher education to be update, dynamic and challenging as the society progresses. All the fields have been influenced by technology. Higher education needs to be computerized not only in official administrator but also in instruction, teaching, evaluation, assessment and grading. The teaching & learning method have become more interesting, more informative & more innovative with the help of communication technology. Teacher education has become more interactive & less didactic. E-learning, E-books, CAI. Programmed instructional books, virtual classrooms, T.V. teaching, learning through internet have been slowly introduced in teacher training colleges, where education becomes pupil-centered. The conventional classroom handled by the teaching using chalk & blackboard has been replaced by more participative vie using multimedia, power-point presentation, telecommunication, e-learning etc.

With the emergence of World Wide Web (WWW), the world of teaching and learning had adopted online learning as one of its main innovation for devising learning material properly in order to engage the learner and to promote learning.

It is interesting to note that different terminologies have been used for online learning. Terms that are commonly used include: e-learning, internet learning, distributed learning, networked learning, tele-learning, virtual learning, computer-assisted learning, web-based learning and distance learning.

Keyword: E- learning, Pupil centered

Introduction

Education through E-learning :

Technology has entered in classroom as a support system in the form of windows (.ppt, word, excel), CAI, demonstration on computers. Development in computer technology result in E-learning. E-learning is used in much broader sense than the computer based training] and CAI. Now it is the time of E-learning in teacher education.

- E-learning is way for teachers to learn new knowledge and skills using computer network technologies that enhance knowledge and performance.

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- If E-learning is the instruction that is delivered electronically, in part or wholly via web browser, through the internet or an intranet, or through multimedia platform such as CDROM or DVD Brandon Hall.

E-learning or electronic learning is the general term used for computer enhanced learning. E-learning has the advantage of learning at the learner's pace and also it is available on demand so the learners can access it at anytime, they want. E-learning is a technology based distance learning program conducted online, where in students can communicate with peers & instructors. Teachers at one place can teach multiple students at different locations and the students can receive immediate feedback.

E-learning involves the creation of virtual classroom i.e. classrooms in the cyberspace. Virtual classrooms means there are no actual classrooms, no teachers or textbooks, but it gives the impression of studying in classroom. In E-learning teaching learning process is possible through electronic components like computers & Internet. Some of the institutions offering online courses, associate degree, bachelor degree, master degree & certificate courses included e-school, world.com, e-learn, uk.com, oxford open learning international material including texts, graphics & animation is provided through the internet after the fees is received by the instruction. After receiving the password, the student can go through the course material, listen to the recorded lecture as well as submit assignments & projects on the internet.

Forms of E-learning :

E-learning today allows students to get fully involved interactive and collaborative learning process through the use of internet may be through asynchronous activities or through the synchronous activities.

Asynchronous E-learning :

It includes learning through asynchronous activities like e-mail, discussion forum, blogs, wikis etc. Much of the E-learning approaches are characterized as asynchronous. In asynchronous E-learning programmes are independent of time. Anyone can access the programme at a time and as many times as desired. Communication between people does not take place in real time. Asynchronous E-learning does not need a facilitator or instructor and is one of the more popular E-learning deployment methods. For e.g. self paced courses taken via internet on CDROM and stored audio/video level representation or seminar.

Synchronous E-Learning :

It includes learning through synchronous activities like chat sessions, video-conferencing etc. with synchronous e-learning and teaching takes place at the same time while the trainer and learner are physically separated from each other synchronous programmes are time dependent. Communication takes place in the real time. If you put live classroom training on the web, it is a synchronous event. It is scheduled and students and teachers must be

present at the time, just like any classroom event. Examples of synchronous learning are internet telephony, web conferencing, online lectures, distance learning via interactive satellite, Audio/Video conferencing etc.

Need of E-learning in teacher education :

The ever increasing number of students necessitates more and more of competent teachers and teacher education institutions. At the same time the poor quality of educational standards cannot be justified by this quantitative expansion hence to maintain quality and efficiency imparting teacher education E-learning is needed.

There is urgent need to incorporate E-learning in teacher education programs :

- The students opting for teaching as profession need to give wide and extensive training of E-learning.
- E-learning enables students to get the practical exposure to school and class environment.
- Students themselves use E-learning in the class room when they learn strategies and processes of E-learning.
- Provides opportunities such as teacher less virtual classroom, E-learning e-teaching, e-evaluation.
- Networking in teacher education-specific teacher education institutions need to be networked so that they function in collaborative manner.

E-learning sources/Tools :

Many internet based tools can serve to facilitate classroom management task or provide support for instruction.

- **World Wide Web** : www is computer based network of information resources that a user can move through by using links from one document to other. By using www the learner can access information through e-books and audio video files. It can be viewed multiple times and downloaded whenever needed.
- **E-mail** : Electronic mail allows teacher to send instructions, announcements and assignments to students. Teacher can ask students to send their views on the problematic situation related to the subject matter. Shy students hesitate to interact in person can share his views through e-mail. Both teacher and student can exchange letters, files data or report using e-mail.
- **Online Publications** : Many educational journals now have an online version. Most of these online publications include innovative articles, techniques, and new trends in education useful for teacher educator.
- **Lesson Plan sites** : Practice teaching is important aspect of teacher education. Lesson plan is a key academic resource to practice teaching. Some lesson plans sites offer subject-specific plans, in addition to sites dedicated to lesson plans, links on many educational sites offer lesson plans related to the content of that site. Lesson plans software programs generate

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lesson plans for you and even relate them to specific standard. e.g. <http://www.ngfl.gov.uk>.

- **Portals** : Websites which includes services such as search engine, news email, conferencing etc. are called portal. Different educational portals are available online which allows teacher educator to use this to update knowledge, skills and exchange the views related to subject. Classroom management tools, live classroom training are also available on these educational portals.

ROLE OF THE TEACHER OR TUTOR IN AN E-LEARNING CONTEXT

For the effective online interaction between the students and the teachers, the teachers uses the theoretical model developed by Garrison, Anderson and Archer and this involves three critical components

1. **Cognitive Presence**
2. **Social Presence**
3. **Teacher Presence**

According to them deep and meaningful learning result when there are sufficient level of these three component "presence".

Cognitive presence is grounded in and defined by the study of a particular content. It works within the epistemological, cultural and social expression of the content in an approach that supports the development of critical thinking skills.

The second, social presence relates to the establishment of a supportive environment created by the teacher such that students feel the necessary degree of comfort and safety to express their innovative ideas in a collaborative context. The absence of social presence leads to an inability to express disagreements, share viewpoints, explore differences and accept support and confirmation from peers and teachers.

In the teaching presence the teacher performs three critical roles in the process of creating an effective teaching presence. First, he design and organize the learning experience that takes place both before the establishment of the learning community and during its operation. Second, in teaching learning process the teacher devise and implement activities to encourage discourse between and among students, between the teacher and the student and between and among students, between the teacher and the student, the between individual students and groups of students experience when he adds subject matter expertise through presence is in not always the sole task of the formal teacher. Many contexts, especially when teaching at university level, teaching presence is delegated to or assumed by students as they contribute their own skills and knowledge to the developing learning world community.

Conclusion :

E-learning is still new in India and needs to pickup if education is to have for reaching implication. In fact, what we need in India is combination of e-learning and classroom teaching techniques. The change must take place gradually. The program has to be well designed and publicized well so that it can take off by word of mouth. The challenge for most educational organization that aspire to prove e-

learning in India is to get a good program that meet the learning needs and then makes the cultural change in the way they learn. We may fix 'distributed learning' a mix of deliberately reduced face to face teaching and online learning as a safe e-learning strategy for secondary and tertiary education (Bates, 2001).

The Pro's and Con's of e-learning vary depending on program, goals, target, audience and organizational infrastructure and culture. But it is unarguable that e-learning is rapidly growing as form of training delivery and most are finding that the clear benefits to e-learning will guarantee it is a role in their overall learning strategy.

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छत्तीसगढ़ में वनौषधियों का विपणन
(मरवाही वनमंडल के विशेष संदर्भ में)

सारांश

राज्य में वनौषधियों का विपणन छ.ग. लघु वनोपज संघ (व्यापार एवं विकास) मर्यादित रायपुर द्वारा “छत्तीसगढ़ हर्बल्स” ब्रान्ड नाम से किया जाता है। उक्त कार्य प्रदेश में संचालित **NWFP मार्ट (Whole Seller)** एवं **जिला यूनियन सजीवनी (Retail Outlet)** के माध्यम से स्थानीय स्तर से लेकर अन्तराज्यीय एवं राष्ट्रीय स्तर पर किया जाता है। प्रस्तुत शोध पत्र मरवाही वनमंडल अन्तर्गत ग्राम केवची में संचालित वनौषधि विक्रय केन्द्र से प्राप्त आकड़े के आधार पर तैयार किया गया है। इससे ज्ञात हुआ की प्रदेश में विशेषकर मरवाही वनांचल क्षेत्रों में वनौषधि व्यवसाय के विकास विस्तार की अपार संभावनाएं विद्यमान है यदि क्षेत्र वासियों में इसके प्रति जागरूकता लाकर आवश्यक मार्गदर्शन एवं आर्थिक सहयोग प्रदान कर वनौषधि कारोबार को नई ऊंचाई दी जा सकती है। जिससे क्षेत्रीय विकास के साथ-साथ प्रदेश के विकास का नये आयाम स्थापित हो सकेंगे।

मुख्य शब्द : अर्थ व्यवस्था, विपणन, हर्बल टेस्ट

प्रस्तावना

वनौषधि की अवधारणा के संबंध में किसी प्रकार का लिखित साक्ष्य प्राप्त नहीं होता है कि औषधी का उपयोग कब से मानव करता आया है एवं इसकी शुरुवात किसने की और कैसे हुआ परन्तु विभिन्न धार्मिक ग्रंथों, विद्वानों, लेखकों, ऋषि-मुनियों एवं अन्य महात्माओं द्वारा रचित एवं संकलित लेखों आदि के माध्यम से सार्वभौमिक रूप से स्वीकृत एक बात स्पष्ट परिलक्षित होती है कि जगत सृष्टि ने जब सृष्टि के प्रारम्भ में पंचमहाभूत तथा उससे उत्पन्न संदर्भों को बनाया तभी से प्राणियों के साधनों का भी ज्ञान कराया। अर्थात् सर्वज्ञान सम्पन्न स्वयंभू ब्रम्हा ने लोगों को उत्पन्न करने की इच्छा से आयुर्वेद की रचना की जिसमें औषधी संबंधी जानकारी का उल्लेख किया गया है उसके बाद संपूर्ण प्राणियों की रचना की। अतः मानव या प्राणी मात्र सृष्टि के आरंभ से ही अपने हित या अहित का ज्ञान करता आया है। अपनी आयु की दृष्टि और उत्तरोत्तर नवीन-नवीन उपांगों का अवलंबन या अनुसंधान करता रहा है।

इस प्रकार प्राचीन समय से ही औषधी पौधों का मानव जाति के साथ अटूट संबंध रहा है। औषधीय एवं सुगंधीय पौधों से सम्पन्न हमारे दे" में वनौषधि का चिकित्सा जगत में द्वितीय स्थान रहा है। कालांतर में औद्योगिकीकरण एवं आधुनिकीकरण के फलस्वरूप चिकित्सा जगत में अवयवों की खोज तथा तत्काल निदान प्रक्रिया ने वनौषधि पर आधारित परम्परागत चिकित्सा पद्धति को गंभीर रूप से आहत किया है, परन्तु आधुनिक चिकित्सा पद्धति के बाह्य प्रभाव (Side effect) के परिणामों के प्रभाव से व्यक्ति परंपरागत जड़ी-बुटी की ओर आकर्षित हो रहे हैं। यही कारण है कि वर्तमान समय में राष्ट्रीय एवं अंतराष्ट्रीय स्तर पर हर्बल उत्पादों एवं जड़ी-बुटी की माँग में उत्तरोत्तर वृद्धि हो रही है। इस समय वि"व में हर्बल मेडिसिन का बहुत बड़ा बाजार है, जो ऐलोपैथिक मेडिसिन की अपेक्षा कई गुना ज्यादा है। छ.ग. राज्य वनौषधि बोर्ड रायपुर की रिपोर्ट के अनुसार अब तक प्रदेश में 1525 औषधि प्रजातियों की पहचान की जा चुकी है, जिसके और बढ़ने की संभावना है। फलतः हमारे दे" में भी वनौषधियों का विपणन विकास व विस्तार कर आयुर्वेद की “सर्वे भवन्तु सुखिनः” उक्ति को चरितार्थ किया जा सकता है, साथ ही अपनी अर्थव्यवस्था को भी सुदृढ़ किया जा सकता है।

अध्ययन क्षेत्र

प्रस्तुत अध्ययन क्षेत्र ग्राम केवची जो बिलासपुर अमरकंटक मुख्य मार्ग पर बिलासपुर जिला मुख्यालय से लगभग 105 किमी. एवं पेन्द्रारोड अमरकंटक मार्ग पेन्द्रारोड से लगभग 25 किमी. की दूरी पर स्थित तिराहा संगम स्थल है जो



मुकेश कुमार

सहायक प्राध्यापक (वाणिज्य) शासकीय
दन्त"वरी स्नातकोत्तर महाविद्यालय
दन्तेवाड़ा (छ0ग0)

डी0 पी0 देवांगन

वरिष्ठ सहा0 प्राध्यापक (वाणिज्य)
शा0 स्वा0 बिलासा कन्या स्ना0
महावि0 बिलासपुर छ0ग0)

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प्राकृतिक रूप से श्रृंगारित है, जो बरबस ही आंगतुको को आकर्षित करती है इसके अतिरिक्त अपने गर्भ में विविध प्रजाति के औषधि पौधें समाहित किए हुए है। यह ग्राम वनग्राम की श्रेणी में आता है यहां की अधिकांश जनसंख्या अपनी आजीविका हेतु कृषि एवं वनों पर निर्भर है। इस प्रकार यहाँ के लोगों द्वारा वनौषधियों का एकत्रीकरण, संग्रहण एवं विक्रय करके जीविकोपार्जन किया जाता है। इसमें कुछ स्थानीय व्यक्ति संगठित होकर स्व-सहायता समूह बनाकर यह कार्य करते हैं, जिसमें से एक ठाकुर देवा स्वसहायता समूह है जिनके द्वारा केवंची में औषधि उत्पादों का विक्रय किया जाता है। इस समूह में महिला एवं पुरुष दोनों मिलकर कार्य करते हैं यह समूह 8 मार्च 2010 से वनौषधि विक्रय कार्य से संलग्न है। जो मरवाही वनमंडल अंतर्गत जिला युनियन संजीवनी का संचालन करते हैं। इस समूह में अध्यक्ष, उपाध्यक्ष सहित कुल 12 सदस्य कार्यरत हैं। जिसमें से छः सदस्य गोड़ समुदाय के, दो-दो सदस्य भैना, एवं यादव तथा एक-एक सदस्य ब्राह्मण एवं पनिका समुदाय से हैं। समूह के सदस्यों की शैक्षणिक स्थिति अच्छी नहीं है समूह में केवल दो सदस्य हाईस्कूल पास हैं शेष सभी सदस्य निरक्षर हैं।

अध्ययन का उद्देश्य :-

1. मरवाही वनमंडल क्षेत्र की वनौषधियों के विपणन का अध्ययन।
2. वनौषधि के विपणन संबंधी समस्याओं का मूल्यांकन करना।
3. वनौषधियों पर आधारित रोजगार की संभावनाओं का आंकलन।
4. वनौषधियों के विपणन विकास एवं संभावनाओं का अध्ययन।

शोध प्रविधि :-

प्रस्तुत अध्ययन प्राथमिक एवं द्वितीयक आँकड़ों पर आधारित है। प्राथमिक आँकड़ों का संकलन मुख्यतः साक्षात्कार के माध्यम से एवं द्वितीयक आँकड़ों केवंची क्षेत्र के वनौषधि विपणन केन्द्रों से प्राप्त किये गये हैं। जिसके आधार पर मरवाही वनमंडल के पेन्द्रारोड क्षेत्र केवंची के वनौषधि विक्रय केन्द्र का सूक्ष्म अध्ययन कर इसके वर्तमान स्वरूप एवं संभावनाओं पर प्रकाश डाला गया।

वनौषधियों का विपणन :-

“विपणन सही उत्पाद (वस्तु) को सही व्यक्तियों तक सही समय पर सही कीमत पर, सही वितरण वाहिका द्वारा एवं सही संवर्द्धन द्वारा पहुंचाने की कला है।” विपणन सामान्य व्यवहार में सर्वाधिक प्रचलन का शब्द है फिर भी इसके वास्तविक अर्थ से अनभिज्ञ है सबसे बड़ी विडम्बना या हास्यास्पद बात तो यह है कि अनेक ऐसे व्यक्ति भी विपणन के अर्थ से परिचित नहीं हैं जो कि दिन-रात विपणन के कार्य में लगे हुए हैं यहाँ तक की एक विक्रेता या विक्रय प्रबंधक विपणन का अर्थ केवल विक्रय से लेता है विपणन विशेषज्ञों का मत है कि व्यवहार में विपणन शब्द का प्रयोग प्रायः हर व्यक्ति ने अपनी स्थिति, योग्यता, पद, आवश्यकता एवं वातावरण के संदर्भ में एक नूतन अर्थों में किया है। वास्तव में विपणन क्रय, विक्रय, उत्पाद, नियोजन, विज्ञापन आदि तक सीमित न रहकर एक विस्तृत अर्थीय शब्द है जिसमें वस्तुओं एवं सेवाओं के उत्पादन से पूर्व की

जान वाली क्रियाओं से लेकर उनके वितरण और आवश्यक विक्रयोपरांत तक की सेवाओं को सम्मिलित किया जाता है।

प्रदेश में वनौषधियों का विपणन छ.ग. लघुवनोपज संघ (व्यापार एवं विकास) मर्यादित रायपुर द्वारा किया जाता है। जो प्रदेश में एवं प्रदेश के बाहर अन्य राज्यों में विपणन किया जाता है, उक्त संस्था द्वारा औषधी उत्पादों का विक्रय मूल्य का निर्धारण, दिशा-निर्देशन एवं नियंत्रण किया जाता है। यह कार्य प्रदेश के शहरों में स्थापित NWFP (Non word Forest Product) मार्ट थोक विक्रय केन्द्र (Wholeseller) तथा स्थानीय स्तर पर गठित जिला युनियन संजीवनी (Retail outlet) के माध्यम से निष्पादित किये जाते हैं। प्रदेश में निर्मित उत्पादों को छ.ग. शासन द्वारा छत्तीसगढ़ हर्बल्स ब्राण्ड नाम दिया गया है। इसी नाम से विभिन्न हर्बल उत्पादों का विपणन किया जाता है। छ.ग. में निर्मित हर्बल उत्पादों का विपणन राज्य के स्थानीय स्तर से लेकर राज्य के बाहर अन्य प्रांतों में किया जाता है।

इसी परिप्रेक्ष्य में मरवाही वनमंडल अंतर्गत केवंची में स्थापित जिला युनियन संजीवनी द्वारा बेचे जाने वाले हर्बल उत्पाद जो विभिन्न प्रकार के रोगोपचार एवं उत्तम स्वास्थ्य व दीर्घायु बनायें रखने में उपयोगी हैं, जिनका विवरण इस प्रकार है :-

1.स्थानीय स्तर पर विक्रय

इससे आशय स्थानीय एवं क्षेत्रीय स्तर पर औषधी उत्पादों का विक्रय करने से है। यहाँ केवंची में संजीवनी वनौषधि विक्रय केन्द्र स्थापित है जिसका संचालन ठाकुर देवा स्व-सहायता समूह द्वारा किया जाता है, जहाँ विविध प्रकार के औषधी उत्पादों का विक्रय किया जाता है इस संस्था द्वारा बेची जाने वाली हर्बल उत्पादों की सूची इस प्रकार है :-

सारणी क्रमांक 1

संजीवनी वनौषधि विक्रय केन्द्र केवंची द्वारा बेची जाने वाली हर्बल उत्पादों की सूची

क्रमांक	उत्पाद का नाम	उपयोग
1.	त्रिफला चूर्ण	पाचक के लिए
2.	शतावरी कल्प चूर्ण	महिलाओं के लिए
3.	अर्जुनक चूर्ण	श्वास संबंधी
4.	ब्लड प्रेशर नियामक चूर्ण	ब्लड प्रेशर दमन के लिए
5.	सर्दी खांसी नाशक चूर्ण	सर्दी खांसी दमन के लिए
6.	हवन सामग्री	पूजा हेतु
7.	पायोकेल दंत मंजन	दांत की सफाई हेतु
8.	मधुमेह नाशक चूर्ण	मधुमेहरोगी के लिए
9.	सफेद मूसली चूर्ण	शक्तिवर्धक
10.	हर्बल चाय	बुस्ती एवं स्फूर्ती के लिए
11.	चर्म मलहम	त्वचा रोग संबंधी
12.	महिला मित्र चूर्ण	महिलाओं के लिए
13.	अविपत्तिकरण चूर्ण	एसिडिटी के लिए
14.	आंवला चूर्ण	पाचन के लिए
15.	शीतोप्लादी चूर्ण	सर्दी खांसी बुखार नाशक
16.	नीम चूर्ण	त्वचा संबंधी

Periodic Research

17.	कालमेघ चूर्ण	मलेरिया के लिए
18.	वातहर तेल/चूर्ण	गठिया/वातरोगी के लिए
19.	महाविष गर्भ तेल	गठिया रोगी के लिए
20.	बायो बीडिंग चूर्ण	कृमि नाशक
21.	अश्वगंधा चूर्ण	शक्तिवर्धक के लिए
22.	इमली केन्डी	चाकलेट
23.	आंवला जूस	एसिडिटी कम करने के लिए
24.	आंवला मुरब्बा	एसिडिटी कम करने के लिए
25.	शतावरी चूर्ण	शक्तिवर्धक
26.	पंचसकार चूर्ण	गैस/कब्ज नाशक
27.	दर्द निवारक तेल	दर्द निवारक हेतु
28.	गुडमार चूर्ण	शुगर रोगी के लिए
29.	हर्बल केश पास	बालों में रूसी रोक थाम हेतु
30.	बहेरा चूर्ण	पाचक के लिए
31.	आंवला केन्डी	मिठा/नमकीन स्वाद के लिए
32.	तिखुर	फरहारी में साबुन दान के रूप में उपयोग
33.	दांत दर्द की दवा	दांत रोगी हेतु
34.	बवासीर हर्बटी	बवासीर रोगी के लिए
35.	बेल शरबत	पाचन शक्ति हेतु
36.	कौच चूर्ण	शक्तिवर्धक हेतु
37.	आम का अचार	स्वाद एवं पाचक के लिए।

स्रोत – कार्यालय वनौषधी विक्रय केन्द्र केंवची

उक्त समूह द्वारा अपना कार्य प्रारंभ वर्ष अर्थात् मार्च 2010 से 2012 तक बेची गई हर्बल उत्पादों की सम्मिलित आंकड़ा निम्नलिखित है :-

सारणी क्र० 2

संजीवनी वनौषधी विक्रय केन्द्र केंवची द्वारा बेची जाने वाली हर्बल उत्पादों की स्थिति

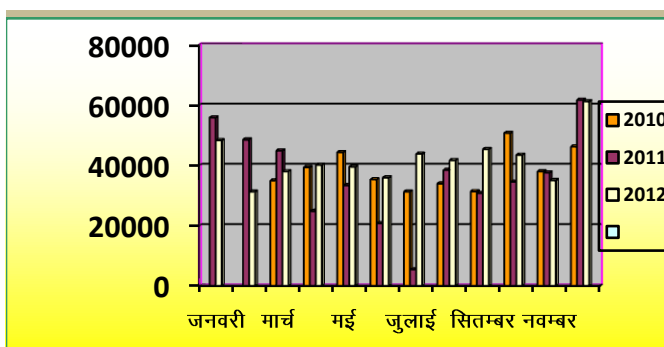
क्र०	माह	उत्पाद विक्रय राशि (रुपये में)		
		2010	2011	2012
1.	जनवरी	—	55,854	48,298
2.	फरवरी	—	48,519	31,237
3.	मार्च	34,918	44,896	38,007
4.	अप्रैल	39,318	24,806	40,121
5.	मई	44,296	33,379	39,510
6.	जून	35,358	20,757	35,942
7.	जुलाई	31,253	5,455	43,806
8.	अगस्त	33,943	38,454	41,680
9.	सितम्बर	31,363	30,781	45,355
10.	अक्टूबर	50,716	34,525	43,465
11.	नवम्बर	37,991	37,596	35,060

12.	दिसंबर	46,263	61,704	61,185
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स्रोत – कार्यालय वनौषधी विक्रय केन्द्र केंवची

उपरोक्त आंकड़ों पर तुलनात्मक रूप से गौर किया जाये तो **Fluctuation** (उतार-चढ़ाव) की स्थिति को दर्शाता है जिससे किसी भी वर्ष में लगातार विक्रय राशि की कमी या वृद्धि की निरंतरता नहीं पाई गई। विशेष रूप से इसका कारण यथासमय पर्याप्त मात्रा में उत्पादों का उपलब्ध न हो पाना है जिससे विक्रय कार्य प्रभावित होता है साथ ही पर्यटन क्षेत्र होने से पर्यटकों का वर्ष भर आवागमन में निरंतरता न होने से भी विक्रय कार्य प्रभावित होती है। इसके अतिरिक्त विभागीय एवं अन्य तकनीकी कारणों से विक्रय कार्य प्रभावित होता है जिसके कारण ऐसी स्थिति निर्मित होती है। इसे निम्न दण्ड आरेख द्वारा इस प्रकार दर्शाया गया है..

आरेख –संजीवनी वनौषधी विक्रय केन्द्र केंवची द्वारा बेची जाने वाली हर्बल उत्पादों की स्थिति



2. NWFP मार्ट या प्रादेशिक स्तर पर विक्रय – माँ नर्मदा वनौषधी प्रसंस्करण केन्द्र केंवची द्वारा प्रसंस्करण की जाने वाली हर्बल उत्पादों का विक्रय NWFP मार्ट एवं जिला यूनियन संजीवनी के माध्यम से की जाती है NWFP मार्ट बिलासपुर को बेची जाने वाली हर्बल उत्पादों की सूची इस प्रकार है :-

सारणी क्रमांक 3

NWFP मार्ट बिलासपुर में बेची गयी उत्पादों का विवरण

क्र०	उत्पाद का नाम	उपयोग
1.	आमलकी चूर्ण	स्वाद एवं पाचक के लिए
2.	अर्जुनतक चूर्ण	महिलाओं के लिए
3.	कालमेघ चूर्ण	मलेरिया के लिए
4.	पंचसकार चूर्ण	गैस कब्ज नाशक
5.	पंचसकार चूर्ण	गैस कब्ज नाशक
6.	शतावरी कल्प चूर्ण	महिलाओं के लिए एवं शक्तिवर्धक
7.	त्रिफला चूर्ण	पाचक के लिए
8.	बायविडिंग चूर्ण	कृमि नाशक के लिए

स्रोत :- कार्यालय NWFP मार्ट बिलासपुर

Periodic Research

माँ नर्मदा वनौषधि प्रसंस्करण केन्द्र केंवची द्वारा बेची गई उत्पादों की माहवार एकीकृत जानकारी का विवरण इस प्रकार है :-

सारणी क्रमांक 4

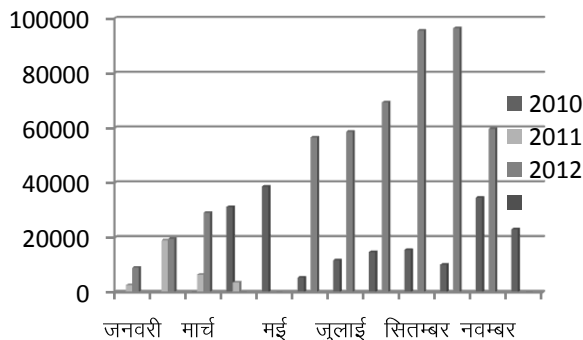
माँ नर्मदा वनौषधि प्रसंस्करण केन्द्र केंवची द्वारा बेची गई उत्पादों की स्थिति

क्र०	माह	उत्पाद विक्रय मात्रा (रूपये)		
		2010	2011	2012
1.	जनवरी	—	2,660	9,060
2.	फरवरी	—	19,000	19,530
3.	मार्च	—	6,498	29,060
4.	अप्रैल	31,200	3,665	Nil
5.	मई	38,652	Nil	Nil
6.	जून	54,55	Nil	56,582
7.	जुलाई	11,750	—	58,660
8.	अगस्त	14,745	—	69,340
9.	सितम्बर	15,522	—	95,560
10.	अक्टूबर	10,142	—	96,410
11.	नवम्बर	34,584	—	59,733
12.	दिसंबर	23,070	—	Nil

स्रोत :- कार्यालय माँ नर्मदा प्रसंस्करण केन्द्र केंवची।

उक्त सारणी से परिलक्षित होता है कि विगत 03 वर्षों से प्राप्त आंकड़े वर्ष भर संस्था की विक्रय स्थिति नहीं दर्शाते जिसका कारण संस्था का प्रारंभिक चरण एवं पर्याप्त संसाधन व धन का अभाव जैसे बुनियादी कारणों से है साथ ही प्रारंभ में रिकार्ड व्यवस्थित नहीं होने से आवश्यक आंकड़े उपलब्ध नहीं हो पाया। इसे निम्न दण्ड आरेख द्वारा इस प्रकार दर्शाया गया है..

आरेख - माँ नर्मदा वनौषधि प्रसंस्करण केन्द्र केंवची द्वारा बेची गई उत्पादों की सूची



राष्ट्रीय/अंतराष्ट्रीय स्तर पर विक्रय - केंवची में निर्मित एवं प्रसंस्करित हर्बल उत्पादों का राष्ट्रीय स्तर अर्थात् अन्य प्रदेशों का प्रत्यक्ष तौर पर विक्रय नहीं किया जाता बल्कि NWFP मार्ट के माध्यम से राष्ट्रीय स्तर पर औषधि उत्पादों का विपणन किया जाता है इस संबंध

में विशेष उत्पाद के विक्रय की जानकारी उपलब्ध नहीं हो सका है। राष्ट्रीय स्तर पर हर्बल उत्पादों का विपणन कार्य में निरंतरता नहीं पायी गई। फलतः अंतराष्ट्रीय स्तर पर हर्बल उत्पादों का विपणन का अभाव पाया गया है।

संभावनाएँ एवं निष्कर्ष :-

औषधी उत्पादों की उपयोगिता हमारे जीवन में सृष्टिकाल से बनी हुई है, इसकी महत्ता एवं उपयोगिता न केवल छत्तीसगढ़ में बल्कि सार्वभौमिक है। इसका प्रमाण हर्बल उत्पादों के बाजार में निरंतर हो रहे विकास व विस्तार से है। जो लगातार एलोपैथिक दवाओं का स्थान ले रहा है। इस दिशा में छ.ग. शासन द्वारा प्रदेश के औषधी उत्पादों के व्यावसायिक कारोबार को बढ़ाने हेतु व्यापक स्तर पर कार्य किया गया है। इस क्रम में प्रदेश में छ.ग. लघु-वनोपज (व्यापार एवं विकास) संघ मर्यादित रायपुर, संस्थान की स्थापना है। इसके अतिरिक्त प्रदेश की औषधी पादपों की पहचान एवं औषधी उपयोगिता व उनका विकास, विना विहीन विदोहन, संरक्षण के उद्देश्य से छ.ग. औषधी पादप बोर्ड रायपुर की स्थापना है। सरकार का यह प्रयास निश्चित तौर पर सराहनीय है।

अध्ययन क्षेत्र में निवासरत व्यक्तियों एवं स्व-सहायता समूह जो औषधी उत्पादों के कारोबार में संलग्न है। इन्हें उचित आर्थिक सहायता प्रदान कर पूंजी आभाव की समस्या को कम किया जा सकता है। इससे संबंधितों की आर्थिक विकास में सहयोग के साथ-साथ औषधी उत्पादों के विकास विस्तार व संरक्षण की दिशा में सहायक होगा। यद्यपि इस क्षेत्र में प्रबल रोजगार की संभावनाओं के संदर्भ में अनेक प्रयास किये गये हैं तथापि इस दिशा में अभी बहुत कुछ विकास की संभावनाएँ विद्यमान हैं, जिन्हें सरकार के साथ-साथ समाज सेवा संगठनों, पर्यावरणविदों, वैद्यों, जन सामान्य एवं स्थानीय निवासियों के सम्मिलित सहयोग से इस क्षेत्र के साथ-साथ प्रदेश में वनऔषधि के विपणन कार्य को और अधिक विस्तारित एवं सुव्यवस्थित ढंग से संचालित किये जा सकते हैं। जो प्रदेश सरकार की छ.ग. राज्य को हर्बल स्टेट की संज्ञा की सार्थकता को सिद्ध करने में महत्वपूर्ण एवं सराहनीय कदम होगी।

समस्याएँ :-

1. औषधि उत्पादों की उचित मात्रा में व समय पर अनुपलब्धता।
2. आवश्यक वित्त (पूंजी) की कमी।
3. औषधि उत्पादों के प्रति लोगों में जन जागरूकता एवं जानकारी का अभाव।

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3. कपिल एच.के. 1996-97 "अनुसंधान विधियों" हरप्रसाद भार्गव प्रकाशन, आगरा।
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5. छ.ग. लघु वनोपज संघ (व्यापार एवं विकास) मर्यादित, रायपुर।

Periodic Research

स्नातक स्तर पर शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता से सम्बन्ध का अध्ययन

सारांश

आज स्नातक स्तर पर शिक्षार्थियों को अनेक प्रकार की समस्याओं का सामना करना पड़ता है उनकी समस्याओं में प्रमुख रूप से मानसिक अस्वस्थता, कुसमायोजन, संवेगात्मक अपरिपक्वता, तनाव व कुंठा आदि दिखाई देते हैं। ये समस्याएँ उनके व्यवहार आचरण व शैक्षिक विकास को प्रभावित करती हैं जिससे उनका समुचित व्यक्तिगत एवं सामाजिक विकास नहीं हो पाता उनमें समायोजन की समस्या बनी रहती है। अतः शोधार्थी के मन में यह जिज्ञासा उत्पन्न हुई कि स्नातक स्तर पर छात्रों का मानसिक स्वास्थ्य कितनी मात्रा में सृजनात्मकता से सम्बन्धित है। और उसकी दिना व दिना क्या है। अतः इसी जिज्ञासा के शमन हेतु शोधार्थी द्वारा कानपुर नगर जनपद के अनुदानित महाविद्यालयों में 480 शिक्षार्थियों का चयन क्षेत्र व लिंग के आधार पर किया गया है। मानसिक स्वास्थ्य के मापन हेतु अरुण कुमार सिंह तथा अल्पना सेन गुप्ता द्वारा मानकीकृत परीक्षण तथा सृजनात्मकता के मापन हेतु प्रो० वॉकर मेंहदी के परीक्षण का प्रयोग किया गया तथा आंकड़ों के विश्लेषण हेतु पिर्यसन स्ववायर सहसम्बन्ध गुणांक की गणना की गयी जिससे स्पष्ट हुआ कि स्नातक स्तर पर शिक्षार्थियों के मानसिक स्वास्थ्य व सृजनात्मकता के बीच धनात्मक सहसम्बन्ध औसत के करीब होता है। यह भी सिद्ध हुआ कि सृजनात्मकता और मानसिक स्वास्थ्य के बीच सहसम्बन्ध पर ग्रामीण व शहरी क्षेत्र तथा लिंग का भी प्रभाव नहीं पड़ता है। अतः प्रस्तुत अध्ययन से यह निष्कर्ष निकलता है कि स्नातक स्तर पर शिक्षार्थियों की सृजनशीलता उनके मानसिक स्वस्थ से धनात्मक दिना में औसत रूप से सहसंबंधित होती है।



यशिका गुप्ता

प्राध्यापिका (शिक्षक प्रशिक्षण विभाग)
मुलायम सिंह महाविद्यालय,
कानपुर



पुनीत शर्मा

शोध छात्र (शिक्षाशास्त्र)
सी० एम० जे० यूनिवर्सिटी,
फाल्गुना

मुख्य शब्द : मानकीकृत परीक्षण, सृजनात्मक क्षमता

प्रस्तावना

स्नातक स्तर पर शिक्षार्थी आज अनेक प्रकार की समस्याओं से ग्रस्त हैं। उनकी समस्याएँ प्रमुख रूप से मानसिक अस्वस्थता, कुसमायोजन, संवेगात्मक अपरिपक्वता, तनाव, कुंठा आदि के रूप में दृष्टिगोचर होती हैं। ये समस्याएँ शिक्षार्थियों के व्यवहार, आचरण और शैक्षिक विकास आदि को प्रभावित करती हैं, जिससे उनका वैयक्तिक और सामाजिक विकास नहीं हो पाता क्योंकि स्नातक स्तर का शिक्षार्थी प्रौढ़ावस्था की दहलीज पर होता है। उसमें समायोजन की समस्या बनी रहती है। ऐसे में वह अपने संवेगों को उचित अभिव्यक्ति देने का प्रयास करता है जिससे प्रतिकूल परिस्थितियों में निराशा उत्पन्न होती है जो कि व्यवहार में इस प्रकार की असामान्यता को दर्शाती है और उसमें उपस्थित सृजनात्मक क्षमता प्रभावित होती है जिसका लाभ समाज व देश को मिलना चाहिए उसे नहीं मिल पाता है। ऐसे में शोधकर्ता इस स्तर पर यह जानने को जिज्ञासित था कि मानसिक स्वास्थ्य कितनी मात्रा में सृजनात्मकता से सम्बन्धित है और उसकी दिना व दिना क्या है, इसके लिए विस्तृत साहित्य सर्वेक्षण किया गया जिसमें से मुख्य निम्नवत् हैं:—सिद्दीकी एवं डी अर्क (1984) ने कनाडा में अध्ययन से परिणाम प्राप्त किया कि प्रतिबल का प्रभाव मानसिक स्वास्थ्य पर युवाओं के लिए घातक है। कैम्पस (1986) ने व्यवहार श्रृंखला पर मानसिक स्वास्थ्य विश्लेषण से देखा कि छात्रों की तुलना में छात्राएँ अधिक प्रभावित होती हैं।

कोलमैन ने बताया कि आज की पीढ़ी का युग ही चिन्ता का युग है। मानसिक स्वास्थ्य के सकारात्मक रूप में व्यवहार की परिभाषा का प्रस्ताव पोलार्क (1948), हडफील्ड (1950), हेनरी (1953), फैंक (1953), कोलेजन (1956) तथा बेलिन (1957) ने किया था। इसी तरह के अध्ययन भारत में सृजनात्मकता से सम्बन्धित वाकर (1973), सनसनवाल (1984), मौर्या (2002), सिंह (2004), मौर्या (2004), यादव (2007), मिश्रा (2009), गुप्ता (2011) के थे, जो मानसिक दबाव, चिन्ता तथा व्यक्तित्व से जुड़े थे। शोधकर्ता ने (Gap area) समझकर स्वतंत्रचर के रूप में मानसिक स्वास्थ्य और परतंत्र चर के रूप में सृजनात्मकता

Periodic Research

को लिया जो स्नातक स्तर पर कानपुर मण्डल से 480 शिक्षार्थियों पर क्षेत्र व लिंग को आधार मानते हुए किया गया।

परिकल्पनायें

प्रस्तुत अध्ययन में निम्नलिखित शून्य परिकल्पनाओं का परीक्षण किया गया।

1. स्नातक स्तर पर शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच कोई सार्थक सम्बन्ध नहीं है।
2. स्नातक स्तर पर ग्रामीण शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच कोई सार्थक सम्बन्ध नहीं है।
3. स्नातक स्तर पर शहरी शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच कोई सार्थक सम्बन्ध नहीं है।
4. स्नातक स्तर पर छात्रों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच कोई सार्थक सम्बन्ध नहीं है।
5. स्नातक स्तर पर छात्राओं के मानसिक स्वास्थ्य और सृजनात्मकता के बीच कोई सार्थक सम्बन्ध नहीं है।

शोध की प्रकृति

प्रस्तुत शोध अध्ययन सर्वेक्षण प्रकृति का है।

शोध का प्रकार

प्रस्तुत अध्ययन विवरणात्मक प्रकार का है।

शोध-विधि

प्रस्तुत अध्ययन सर्वेक्षण विधि से किया गया है।

समष्टि

प्रस्तुत अध्ययन की समष्टि स्नातक प्रथम भाग के समस्त शिक्षार्थी कानपुर मण्डल से है।

न्यादर्श

यादृच्छिक न्यादर्श प्रविधि से लाटरी रीति द्वारा कुल 480 शिक्षार्थियों का चयन किया गया, जिसमें आधे-आधे क्षेत्र व लिंग के आधार पर थे।

शोध उपकरण

प्रस्तुत शोध में आंकड़ों का संकलन निम्नलिखित मानकीकृत उपकरणों द्वारा किया गया था।

1. मेंटल हेल्थ बैटरी

यह उपकरण अरुण कुमार सिंह तथा अल्पना सेन गुप्ता द्वारा 1983 में मानकीकृत किया गया था। जिसमें कुल छः क्षेत्रों से 130 कथन थे। इसकी विश्वसनीयता गुणांक 0.72 से 0.87 तक थी और वैधता गुणांक 0.6 से 0.8 के बीच थी। व्याख्यात्मक मानक प्रतितांक था।

2. बर्बल टेस्ट ऑफ क्रियेटिव थिंकिंग

यह उपकरण 1971 में मानकीकृत हुआ, जिसका निर्माण प्रो० वॉकर मेंहदी ने किया था। इसके द्वारा प्रवाह, त्वचनीयता तथा मौलिकता का सम्मिलित मापन होता है। इसमें कुल 04 क्रियाविधियाँ हैं, जिसमें प्रथम-द्वितीय तथा तृतीय से तीन-तीन कथन और अन्तिम क्रियाविधि के लिए केवल एक कथन है। इसकी विश्वसनीयता गुणांक 0.959 और वैधता गुणांक 0.39 है। व्याख्यात्मक मानक प्रतितांक है।

प्रयुक्त सांख्यिकीय तकनीकी

आंकड़ों के विश्लेषण हेतु पियर्सन स्ववायर सहसम्बन्ध गुणांक की गणना की गई थी।

शोध की सीमायें

प्रस्तुत अध्ययन कानपुर मण्डल के केवल कानपुर नगर जनपद पर ही किया गया है। इसमें केवल अनुदानित महाविद्यालयों को ही सम्मिलित किया गया है।

शोध के तकनीकी शब्द

प्रस्तुत अध्ययन में कुल दो तकनीकी शब्द हैं जिसमें मानसिक स्वास्थ्य को स्वतन्त्र चर के रूप में तथा सृजनात्मकता को आश्रित चर के रूप में प्रयुक्त किया गया था।

मानसिक स्वास्थ्य

मानसिक स्वास्थ्य से तात्पर्य ऐसे सीखे गये व्यवहार से होता है जो सामाजिक रूप से अनुकूल होते हैं और जो व्यक्ति को अपनी जिंदगी के साथ पर्याप्त रूप से मुकाबला करने की अनुमति देते हैं।

सृजनात्मकता

सृजनात्मकता वह व्यावहारिक प्रक्रिया है जो व्यवहार में नयापन लिए कुछ नमनीयता तथा मौलिकता की ओर उन्मुख रहती है।

विश्लेषण व व्याख्या

प्रस्तुत अध्ययन में आंकड़ों के विश्लेषण से निम्नलिखित सारणी तैयार हुई हैं –

सारणी

स्नातक स्तर के शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के सम्बन्ध की विश्लेषण तालिका

समूह	स्वतंत्रता का अंश	सह सम्बन्ध गुणांक
सम्पूर्ण शिक्षार्थी	478	0.58
सम्पूर्ण ग्रामीण शिक्षार्थी	238	0.52
सम्पूर्ण शहरी शिक्षार्थी	238	0.59
सम्पूर्ण छात्र	238	0.56
सम्पूर्ण छात्राएँ	238	0.53

d.f. (478) at 0.5 Level of confidence = 0.88

df. (238) at 0.5 Level of confidence = .159

उपरोक्त सारणी से स्पष्ट है कि सम्पूर्ण विद्यार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच सहसम्बन्ध गुणांक की गणना की गई जिसका मान 0.58 प्राप्त हुआ। जो df (478) के 0.5 सार्थकता स्तर पर 0.088 से अधिक है अतः शून्य परिकल्पना अस्वीकृत हो जाती है। अतः सिद्ध हो जाता है कि स्नातक स्तर पर शिक्षार्थियों के मानसिक स्वास्थ्य और सृजनात्मकता के बीच धनात्मक सहसम्बन्ध औसत के करीब होता है।

इसी प्रकार ग्रामीण व शहरी शिक्षार्थियों के मानसिक स्वास्थ्य तथा सृजनात्मकता के बीच सहसम्बन्ध गुणांक क्रमशः 0.52 और 0.59 जो कि df (238) के 0.5 सार्थकता स्तर पर 0.159 से अधिक है।

अतः शून्य परिकल्पना अस्वीकृत हुई और सिद्ध हो जाता है कि निवास स्थली का प्रभाव नहीं पड़ता है।

इसी प्रकार छात्रों और छात्राओं के मानसिक स्वास्थ्य तथा सृजनात्मकता के बीच सहसम्बन्ध गुणांक क्रमशः 0.56 और 0.53 है जो कि df (238) के 0.5 सार्थकता स्तर पर 0.159 से अधिक है और शून्य परिकल्पना अस्वीकृत हुई और सिद्ध हुआ कि लिंग का कोई प्रभाव नहीं पड़ता है।

शोध निष्कर्ष

प्रस्तुत अध्ययन से निष्कर्ष निकलता है कि स्नातक स्तर पर शिक्षार्थियों की सृजनशीलता उनके मानसिक स्वास्थ्य से धनात्मक दिशा में औसत रूप से सहसम्बन्धित होती है।

सन्दर्भ ग्रन्थ सूची

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2. अग्रवाल एस0 एण्ड कुमारी एस0 (1982) ए कोटिलेनल स्टडी ऑफ रिस्क टैकिंग एण्ड क्रियेटिविटी विथ स्पेशल रेफ0 टू सेक्स डिफ0, इंडि0 एजू0 रिव्यू 17 (3), 104–109।
3. गुप्ता एस0 पी0 (2011) सांख्यिकीय विधियाँ 7 शारदा प्रकाशन इलाहाबाद।
4. मेहदी वकार (1971) बर्बल टेस्ट ऑफ क्रियेटिविटी, नेशनल साइ0 कार0 आगरा।
5. गुप्ता ए0 सेन एण्ड सिंह ए0 के0 (1985) इमोशनल स्टोविलिटी टेस्ट फार चिल्ड्रेन (ESTC) नेशनल साइकोलाजिकल कारपोरेशन आगरा।
6. सिंह एन0 के0 (2011) शैक्षिक नियोजन मानचित्र मापन, शारदा प्रकाशन इलाहाबाद।

Periodic Research

तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता

सारांश

अनेक ऐतिहासिक, सांस्कृतिक एवं सामाजिक कारणों से भारतीय समाज में अधिकांश महिलाओं की प्रस्थिति वर्तमान समय में भी कमजोर वर्ग की बनी हुई है। जिसका परिणाम है कि महिला को या तो तलाकशुदा जीवन—यापन करना पड़ता है या परित्यक्ता का जीवन जीने को विवश होना पड़ता है और फिर इसी समाज द्वारा इन परित्यक्ता व तलाकशुदा महिलाओं को हेय दृष्टि से देखा जाता है। जिसका इनके संवेगात्मक पक्ष पर अत्यधिक गहरा प्रभाव पड़ता है। प्रस्तुत अध्ययन में तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता का अध्ययन एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता का अध्ययन किया गया। तुलनात्मक अध्ययन के परिणामों से स्पष्ट है कि परित्यक्ता महिलाओं की अपेक्षा तलाकशुदा महिलाएँ संवेगात्मक रूप से अधिक परिपक्व हैं।

मुख्य शब्द : संवेगात्मक पक्ष, वैवाहिक सम्बन्ध, इमोशनल मैच्यूरिटी, स्केल प्रस्तावना



नसरीन रहमान शेख

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तलाक न केवल महिलाओं व बालकों को प्रभावित करता है अपितु पारिवारिक, सामाजिक, धार्मिक मान्यताओं, शैक्षणिक और स्वास्थ्य (शारीरिक और मानसिक) पर भी गहरा प्रभाव डालता है (पेट्रिक एफ फागन, आरॉन चर्चिल, 2012)। इक्कीसवीं सदी में महिलाओं के शिक्षित व जागरूक होने के कारण जब वह अपने अधिकारों की माँग व प्रयोग करती है, जिसे अधिसंख्य पुरुष समाज स्वीकार करने में समर्थ नहीं है, इसी के परिणामस्वरूप महिला को या तो तलाकशुदा जीवन—यापन करना पड़ता है या परित्यक्ता का जीवन जीने को विवश होना पड़ता है और फिर इसी समाज द्वारा इन परित्यक्ता व तलाकशुदा महिलाओं को हेय दृष्टि से देखा जाता है। जिसका इनके संवेगात्मक पक्ष पर अत्यधिक गहरा प्रभाव पड़ता है। ऑलानियि बोजूवॉये, ऑरॉक अकपन (2009) के अनुसार विश्व में तलाक की संख्या निरन्तर बढ़ने से टूटे घरों में बालक बड़े हो रहे हैं, यद्यपि तलाक सभी बालकों को प्रभावित करता है परन्तु सभी बालक एक ही तरह से प्रतिक्रिया नहीं करते कुछ बालकों के लिए माता पिता का तलाक व्यक्तिगत त्रासदी है तो कुछ बालकों के लिए पारिवारिक झगड़ों की तनाव पूर्ण जीवन शैली से मुक्ति है। कूपर एवं कूपर (1985) के अनुसार “वह स्त्री जिसने अपनी वैवाहिक संबंधों का अन्त कानून एवं धार्मिक विधि द्वारा कर लिया है, तलाकशुदा महिला कहलाती है।” प्रस्तुत शोध में उन महिलाओं को सम्मिलित किया गया है जिन्हें उनके पति द्वारा तलाक दिया गया है। तलाक के साथ ही वर्तमान समय में परित्याग की प्रकृति भी दिखाई दे रही है। वह विवाहित स्त्री जिसको परिवार के सदस्यों द्वारा पति से अलग रहने के लिये मजबूर किया गया हो या जिसको उसका पति जबरदस्ती घर से निकाल देता है। परित्याग के अनेक उदाहरण हैं, जैसे पति अपनी पत्नी को मायके छोड़ जाता है और उसे वापस नहीं बुलाता। इसके विपरीत पत्नी स्वयं ही पति के बुरे आचरण से तंग आकर पति का घर छोड़कर अन्यत्र चली जाती है। प्रस्तुत शोध में वह विवाहित स्त्री जिसको परिवार के सदस्यों द्वारा पति से अलग रहने के लिये मजबूर एवं उसका पति जबरदस्ती घर से निकाल देता है, को भी अपने उत्तरदाता के रूप में चुना गया है।

अध्ययन का महत्व

आधुनिक युग में तलाक एवं परित्याग एक वृहद् सामाजिक समस्या हैं। आधुनिकता के परिणामस्वरूप होने वाले दुष्परिणामों में से तलाक भी एक है। पूर्व की तुलना में वर्तमान में तलाक की संख्या में दिन प्रतिदिन वृद्धि हो रही है। यद्यपि यह दोनों ही पक्षों के लिये दुःखद है, लेकिन फिर भी इसका सर्वाधिक

Periodic Research

प्रभाव महिलाओं पर ही होता रहा है। चाहे किसी भी जाति, धर्म की महिला हो, तलाक सभी को बराबर प्रभावित करता है।

प्रस्तुत अध्ययन के माध्यम से यह ज्ञात करने का प्रयास किया गया है, कि तलाकशुदा एवं परित्यक्ता (हिन्दु व मुस्लिम) महिलाओं की जीवन स्थिति पर तलाक एवं परित्याग का क्या प्रभाव होता है ? तथा उनकी संवेगात्मक परिपक्वता किस प्रकार प्रभावित होती है ? क्योंकि महिला की शारीरिक, मानसिक स्थिति पर इसका गहरा प्रभाव पड़ता है। महिलाओं के अतिरिक्त उनके परिवार विशेषकर उनके बालकों पर इसका मनोवैज्ञानिक प्रभाव देखने में आता है। इस द्वंदात्मक परिस्थिति में फंसकर बालकों का विकास अवरुद्ध हो जाता है और उनके व्यक्तित्व, प्रतिभा पर भी विपरीत प्रभाव परिलक्षित होने लगता है। प्रस्तुत अध्ययन सम्मिलित रूप से उपरोक्त सभी समस्याओं के गहन विश्लेषण पर आधारित है, जिससे इन समस्याओं के वास्तविक कारणों को समझा जा सके और उन्हें दूर करने के लिये सुझाव दिये जा सके।

अध्ययन का उद्देश्य

प्रस्तुत अध्ययन का उद्देश्य तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता पर पड़ने वाले प्रभाव का अध्ययन करना था। तलाक शुदा महिलाएं वैधानिक रूप से पति से अलग होकर जीवनयापन करती हैं इस प्रकार तलाक में वैवाहिक सम्बन्धों की समाप्ति पर सामाजिक एवं कानूनी रूप से मान्यता प्राप्त होती है, परन्तु महिलाओं का एक वर्ग वह भी है जहाँ विवाह के पश्चात विवाहित स्त्री को पति से अलग रहने के लिए विवश किया जाता है परन्तु इसे वैधानिक स्वरूप प्राप्त नहीं होता। अतः प्रस्तुत अध्ययन का एक उद्देश्य परित्यक्त महिलाओं की संवेगात्मक परिपक्वता का अध्ययन करना भी था। प्रस्तुत अध्ययन में हिन्दु मुस्लिम दोनों समुदायों की महिलाओं को सम्मिलित किया गया है। अतः हिन्दु मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता का एवं हिन्दु मुस्लिम परित्यक्त महिलाओं की संवेगात्मक परिपक्वता का तुलनात्मक अध्ययन भी किया गया।

उपकल्पना :

1. तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता परित्यक्ता महिलाओं की अपेक्षा अधिक होती है।
2. हिन्दु तलाकशुदा महिलाओं की अपेक्षा मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता अधिक होती है।
3. हिन्दु परित्यक्त महिलाओं की अपेक्षा मुस्लिम परित्यक्त महिलाओं की संवेगात्मक परिपक्वता अधिक होती है।

शोध विधि

प्रस्तुत अध्ययन में निदर्शन के लिये मेरठ जिले से हिन्दु-मुस्लिम समुदाय की तलाकशुदा एवं परित्यक्ता महिलाओं का चयन किया गया है। शोध के लिये 50 तलाकशुदा एवं 50 परित्यक्ता महिलाओं का चयन किया गया है, जिन्हें निम्न तालिका में दर्शाया गया है।

तालिका क्रमांक 1 –

तलाकशुदा एवं परित्यक्त महिलाएं—प्रतिदर्श

समूह	हिन्दु	मुस्लिम	महायोग
तलाकशुदा महिलाएं	25	25	50
परित्यक्त महिलाएं	25	25	50
योग	50	50	100

शोध उपकरण

संवेगात्मक परिपक्वता परीक्षण :

तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता जानने के लिये यशवीर सिंह एवं एम. भार्गव द्वारा प्रतिपादित “इमोशनल मैच्युरिटी स्केल (ई. एम.एस.)” 1984 का प्रयोग किया गया है। मापनी में 48 कथन हैं।

प्रदत्तों का विश्लेषण

शोध में तथ्य स्वयं में तो केवल कुछ सूचना ही देते हैं, लेकिन जब इनका विश्लेषण किया गया तो इनसे महत्वपूर्ण निष्कर्ष प्राप्त हुए। विश्लेषण करने के लिये प्राप्त प्रदत्तों का सार्थकता के स्तर पर परीक्षण करने के लिये “t” परीक्षण का प्रयोग किया गया।

तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता

संवेगात्मक परिपक्वता का विश्लेषण करने पर ज्ञात होता है, कि तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता में सार्थक अन्तर है (t मूल्य = 4.99)। जिसमें तलाकशुदा महिलाओं का माध्य 75.66 और परित्यक्ता महिलाओं का माध्य 90.22 है (तालिका क्रमांक 2)। चित्र क्रमांक 1 यह परिणाम दर्शाता है। प्रस्तुत शोध की उपकल्पना “तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता परित्यक्ता महिलाओं की अपेक्षा अधिक होती है स्वीकृत हुई है। परित्यक्ता महिलाओं के संवेगात्मक रूप से कम परिपक्व होने के कारण उनकी मानसिक द्वन्द की स्थिति भी सामने आयी है, क्योंकि तलाक न होने के कारण परित्यक्ता महिलायें न तो तलाकशुदा महिला की तरह और न ही विवाहित की तरह रह पाती हैं एवं कई बार दुविधापूर्ण स्थिति होने पर इस मनोदशा का उनकी संवेगात्मक स्थिति पर अत्याधिक प्रभाव पड़ने के कारण परित्यक्ता महिलाओं में चिड़चिड़ापन सांवेगिक अस्थिरता, सांवेगिक दमन एवं सामाजिक कुसमायोजन उदासी, निराशा तथा व्यक्तित्व विघटन जैसे लक्षण दिखाई देते हैं, जिससे उनकी संवेगात्मक परिपक्वता कम होती जाती है। इसके विपरीत तलाकशुदा महिलायें तलाक होने के पश्चात इस द्वंदात्मक स्थिति से बाहर निकल आती हैं, अर्थात् उनका ससुराल पक्ष के परिवार तथा उस परिवार के तनाव से कोई सम्बन्ध नहीं रहता और ऐसी महिलायें स्वयं को तलाकशुदा महिला के रूप में स्वीकार कर लेती हैं।

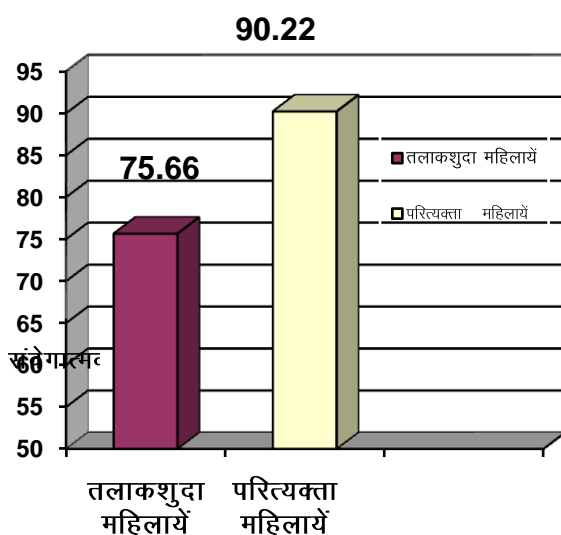
Periodic Research

तालिका क्रमांक 2
तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता सम्बन्धी विभिन्नताएं

समूह	पदों की संख्या N	माध्य M	प्रमाप विचलन S.D.	SE.diff.	"t" मूल्य
तलाकशुदा महिलायें	50	75.66	14.310	2.92	4.99"
परित्यक्ता महिलायें	50	90.22	14.623		

(0.01 विश्वसनीय स्तर पर सार्थक)

चित्र क्रमांक 1
तलाकशुदा/परित्यक्ता महिलाएं एवं संवेगात्मक परिपक्वता



हिन्दु-मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता

हिन्दु तलाकशुदा एवं मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता के परिणामों की विवेचना करने पर ("t" मूल्य 2.76) है जोकि 0.05 स्तर पर सार्थक है (तालिका क्रमांक 3)। हिन्दु तलाकशुदा महिलाओं का माध्य 81.04 हैं और मुस्लिम तलाकशुदा महिलाओं का माध्य 70.28 है। चित्र क्रमांक 1.1 यह परिणाम प्रदर्शित करता है कि मुस्लिम तलाकशुदा महिलायें हिन्दु तलाकशुदा महिलाओं की अपेक्षा संवेगात्मक रूप से अधिक परिपक्व पायी गयी। अध्ययन की उपकल्पना हिन्दु तलाकशुदा एवं मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता में अन्तर पाया जाता है, स्वीकार्य हुई है।

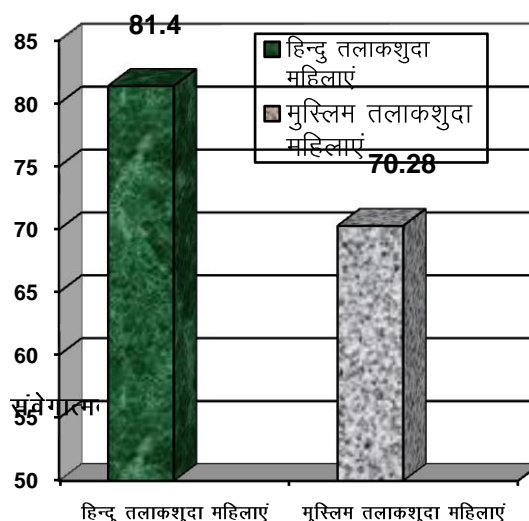
हिन्दुओं में विवाह को एक पवित्र संस्कार माना जाता है अर्थात् विवाह को सात जन्मों तक का सम्बन्ध माना जाता है। यदि किसी महिला का तलाक होता है तो समाज उस महिला को ही उत्तरदायी मानता है। दूसरे हिन्दु तलाक प्रक्रिया अधिक लम्बी व जटिल होती है। इस कानूनी अवधि से गुजरना ही एक त्रासदी के समान हो जाता है जिसका बहुत गहराई तक इन महिलाओं की मनोदशा पर प्रभाव पड़ता है। समाज एवं कानून इन दोनों के कारण महिलायें बहुत असहज हो जाती है। जिससे उनकी संवेगात्मक-परिपक्वता भी प्रभावित हुये बिना नहीं रहती। इसके विपरीत मुस्लिम तलाक की प्रक्रिया इतनी जटिल व लम्बी नहीं होती है। एवं मुस्लिम समाज भी कुछ सीमा तक उन्हें स्वीकृति प्रदान कर देता है, साथ ही उनके पुनर्विवाह के लिए भी रास्ते खुले होते हैं।

तालिका क्रमांक 3
हिन्दु-मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता सम्बन्धी विभिन्नताएं

समूह	पदों की संख्या N	माध्य M	प्रमाप विचलन S.D.	SE.diff. f	"t" मूल्य
हिन्दु तलाकशुदा महिलायें	25	81.04	16.150	3.89	2.76'
मुस्लिम तलाकशुदा महिलायें	25	70.28	10.133		

(0.05 विश्वसनीय स्तर पर सार्थक)

चित्र क्रमांक 1.1
हिन्दु-मुस्लिम तलाकशुदा महिलाएं एवं संवेगात्मक परिपक्वता



परित्यक्ता हिन्दु-मुस्लिम महिलाओं की संवेगात्मक परिपक्वता

हिन्दु-मुस्लिम परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता की विवेचना करने पर हिन्दु परित्यक्ता महिलाओं

Periodic Research

का माध्य 89.36 और मुस्लिम परित्यक्ता महिलाओं का माध्य 91.08 है (तालिका क्रमांक 4)। हिन्दु मुस्लिम परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता में सार्थक अन्तर नहीं पाया गया। क्योंकि दोनों धर्मों में परित्यक्ता हिन्दु-मुस्लिम महिलाओं की स्थिति समान ही होती है चित्र क्रमांक 1.2।

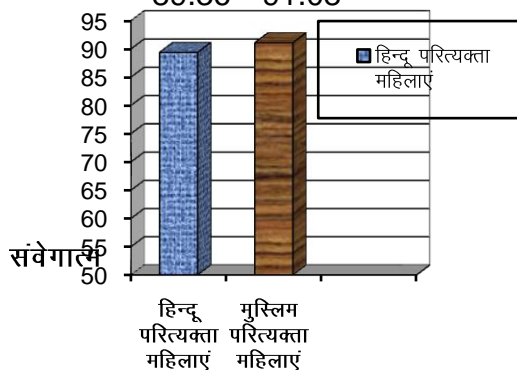
तालिका क्रमांक 4

परित्यक्ता हिन्दु-मुस्लिम महिलाओं की संवेगात्मक परिपक्वता सम्बन्धी विभिन्नताएं

समूह	पदों की संख्या N	माध्य M	प्रमाप विचलन S.D.	SE. diff.	"t" मूल्य
हिन्दु परित्यक्ता महिलाएं	25	89.36	17.278	4-22	- 0.40
मुस्लिम परित्यक्ता महिलाएं	25	91.08	11.364		

चित्र क्रमांक 1.2

हिन्दु-मुस्लिम परित्यक्ता महिलाएं एवं संवेगात्मक परिपक्वता



निष्कर्ष

प्रस्तुत शोध से प्राप्त परिणामों से स्पष्ट है कि तलाकशुदा एवं परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता का अध्ययन करने पर तलाकशुदा महिलाओं को परित्यक्ता महिलाओं की अपेक्षा संवेगात्मक रूप से अधिक परिपक्व पाया गया है। हिन्दु-मुस्लिम तलाकशुदा महिलाओं की संवेगात्मक परिपक्वता का भी अध्ययन किया गया। प्राप्त परिणामों के आधार पर मुस्लिम तलाकशुदा महिलायें अपेक्षाकृत संवेगात्मक रूप से अधिक परिपक्व पायी गयी। हिन्दु-मुस्लिम परित्यक्ता महिलाओं की संवेगात्मक परिपक्वता में बहुत कम अन्तर पाया गया।

सुझाव

1. आश्रमों का निर्माण :- ऐसी तलाकशुदा एवं परित्यक्ता महिलायें जिनके माता-पिता या परिवार वाले साथ में रखने में असमर्थ हैं अथवा रखना नहीं चाहते हैं, उनके लिये आश्रमों का निर्माण होना चाहिये। जिसमें उनके बच्चों को भी साथ रहने की व्यवस्था हो। तलाकशुदा एवं परित्यक्ता महिलाओं की आश्रमों की व्यवस्था में भागीदारी सुनिश्चित होनी चाहिये। इस प्रकार ये महिलाएं स्वयं इन कार्यों में व्यस्त रहेगी और अपने आप को उपेक्षित-सा अनुभव नहीं करेगी।

2. रोजगारोन्मुखी कार्यक्रम का प्रशिक्षण :- तलाकशुदा एवं परित्यक्ता महिलाओं को उनके शिक्षा-स्तर के अनुसार

रोजगारोन्मुखी कार्यक्रमों का प्रशिक्षण दिया जाना चाहिये, जिससे ये महिलायें आर्थिक उपार्जन कर आत्मनिर्भर बन सकें। इस प्रकार उनमें आत्मविश्वास की भावना जाग्रत होगी।

3. बालकों के लिये छात्रवृत्ति की व्यवस्था :- तलाकशुदा एवं परित्यक्ता महिलाओं के बालकों की शिक्षा हेतु शासन द्वारा छात्रवृत्ति की व्यवस्था होना चाहिये। यह छात्रवृत्ति रोजगारोन्मुखी शिक्षा प्राप्त करने तक मिलनी चाहिये।

4. कानून को सुदृढ़ बनाया जाये :- आश्रमों एवं अपने माता-पिता अथवा अपने रिश्तेदारों के साथ रहने वाली इन सभी तलाकशुदा एवं परित्यक्ता महिलाओं को भरण-पोषण भत्ता दिलवाने के लिये कानून को और अधिक सुदृढ़ बनाने की आवश्यकता है। जिससे इन महिलाओं को यथार्थ रूप में भरण-पोषण भत्ता मिल सके और ये अपने बालकों का अच्छी प्रकार पालन-पोषण कर सकें।

5. कानूनी सलाहकार :- परित्यक्ता महिलाओं के लिये कानूनी सलाहकारों की व्यवस्था होनी चाहिये। क्योंकि अधिकांश परित्यक्ता महिलायें कानूनी सलाहकार का खर्च वहन न कर पाने के कारण कोई कानूनी कार्यवाही नहीं कर पाती।

6. परामर्शदाता की व्यवस्था :- तलाकशुदा एवं परित्यक्ता महिलाओं तथा उनके बालकों को संवेगात्मक समस्याओं से उबारने के लिये निःशुल्क परामर्शदाताओं की व्यवस्था भी होनी चाहिये, जिससे ये महिलायें अपनी संवेगात्मक भावनाओं पर विजय प्राप्त कर अपने बालकों का उचित पालन-पोषण कर सकें। बालक भी अपनी योग्यताओं को विकसित कर समाज और देश के विकास में अपना योगदान दे सकें।

7. समाज को भी तलाकशुदा एवं परित्यक्ता महिलाओं के प्रति अन्य सदस्यों की तरह व्यवहार करने हेतु जागरूक बनना होगा। समाज का अच्छा व्यवहार इन महिलाओं के खोये हुये आत्मविश्वास को जाग्रत कर सकेगा और ये महिलायें भी सन्तुलित जीवन व्यतीत कर पायेगी।

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Periodic Research

युवाओं में बढ़ता नशा : एक घातक चुनौती

सारांश

मादक पदार्थों का चलन आज संपूर्ण देश के लिए एक सामाजिक समस्या है, जो छूत की बीमारी की तरह समाज में फैल रही है और युवा वर्ग को धीरे धीरे ध्वस्त कर रही है। अपरिपक्व उम्र के युवाओं में हमेशा कुछ नया ज्ञान प्राप्त करने की उत्कंठा होती है, जिसके फलस्वरूप यदि उन्हें कोई मादक पदार्थ मिल जाता है तो वे उसके दुष्परिणाम जानते हुए भी स्वयं पर नियंत्रण नहीं रख पाते और उस पदार्थ के प्रति अपनी उत्सुकता दूर करने के लिए एक बार चखने की गलती कर बैठते हैं, फिर बार बार इसकी पुनरावृत्ति करते हैं। वर्तमान परिवेश में शिक्षण संस्थाएँ कमजोर नियमों के कारण नशाखोरी एवं असामाजिक क्रियाकलापों के अड़डे बनते जा रहे हैं, जहाँ विद्या अध्ययन का उद्देश्य लेकर आने वाले भोले भाले विद्यार्थी बुरी संगत एवं दिखावे के साथ साथ सामाजिक दबाव का शिकार बन कर नशा संस्कृति से जुड़ जाते हैं। फलतः वैयक्तिक विघटन से प्रारंभ हुई प्रक्रिया पारिवारिक, सामाजिक एवं राष्ट्रीय विघटन के अप्रिय दृष्टांत भी प्रस्तुत करती है।

मुख्य शब्द : असामाजिक क्रिया-कलाप, वैयक्तिक विघटन, मद्यपान प्रस्तावना



अजरा एजाज

सहा.प्रा.गृ.वि.
राजमाता सिंधिया शास. क. महा.
छिंदवाड़ा, (म.प्र.)

प्राचीनकाल में मद्यपान व नशीली दवाओं का इस्तेमाल राजाओं और उच्च वर्गीय संभ्रांत परिवारों में हुआ करता था। आधुनिक समय में यह फैशन व स्वागत सत्कार का साधन बन गया है। सभी राष्ट्रों की सरकारें इसे आय के स्रोत के रूप में स्वीकार कर रही हैं। सामाजिक दृष्टि से यह एक विकट समस्या है। शराब या नशीली दवायें व्यक्ति विशेष के लिये हानिकारक तो ह ही, इससे परिवार एवं समाज भी विघटित होता है। आज नशीले पदार्थों की काली छाया समृद्ध परिवार और उच्च वर्ग तक ही सीमित नहीं रही, बल्कि इसकी विषाद छाया में झुग्गी-झोंपड़ी, रिक्शा-टैक्सी चालक, बेरोजगार युवा स्कूल-कालेज के विद्यार्थी आदि सभी कियाशील वर्ग घिर चुके हैं। भारत युवाओं का राष्ट्र है। यहाँ की 71 प्रतिशत आबादी 35 वर्ष से कम आयु की है और यहीं पीढ़ी निरंतर मादक द्रव्यों के चुंगल में अंधकारमय भविष्य की ओर बढ़ रही है। अध्ययनों से स्पष्ट हुआ है कि युवा वर्ग में नशा करने का एकमात्र मुख्य उद्देश्य “मौज मस्ती” करना है। जीवन के इस नये पड़ाव में लड़के-लड़कियाँ अपने में अन्तरनिहित “एडवेंचर” की नशे के रूप में अभिव्यक्ति करना चाहते हैं। इसलिये विद्यार्थियों में आज नशा उत्सुकता, कौतुहल के साथ ही साथ एक “प्रतिष्ठा प्रतीक” बन गया है। अंतर्राष्ट्रीय नारकोटिक्स नियंत्रण रणनीति की रपट के अनुसार भारत में 11 मिलियन नशाखोर हैं।

अर्थ –

नशीले शब्द को कई अर्थों में प्रयुक्त किया जाता है, जैसे –व्यसन, द्रव्य, नशा, मादक पदार्थ, शामक अथवा अवसादक पदार्थ। शामक अथवा अवसादक पदार्थ से तात्पर्य यह है, कि जब कोई मनुष्य अपने केन्द्रीय स्नायुमंडल को क्षीण अथवा अशक्त करने के लिये या नींद अथवा शांति प्राप्त करने के लिये किसी पदार्थ का सेवन करना आवश्यक समझता हो। आधुनिक युग में मादक पदार्थों का सेवन नशे के रूप में न मानने वाले इसे आनंद प्राप्ति की परिभाषा में रखते हैं।

मादक द्रव्यों के प्रयोग से व्यक्तिगत रूप से भी समाज में बहुत सी वैधानिक समस्याएँ उत्पन्न हो रही हैं। नशे के उन्मादी सेवनकर्ता सड़क दुर्घटना एवं इन पदार्थों की प्राप्ति के लिये धोखाधड़ी, चोरी- चकारी, जाल साजी जैसे आपराधिक व्यवहार करने से भी नहीं चूकता है। युवा वर्ग में नशे के बढ़ते प्रयोग से कई सामाजिक समस्याओं में वृद्धि हो रही है।

साहित्य पुनरावलोकन

विद्यार्थियों में मादक पदार्थों के प्रयोग को लेकर अलग-अलग प्रकार से अलग-अलग स्थानों पर शोध व सर्वेक्षण होते रहे हैं जैसे-

Periodic Research

1. कोलकोता विश्वविद्यालय के संप्रयुक्त मनोविज्ञान विभाग द्वारा 1988 में डा राम आहूजा ने राजस्थान में यहां की राजधानी जयपुर में वि.वि. के छात्रों में नशे के सेवन को लेकर अध्ययन किया।
2. वर्ष 1994 में निजी क्षेत्र की शैक्षणिक संस्थाओं में, पब्लिक स्कूलों, रेस्टोरेन्ट कन्टीनों पर टाफियों में नशीली दवाईयां पाई गई, अतः उन पर तुरन्त प्रतिबंध लगाया गया।
3. सन 1994 में नशा वृत्ति की समस्या के परिप्रेक्ष्य में राजस्थान वि. वि. जयपुर ने विभिन्न महाविद्यालयों के छात्र-छात्राओं का अध्ययन किया एवं जयपुर में 26 जून 1995 को अंतर्राष्ट्रीय नशामुक्ति दिवस मनाया गया, इस समस्या के अध्ययन एवं निवारण के उपाय हेतु 12 सदस्यीय समिति का गठन किया गया।

उद्देश्य

हमारा समाज नशे की पकड़ में कुछ इस प्रकार आ चुका है कि यह आज हमारी राष्ट्रीय समस्या बन गया है। वर्तमान में यह प्रवृत्ति युवा विद्यार्थियों में अधिक पायी जा रही है। आज नशा सिर्फ महानगरो में ही नहीं बल्कि शनैः-शनैः देश के सभी शिक्षण संस्थानों में पहुंचाया जा रहा है। छिन्दवाड़ा में आसपास के क्षेत्रों के विद्यार्थी भी आते हैं और छिन्दवाड़ा शहर के युवा अन्य शहरों में जाकर विद्या अर्जन करते हैं, जहां उनके संपर्क में अन्य विद्यार्थी के साथ विदेशी विद्यार्थी भी आते हैं जो अत्याधुनिक, स्वच्छन्द एवं बेहद उन्मुक्त होते हैं। नशा उनके लिये कुछ नई बात नहीं हाती वे इसे सहज भाव से दिनचर्या के रूप में लेते हैं। प्रस्तुत अध्ययन में हमने इस अध्ययन के कुछ उद्देश्य निर्धारित किये हैं जो निम्नानुसार हैं—

- युवाओं को नशे की ओर आकृष्ट करने वाले कारकों को ज्ञात करना।
- पारिवारिक वातावरण व मूल्यों की जानकारी प्राप्त करना।
- बदलते सामाजिक परिवेश, उपेक्षित सामाजिक व सांस्कृतिक तत्वों को जानना।

परिकल्पना

- विद्यार्थी अपने साथियों के बीच विशेष स्थान बनाने एवं फैशन के लिये नशा ग्रहण करते हैं।
- जिज्ञासा व कौतूहल वश विद्यार्थी नशा प्रारंभ करता है।
- असफलताओं से उत्पन्न तनावों को दूर करने के लिये विद्यार्थी नशा करते हैं।
- पारिवारिक, सामाजिक व सांस्कृतिक उपेक्षा इस प्रवृत्ति को बढ़ाती है।
- हर स्तर का विद्यार्थी नशे का प्रयोग करता है।

अध्ययन पद्धति

नशा खोरी समाज में फैली एक गंभीर समस्या व बीमारी है। जिसके शिकार हमारे समाज में सभी आयु समूह के लोग हैं। विशेष रूप से युवा वर्ग जो विश्वविद्यालय और महाविद्यालय के विद्यार्थी हैं वे इस व्याधि से सबसे अधिक ग्रसित हैं। अतः हमने छिंदवाड़ा

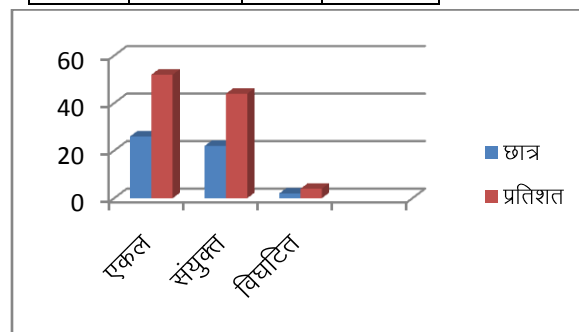
जिले में शिक्षा ग्रहण कर रहे शासकीय व अशासकीय महाविद्यालय में अध्ययनरत् 50 छात्रों को अध्ययन के लिये चुना। प्रश्नावली तैयार कर विद्यार्थियों से उत्तर जानने का प्रयास किया गया।

विश्लेषण

पारिवारिक संबंध, परिवार का आकार, पारिवारिक सदस्यों का व्यवहार व उनकी गतिविधियां इत्यादि बचपन से ही प्रभावित करती है। अतः इस संबंध में ही सर्वप्रथम जानने का प्रयास किया गया:

परिवार का प्रकार

क्रमांक	परिवार	छात्र	प्रतिशत
1.	एकल	26	52
2.	संयुक्त	22	44
3.	विघटित	02	04
	योग	50	100

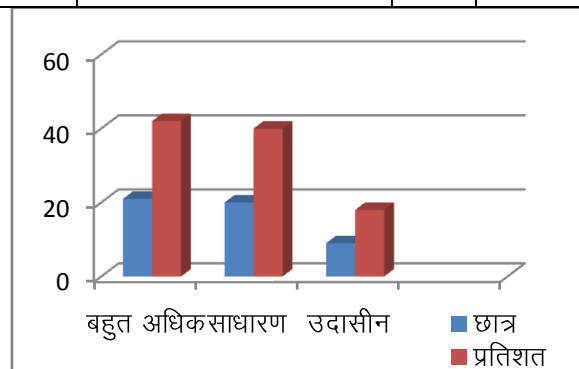


परिवार का प्रकार (स्वयं स्रोत)

उक्त तालिका से स्पष्ट है कि यहां पर 52 प्रतिशत छात्र एकांकी परिवार से हैं। 44 प्रतिशत संयुक्त परिवार से एवं 4 प्रतिशत विघटित परिवार से हैं। उक्त स्थिति को देखते हुए यह भी नहीं कहा जा सकता कि बच्चे एकदम अकेले रहते हैं इस कारण व्यसनी बने।

माता-पिता /अभिभावकों का बच्चों के प्रति व्यवहार

क्रमांक	माता-पिता अभिभावक ध्यान देते हैं	छात्र	प्रतिशत
1.	बहुत अधिक	21	42
2.	साधारण	20	40
3.	उदासीन	09	18
	योग	50	100



Periodic Research

माता-पिता /अभिभावकों का बच्चों के प्रति व्यवहार (स्वयं स्त्रोत)

माता-पिता /अभिभावक, बच्चों पर कितना ध्यान देते हैं अर्थात् उनका अपने बच्चों के प्रति कैसा व्यवहार है? इसे जानना इसलिये आवश्यक है कि कहीं अभिभावकों की उदासीनता बच्चों में व्यसन की उत्तरदायी तो नहीं है? परिणाम आश्चर्य जनक मिले ,शोध में पाया कि अधिकांश व्यसनी बच्चों के माता-पिता बच्चों पर बहुत ध्यान देते हैं ,इसके विपरीत बच्चों के प्रति उदासीन रहने वाले अभिभावकों /माता-पिता के बच्चे कम व्यसनी निकले ।

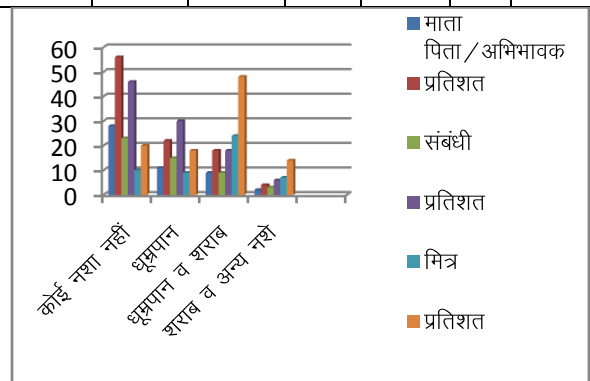
यह प्रश्न पूछने पर कि माता-पिता /अभिभावक आप पर कितना ध्यान देते हैं? तो 42प्रतिशत छात्रों ने बताया कि बहुत अधिक ध्यान देते हैं। वहीं 40 प्रतिशत छात्रों ने बताया कि उनके परिजन साधारण या सामान्य ध्यान रखते हैं अर्थात् न कम न ज्यादा। साथ ही 18 प्रतिशत छात्रों ने बताया कि उनके माता-पिता /अभिभावक उनके प्रति उदासीन रहते हैं।

परिवार, संबंधी, मित्रों के नशाखोरी का विश्लेषण

विद्यार्थियों में नशे के सेवन का अध्ययन करने से पूर्व यह जानना आवश्यक है कि उनके घर परिवार या आसपास का माहौल कैसा है ? साधारणतया जिनके परिवारों में व्यसन होता है या आस पास के वातावरण में, यानि पास-पड़ोस, मित्रों में नशाखोरी होती है या उनमें नशे का प्रचलन है तो वहां के विद्यार्थी नशा कर सकते हैं ।

पारिवारिक सदस्यों, संबंधियों, मित्रों में नशे का विश्लेषण

नशा	माता-पिता /अभि.	प्रतिशत	संबंधी	प्रतिशत	मित्र	प्रतिशत
कोई नशा नहीं	28	56	23	46	10	20
धूम्रपान	11	22	15	30	09	18
धूम्रपान व शराब	09	18	09	18	24	48
शराब व अन्य नशे	02	04	03	06	07	14
योग	50	100	50	100	50	100



पारिवारिक सदस्यों, संबंधियों, मित्रों में नशे का विश्लेषण:-(स्वयं स्त्रोत)

किसी भी प्रकार का नशा न करने वाले परिवार 56 प्रतिशत है, अर्थात् यहाँ किसी भी प्रकार का नशा न करने वाले परिवार सबसे अधिक हैं। 22 प्रतिशत विद्यार्थियों ने बताया कि उनके माता-पिता /अभिभावक मात्र धूम्रपान ही करते हैं। 18 प्रतिशत ने बताया उनके माता-पिता/अभिभावक धूम्रपान व शराब का सेवन करने वाले हैं। वहीं 4 प्रतिशत विद्यार्थियों ने बताया उनके माता-पिता/अभिभावक शराब के साथ अन्य नशा भी करते हैं।

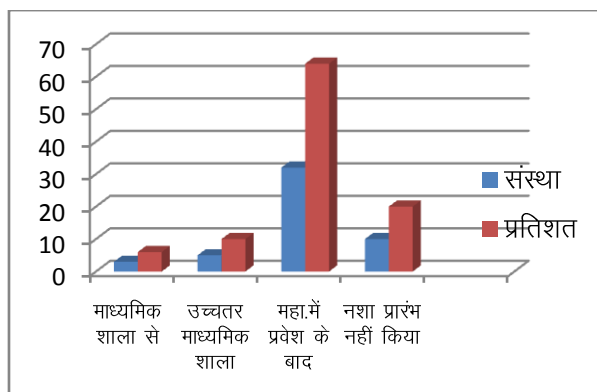
46 प्रतिशत विद्यार्थियों ने बताया कि उनके सगे संबंधी किसी प्रकार का नशा नहीं करते हैं। 30 प्रतिशत विद्यार्थियों ने कहा कि उनके संबंधी मात्र धूम्रपान करते हैं । वहीं 18 प्रतिशत विद्यार्थियों ने कहा कि उनके संबंधी धूम्रपान व शराब का सेवन करते हैं । मात्र 6 प्रतिशत विद्यार्थियों ने कहा कि उनके संबंधी शराब के अलावा अन्य प्रकार का नशा भी प्रयुक्त करते हैं।

चौकाने वाली बात यह है कि मात्र 20 प्रतिशत विद्यार्थियों ने बताया कि उनके मित्र किसी भी प्रकार का नशा नहीं करते हैं **लेकिन अधिकांश मित्र धूम्रपान अथवा नशे के आदी हैं, यह समाज के लिये चिंतावनी है।** विद्यार्थियों ने बताया कि उनके 18 प्रतिशत मित्र ही ऐसे हैं जो मात्र धूम्रपान करते हैं। 48 प्रतिशत विद्यार्थियों ने बताया उनके मित्र धूम्रपान के साथ शराब का भी सेवन करते हैं। एवं 14 प्रतिशत विद्यार्थियों ने बताया कि उनके मित्र शराब व अन्य नशे का प्रयोग भी करते हैं ।

नशाखोरी एवं धूम्रपान प्रारंभ करने की अवधि का विश्लेषण

क्रमांक	नशाखोरी प्रारंभ करने की अवधि	संस्था	प्रतिशत
1.	माध्यमिक शाला से	03	6
2	उच्चतर माध्यमिक शाला	05	10
3.	महा. में प्रवेश के बाद	32	64
4.	नशा प्रारंभ नहीं किया	10	20
	योग	50	100

Periodic Research



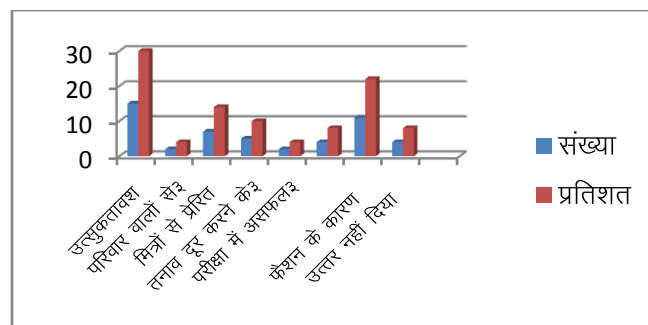
नशाखोरी एवं धूम्रपान प्रारंभ करने की अवधि का विश्लेषण (स्वयं स्रोत)

नशाखोरी करने वाले व्यसनी विद्यार्थियों से पूछने पर कि उन्होंने नशा कब से प्रारंभ किया? तो जो पता चला वह इस प्रकार है—माध्यमिक शाला से 6 प्रतिशत विद्यार्थियों ने, उच्चतर माध्यमिक शाला से 10 प्रतिशत विद्यार्थियों ने एवं सबसे अधिक 64 प्रतिशत विद्यार्थियों ने महा.विद्यालय में प्रवेश के बाद नशे का प्रारंभ किया। मात्र 20 प्रतिशत विद्यार्थी ऐसे थे जिन्होंने इस लत से अपने आपको मुक्त रखा था। जैसा कि हमारी परिकल्पना थी कि हर स्तर का विद्यार्थी नशे का प्रयोग करता है, हमने उसे सही पाया। यह समाज के लिये एक घातक संकेत है।

शालेय शिक्षा के बाद महाविद्यालयीन शिक्षा में प्रवेश विद्यार्थियों के लिए एक नया अनुभव होता है। जहाँ विद्यार्थी अपने वरिष्ठ विद्यार्थियों की संगत में एवं दबाव वश व्यसन में फँस जाते हैं जो धीरे धीरे बढ़ता ही जाता है।

नशीले पदार्थों का सेवन प्रारंभ करने के उत्तरदायी कारणों का विश्लेषण :—

क्रमांक	उत्तरदायी कारण	संख्या	प्रतिशत
1.	उत्सुकतावश	15	30
2.	परिवार वालों से प्रेरित	2	4
3.	मित्रों से प्रेरित	7	14
4.	तनाव दूर करने के लिये	5	10
5.	परीक्षा में असफल होने पर	2	4
6.	प्यार में धोखा खाने के कारण	4	8
7.	फैशन के कारण	11	22
8.	उत्तर नहीं दिया	04	8
	योग	50	100



नशीले पदार्थों का सेवन प्रारंभ करने के उत्तरदायी कारणों का विश्लेषण (स्वयं स्रोत)

सर्वप्रथम विद्यार्थी ने किस परिस्थिति वश नशा प्रारंभ किया? उसका क्या कारण रहा? जिसके वशीभूत होकर वह व्यसनी बना। जैसा कि उपरोक्त तालिका से स्पष्ट है कि अधिकांश विद्यार्थियों ने अर्थात् 30 प्रतिशत विद्यार्थियों ने उत्सुकतावश नशा प्रारंभ किया। 4 प्रतिशत विद्यार्थियों ने परिवार वालों को देखकर इस प्रवृत्ति को अपनाया। 14 प्रतिशत विद्यार्थी मित्रों से प्रेरित होकर व्यसन की ओर आकृष्ट हुए। 10 प्रतिशत विद्यार्थी तनाव से मुक्ति, 4 प्रतिशत परीक्षा में असफलता के कारण, 8 प्रतिशत प्यार में धोखा खाने के कारण, 22 प्रतिशत अपनी प्रतिष्ठा बनाने व फैशन के कारण इस लत के आदी बने 8 प्रतिशत विद्यार्थियों ने उक्त प्रश्न का उत्तर देना नहीं चाहा।

क्या विद्यार्थी उत्सुकता मिटाने के लिये व्यसन का प्रयोग करते हैं:—

विद्यार्थियों द्वारा नशीले पदार्थों के उपयोग का कारण उत्सुकता मिटाना मुख्य रूप से दिखाई दिया। हमारी परिकल्पना में विद्यार्थियों में नशे का एक कारण कौतुहल एवं जिज्ञासा है। परिकल्पना की सत्यता की जाँच हेतु विद्यार्थियों से पूछने पर ज्ञात हुआ कि नशा करने का एक बड़ा कारण नशीले पदार्थों के प्रति कौतुहल एवं जिज्ञासा ही है।

असफलताओं से उत्पन्न तनावों को दूर करने के लिये विद्यार्थी नशा करते हैं:—

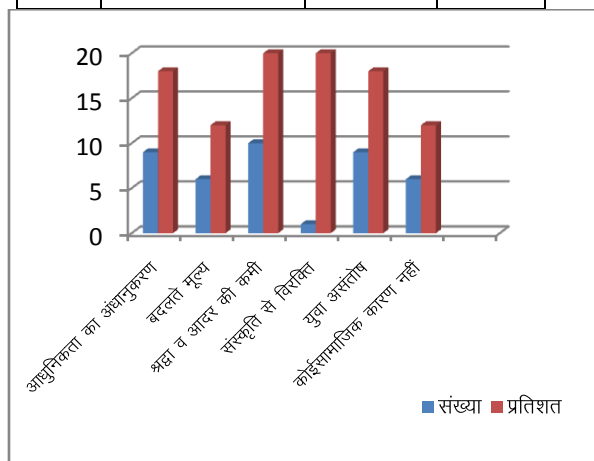
हमारी एक परिकल्पना यह भी थी कि विद्यार्थी, परीक्षा में मिली असफलता से उत्पन्न तनाव को दूर करने के लिये भी नशीले पदार्थों का सेवन करने लगते हैं। विश्लेषण करने पर ज्ञात हुआ कि ये एक बड़ा कारण नहीं है। मात्र कुछ ही छात्र तनाव से प्रभावित होकर नशे के आदी बनते हैं।

युवा वर्ग फैशन से जल्दी प्रभावित होता ही है। फैशन का सर्वाधिक एवं शीघ्र प्रभाव युवा वर्ग पर पड़ रहा है। युवा वर्ग में व्यसन भी फैशन का एक अंग बन गया है। युवा धूम्रपान, शराब एवं अन्य व्यसन को फैशन एवं आधुनिकता की निशानी मानता है। यह विश्लेषण करने पर सिद्ध भी हुआ है। शोध में हमने पाया कि 22 प्रतिशत विद्यार्थी फैशन के वशीभूत नशीले पदार्थों का सेवन करते हैं। जो हमारी परिकल्पना को सही सिद्ध करता है।

Periodic Research

नशाखोरो की बढ़ती हुई संख्या के सामाजिक कारण

क्रमांक	कारण	संख्या	प्रतिशत
1	आधुनिकता का अधानुकरण	9	18
2	बदलते मूल्य	6	12
3	श्रद्धा व आदर की कमी	10	20
4	संस्कृति से विरक्ति	10	20
5	युवा असंतोष	9	18
6	कोई सामाजिक कारण नहीं	6	12
	योग	50	100



नशाखोरो की बढ़ती हुई संख्या के सामाजिक कारण (स्वयं स्त्रोत)

उक्त तालिका से स्पष्ट है कि 18 प्रतिशत विद्यार्थी आधुनिकता का अधानुकरण, 12 प्रतिशत बदलते सामाजिक मूल्य, 20 प्रतिशत श्रद्धा व आदर की कमी को, 20 प्रतिशत संस्कृति से विरक्ति व 18 प्रतिशत असंतोष को नशाखोरों की बढ़ती हुई संख्या का सामाजिक कारण मानते हैं, वहीं 12 प्रतिशत विद्यार्थी इस व्यसन की बढ़ती हुई संख्या का कोई सामाजिक कारण नहीं है ऐसा मानते हैं।

निष्कर्ष

विश्व के अधिकांश देशों की युवा पीढ़ी आज कुंठा और निराशा से ग्रसित है। वही हाल हमारे देश की युवा पीढ़ी का भी है। हमारे प्राचीन संस्कृति एवं पाम्परागत मूल्यों में आई गिरावट एवं भौतिकता तथा पाश्चात्य संस्कृति के अनुगामी युवाओं में नशा करना एक आवश्यक जीवन प्रक्रिया हो गई है। व्यक्ति के बौद्धिक, शारीरिक और सामाजिक विकास की प्रक्रिया उसके परिवार में जन्म लेने से ही प्रारंभ हो जाती है। बचपन से लेकर युवा अवस्था तक पारिवारिक संरक्षण में व्यक्ति रहता है। परन्तु युवा अवस्था व्यक्ति के जीवन का वह आयाम है, जिसमें वह कुछ करने की आकांक्षा रखता है, एवं अपने विचारों, मूल्यों का समाज के साथ तारतम्य न होने पर विद्रोह कर बैठता है, और कुंठा व निराशा के दौर में चुनौती का सामना करने की मानसिकता बनाने के स्थान पर मादक पदार्थों का सेवन कर भटकने लगता है।

युवा पीढ़ी जिज्ञासु स्वभाव की होती है, अर्थात् उसमें किसी भी वस्तु की जानकारी लेने की एक स्व जिज्ञासा होती है। इसी जिज्ञासु स्वभाव के कारण आज अधिकांश युवा नशीले पदार्थों की प्रकृति के प्रति अपनी उत्सुकता मिटाने के लिये ही इसका सेवन एक बार करने के बाद इनके गुलाम बन जाते हैं।

यहाँ के विद्यार्थियों में परीक्षा की असफलता नशा करने का विशेष कारण बनती नहीं दिखाई दी।

समाज में वर्तमान में बदलते मूल्यों, आधुनिकता, पाश्चात्य संस्कृति, श्रद्धा आदर की कमी एवं रुढ़ियों पर ढीली पकड़ के कारण सामाजिक अव्यवस्था के फलस्वरूप वर्तमान में मद्यपान, मादक द्रव्य व्यसन की शुरुआत हुई एवं इसमें दिन प्रतिदिन वृद्धि होती जा रही है।

नशे का सर्वाधिक विपरीत प्रभाव व्यक्ति के व्यक्तित्व पर पड़ता है, जिससे उसकी आर्थिक एवं सामाजिक स्थिति इतनी अधिक बिगड़ने लगती है कि उसकी पराकाष्ठा के रूप में संबंधित व्यक्ति में अपराध वृत्ति को पनपते देखा जा सकता है। हमारे यहां भी आज युवा सामाजिक, सांस्कृतिक मूल्यों से वंचित होकर भौतिकवादी जीवन, दिवास्वप्नों, असीमित आकांक्षाओं और दिशा विहीन आदर्शों के भ्रमजाल में फसता जा रहा है। शहरों की संस्कृति में तो नशा न करने वाले युवा को देहाती की संज्ञा दी जाती है। मद्यपान को आज मित्रता एवं व्यवहारिक जीवन की कड़ी समझा जाने लगा है। महाविद्यालयी छात्रों में नशा करना प्रतिष्ठा का प्रतीक समझा जाने लगा है।

नशीले पदार्थों का सेवन व्यक्ति के शारीरिक एवं मानसिक स्वास्थ्य पर विपरीत प्रभाव डालता है। व्यक्ति या तो मानसिक अवसाद की स्थिति में पहुँच जाता है या फिर अत्यधिक उत्तेजित हो जाता है। शराब पीने वाले यकृत रोग, भूख की कमी, साँस का फूलना एवं प्रोटीन कैलोरी के कुपोषण के कारण जलोदर से पीड़ित हो जाते हैं।

नशीले पदार्थों के सेवन से व्यक्तित्व में जो परिवर्तन आता है उससे परिवार पर बहुत दबाव बनता है। ऐसे युवा बहुत चिड़चिड़े हो जाते हैं साथ ही आकामक भी, अपने नशे की आवश्यकता पूरी करने के लिए वे अपने ही घर का सामान बेचने में नहीं हिचकिचाते हैं।

नशाखोरी के कारण आज शिक्षण संस्थानों में हिंसा जैसी घटनाएँ बढ़ गई हैं।

सुझाव इस समस्या से बचाव हेतु तीन स्तरों पर हम प्रयास कर सकते हैं

- **पारिवारिक स्तर पर**—बच्चों के व्यक्तित्व के निर्माण में परिवार की भूमिका महत्वपूर्ण होती है। परिवारों में स्नेह विहीन, शुष्क, बिखराव वाला वातावरण बच्चों को पथभ्रष्ट करता है। घर में ऐसा माहौल होना चाहिये जिससे बच्चे अपनी रुचि की सृजनात्मक गतिविधियों में सहर्ष भाग ले सकें। परिवार में ही बच्चा सहयोग, आपसी सहायता, पारस्परिक निर्भरता एवं सहिष्णुता का पाठ सीखता है। जैसे ही पता चले कि बच्चा नशा करने लगा है परिवार को सजग हो जाना चाहिए समस्या निदान का तुरंत प्रयास शुरू कर देना चाहिए

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अपना व्यवहार भी उसके प्रति सहानुभूति पूर्ण रखना चाहिए।

- **शैक्षणिक संस्थान के स्तर पर** — विश्वविद्यालय एवं महाविद्यालय के छात्रों में असीम ऊर्जा एवं उद्यम करने की सामर्थ्य होती है। इसे यदि सही दिशा मिल जाए तो इनका व्यक्तित्व संवर जाता है। अन्यथा गलत राह पर पड़ जाता है। इस ऊर्जा को सृजनात्मक कार्यों जैसे लेखन भाषण, चित्रकला, संगीत, समाज सेवा, योग साधना, खेलकूद, जूडो-कराटे, आदि में लगाना चाहिये। सभी छात्रों का इन कार्यक्रमों में से किसी एक में भाग लेना अनिवार्य होना चाहिये।

- महाविद्यालय के प्राध्यापकों की यह अवधारणा नहीं होनी चाहिये कि उनका कार्य केवल कक्षा में आए विद्यार्थियों को पढ़ाना मात्र है, बल्कि कक्षा के अंदर व बाहर घनिष्ठ संवाद स्थापित कर उन्हें उचित मार्गदर्शन देना व सुसंस्कृत करना भी है।

- **समाज के स्तर पर** — नैतिक ह्रास ने नशावृत्ति जैसी अनेक बुराईयों को जन्म दिया है। अतः परामर्शदाता, सामाजिक कार्यकर्ता, समुदाय नेता, बुद्धिजीवी, पुलिस के प्रतिनिधि एक साथ बैठकर सामाजिक बुराईयों पर विचार विमर्श कर, सही नेतृत्व मिलने पर "सामुदायिक कार्य दल" बनाएं। यह दल मादक व्यसनो से ग्रसित लोगों का पता लगाकर उनका उपचार करें।

- नशाखोरी के खिलाफ जनजागृति पैदा करें।
- नशामुक्ति शिविरों का आयोजन करें।
- नशे से मुक्ति के बाद व्यक्तियों के पुनर्वास की व्यवस्था की जाए।

समाज में पत्र-पत्रिकाओं, दूरदर्शन पर वृत्त चित्र एवं धारावाहिक, नुक्कड़ नाटकों तथा विभिन्न प्रचार माध्यमों द्वारा नशे के खिलाफ वातावरण तैयार किया जाना चाहिये।

- नशीले पदार्थों की बिक्री पर पूर्ण प्रतिबंध लगाया जाना चाहिये।
- युवा पीढ़ी का भारतीय संस्कृति की ओर रुझान किया जाए।
- सभी शहरों में ड्रग डीएडिक्शन केन्द्र खोले जाने चाहिये।
- समय समय पर शिक्षण संस्थानों में नशा मुक्ति शिविरों का आयोजन किया जाना चाहिये।
- व्यसनी युवाओं को हेय दृष्टि से न देखा जाए, उनके साथ सहयोगपूर्ण व्यवहार किया जाना चाहिये।

संदर्भ—

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अली सरदार जाफरी का हिन्दी साहित्य में योगदान



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सारांश

कवि रत्न अली सरदार जाफरी उर्दू शायरों में भारतीय उपमहाद्वीप के ख्याति प्राप्त शायर थे। वे प्रगतिशील लेखक आन्दोलन से जुड़े हुये थे और इस आन्दोलन के मुख्य प्रकाश स्तम्भों में से थे। जाफरी जी ने सदैव जुल्म के खिलाफ रचनाएँ लिखी वे शायरी में कला जीवन के लिए मानकर चले और शायरी कट्टरवाद आर्थिक शोषण सामाजिक यंत्रणा के खिलाफ हथियार के रूप में इस्तेमाल किये जाने के पक्ष का सदैव समर्थन किया। जाफरी साहब उच्च कोटि के समालोचक और अनुवादक की हैसियत से भी ख्याति प्राप्त की। उनकी साहित्य तथा आलोचना सम्बन्धी किताबों में तरक्की-तरक्की पसन्द, अदब लखनऊ की पाँच रातें तथा पैगम्बरान-ए-सुखन मशहूर हैं। सरदार जाफरी ने लगभग 87 वर्ष की आयु पाई और सारा जीवन कर्मशीलता में तथा व्यस्तता में व्यतीत किया। उन्होंने कुछ फिल्मों के लिए संवाद भी लिखे। कहानियों और कुछ वृत्ति चित्रों के आलेख भी लिखे साथ ही पत्र और पत्रिकायें संपादित की तथा शैक्षिक और सांस्कृतिक संस्थाओं से जुड़े रहे व दुनिया के अनेक देशों की यात्राएं करते रहे। इस प्रकार जाफरी साहब का सम्पूर्ण जीवन एक रोमांच पूर्ण जीवन यात्रा रहा है। जनाब अली सरदार जाफरी की लोकप्रियता का एक रहस्य यह भी है कि उनकी कविता रूसी, उजबेकी, फारसी, अंग्रेजी, फ्रान्सीसी अरबी, तथा कई भारतीय भाषाओं में अनूदित हो चुकी है। जाफरी साहब उर्दू के साथ अंग्रेजी के भी विद्वान थे उन्होंने साहित्य समाज तथा राजनीति सम्बन्धी अनेक विषयों पर टिप्पणियाँ आलेख और कालम भी बड़ी संख्या में लिखे हैं। उनके आलेख लालकिला, साबरमती आश्रम, और तीनमूर्ति निवास पर आधारित लोकप्रिय ध्वनि और प्रकाश कार्यक्रम के अन्तर्गत हैं। अली सरदार जाफरी ने साहित्य के माध्यम से भारत की एकता, अखण्डता व सदभावना के बीज बोये थे वे आज के मुस्लिम साहित्यकारों के लिए प्रेरणा स्रोत हैं। उन्होंने अपनी कलम के माध्यम से जनमानस को आवाज दी और जीवन की सच्चाई को कलमबद्ध किया। साहित्य के लिए दिये गये अली सरदार जाफरी के योगदान का यह देश ऋणी रहेगा और साहित्य युगों-युगों तक देश के लिए प्रासांगिक रहने के साथ आने वाली पीढ़ियों के लिए प्रेरणा स्रोत भी।

मुख्य शब्द : सांस्कृतिक संस्था, साहित्य युग, साम्प्रदायिकता

प्रस्तावना

भारतवर्ष एक विशाल देश है जहाँ अनेक जाति, धर्म व सम्प्रदाय के व्यक्ति निवास करते हैं अनेक भाषा बोलते हैं, व अनेक प्रकार की वेश-भूषा धारण करते हैं भारतवर्ष में विभिन्न धर्मों को मानने वाले व्यक्ति शताब्दियों से साथ-साथ रहते चले आ रहे हैं, लेकिन सभी में एकता और भ्रातृत्व भावना का पूर्णतया विकास जैसा होना चाहिए वैसा 21^{वीं} सदी में इस वर्तमान युग में भी नहीं दिखाई दे रहा है। अब भी आए दिन साम्प्रदायिक दंगे, आतंकवाद का भयावह रूप देश के वातावरण को विक्षुब्ध बना देता है। देश के इस तरह के वातावरण को सुधारने के लिए बुद्धि जीवियों और साहित्यकारों के प्रयत्न की अत्यंत आवश्यकता महसूस की जाती है ऐसे भ्रातृत्व भावना, भावात्मक एकता व सांस्कृतिक एकता का प्रसार करने वाले महापुरुषों के जीवनचरित्रों को उजागर करके प्रस्तुत करना देश के लिए बड़े पुण्य की बात हो सकती है। देश की सांस्कृतिक, राष्ट्रीय व भावात्मक एकता की भावना का प्रसार करने के अनेक शासकों, सन्त सूफी एवं भक्त कवियों तथा महात्माओं ने अनेक स्तुत्य प्रयत्न किए हैं। आज के वर्तमान समय के साम्प्रदायिक तनाव और हिंसा के इस दौर में इस बात पर विश्वास कर पाना मुश्किल हो सकता है कि चार सौ साल पहल भारतभूमि पर एक ऐसा मसलमान मनस्वी पैदा हुआ था जिसका हिन्दी साहित्य में योगदान अविस्मरणीय है। सरदार जाफरी जी का जन्म 29 नवम्बर 1931 को बलराम पुर गोंडा (उत्तरप्रदेश) में हुआ था। ये एक साधारण मध्यवर्गीय मुसलमान घराने में पैदा हुए थे जिनके घर का वातावरण खालिस धार्मिक था और ऐसे

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मुस्लिम घरानों में 'अनीस के मर्सिये' पढ़े जाते थे और साथ ही इन मुस्लिम परिवारों में रामायण और महाभारत भी हिन्दू घरानों की तरह पढ़े जाते थे, इन सबका प्रभाव जाफरी, पर पड़ा। जाफरी बलरामपुर से अपनी हाईस्कूल की परीक्षा उत्तीर्ण करने के बाद, उच्च शिक्षा के लिए मुस्लिम विश्वविद्यालय अलीगढ़ चले गये, वे अपने छात्र जीवन में ही छात्र नेता बन गये और विद्यार्थी आन्दोलनों में गहराई के साथ भाग लेने लगे। अलीगढ़ विश्वविद्यालय में विद्यार्थियों की एक हड़ताल कराने के कारण वे विश्वविद्यालय से निकाल दिए गये और फिर वे ऐंग्लो-ऐरिनिक कालेज दिल्ली चले गये जहाँ से अपनी बी.ए. की डिग्री प्राप्त की और लखनऊ विश्वविद्यालय से एम.ए. किया। इसके बाद वे कम्युनिस्ट पार्टी के सदस्य बन गये तथा स्वतंत्रता आन्दोलन के दौरान साम्राज्यवादी विरोध के चलते कई बार जेल गये और सन् 1992 में वे मुम्बई आकर बस गये तथा मृत्युपर्यन्त वही रहे।¹ सरदार जाफरी दबे कुचले वर्ग के लोगों को अपने कलम के माध्यम से आजादी और जीवन की सच्चाई के लिए निरन्तर प्रेरित करते रहे।

कवि रत्न अली सरदार जाफरी उर्दू शायरों में भारतीय उपमहाद्वीप के ख्याति प्राप्त शायर थे। वे प्रगतिशील लेखक आन्दोलन से जुड़े हुये थे और इस आन्दोलन के मुख्य प्रकाश स्तम्भों में से थे। उनके साथियों में मजाज, कृष्णचन्द्र, राजेन्द्र सिंह बेदी, स्मृत चुगताई, मजरूह सुल्तानपुरी, और कैफी आज़मी आदि थे। ये सभी एक बड़े परिवार की तरह थे। जाफरी जी ने सदैव जुल्म के खिलाफ रचनाएं लिखी वे शायरी में कला जीवन के लिए मानकर चले और शायरी कट्टरवाद आर्थिक शोषण सामाजिक यंत्रणा के खिलाफ हथियार के रूप में इस्तेमाल किये जाने के पक्ष का सदैव समर्थन किया। जाफरी की निगाह में शायरी दिल बहलाने की चोज नहीं बल्कि जुल्म के खिलाफ जन-मानस में जागरूकता का संदेश देने का माध्यम रही आजादी के लिए उन्होंने शायरी लिखी और जेल गये और आजादी के बाद देश के बँटवारे को लेकर और अन्याय के खिलाफ लिखा तथा जेल गए। जेल में भी इनकी कलम चलती रही, उन्होंने मेरा सफर में लिखा है— मैं यहाँ फिर आऊंगा बच्चों के दहन से बोलूंगा, चिड़ियों की जुबां से गाऊंगा। जाफरी का यह ख्वाब अभी अधूरा है और भावी पीढ़ी को उनके स्वप्न को पूर्ण करना है।

प्रख्यात कवि स्वर्गीय अली सरदार जाफरी ने अपनी आत्मकथा में लिखा है :

“मुझ इन्सान की हाथ बड़े खूबसूरत मालुम होते हैं, इनके कंपन में संगीत है और मौन में कविता। उनकी उंगलियों से सृजन की गंगा बहती है। ये स्वर्गदूत है जो मन और मस्तिष्क की उंचाइयों से आकाशवाणी लेकर कागज के स्तर पर उतरते हैं और उस पर अपने अमिट निशान छोड़ जाते हैं। इन कागदों को दुनिया काव्य और कहानी आलेख और पुस्तक कह कर आँखों से लगाती है और इनसे आत्मिक सात्वना प्राप्त करती है।”

उर्दू के सुविख्यात कवि और प्रतिष्ठित भारतीय साहित्यकार अली सरदार जाफरी को 1997 ई. का

भारतीय ज्ञानपीठ पुरस्कार दिया गया था। साथ ही उन्हें सोवियत लैण्ड पुरस्कार, उत्तरप्रदेश का उर्दू अकादमी पुरस्कार, इकबाल सम्मान तथा पद्मश्री से भी नवाजा गया। भारतीय साहित्य को जिन आधुनिक साहित्यकारों ने एक दिशा प्रदान की है उनमें अली सरदार जाफरी का नाम विशेष रूप से उल्लेखनीय है। जाफरी जी उन बुद्धिजीवियों और कलाकारों में रहे हैं जिन्हें भारत के विभिन्न वर्गों में स्नेह और सम्मान की नजर से देखा जाता था, यहाँ तक की जाफरी की विचाराधारा और सृजन शैली से मतभेद रखने वाले भी भारतीय साहित्य के प्रति उनकी प्रतिबद्धता और उनके द्वारा की गई सेवाओं को तहे दिल से स्वीकार करते हैं। अली सरदार जाफरी की पहली पुस्तक 'मंजिल' नाम से प्रकाशित हुई थी जो कहानी संग्रह था, इसका प्रथम संस्करण 1940 में प्रकाशित हुआ, इसके बाद सन् 1943 में उनका नाटक 'प्यार' नाम से छपा एवं उनकी शायरी का पहला दीवान, 'परवाज' नाम से सन् 1943 में छपा उन्होंने अपनी शायरी जेल में भी लिखना बन्द नहीं किया जिनमे 'नीद' 'पत्थर की दीवार', अवध की खाक ए—हसी, 'एशिया जाग उठा' आदि मशहूर हैं। 'एशिया जाग उठा' जाफरी की लम्बी कविता है जिसमें उन्होंने लिखा है :

‘ये शायरी शायरी नहीं है—रज्ज की आवाज, बादलों की गरज है तूफान की सदाह कि जिसको सुन कर पहाड़ आते हैं सब्ज माथों पे बर्फ की कलगियां लगाए धुंए के बालों में सुर्ख शोलों के हार गुथें समंदर आते हैं झाग की झाझने बजाते हवाएं आती हैं अपने झोंको की नीलगू गोफने घटाएं आती हैं, बिजलियों पर सवार होकर भारतीय दर्शन में पाणिवाद का अत्यन्त महत्व है जिसका दिग्दर्शन महाभारत में होता है।”

इस दर्शन के अनुसार इंसान के दो हाथ ही उसका सार—सर्वस्व हैं, और गीता में जिस कर्म— सिद्धांत का प्रतिपादन किया गया है वह पाणिवाद ही है सरदार जाफरी भी अपनी कविता में हाथों का बयान लिखते हैं—

वो हाथ आते हैं जो हलों को चला रहे हैं
वो हाथ आते हैं जो मशीनों को छू रहे हैं
वो हाथ आते हैं जिनमें झंडे उगे हुए हैं
वो हाथ आते हैं जो कहानी सुना रहे हैं
वो मेरे सिर पे सियाह रात की परछाई है,
मेरे हाथों में हे सूरज का छलकता हुआ जाय”²

कवि जाफरी के शब्दों में समाज को बदलने का साधन कविता है, उन्होंने कहा है— “वह न ही कुल्हाड़ी की तरह वृक्ष काट सकता है और न मनुष्य के हाथों की तरह मिट्टी से प्याले बना सकता है। वह पत्थर से बुत नहीं तराशता बल्कि भावनाओं तथा अन्य भूतियों के नये नये चित्र बनाता है। वह पहले मनुष्य की भावनाओं पर प्रभावशील होता है और इस प्रकार उसमें अतिरिक्त परिवर्तन उत्पन्न करता है, और फिर उस मनुष्य के द्वारा वातावरण तथा समाज को बदलता है। यही कारण है जाफरी की कविता की जनप्रियता का, जो उनके व्यक्तित्व को उभारता है। उनकी कविता का मूल स्वर लोकतांत्रिक है जिसमें लोक संस्कारों की मानवीय पीड़ा और करुणा के बीच निहित है सहजता उनकी कविता की एक प्रमुख

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विशेषता है और उनका रचना संसार जन-जीवन के संघर्षों की अभिव्यक्ति से विनिर्मित है। यही वजह है की जाफरी की निगाह, जिन्दगी के असली मर्म को तलाश लेती है उनका विश्वास है कि दिल से उतरी कविता ही सच्चे दिल में उतरती है वास्तव में सच्चा लेखक वही है जो स्थितियों से कटकर नहीं बल्कि उनका सामाधान अपने कलम के बल पर अपनी रचनाओं में निकाल लेता है, यही कारण है कि लेखन के लिए वातावरण का सर्वाधिक महत्व है और वह लेखन संभवतः लेखन नहीं है जिनमें परिस्थितियों से मुड़ने अथवा भाग जाने का चित्रण हो। जटिल से जटिल जीवन की परिस्थितियों को आत्मसात कर उन्हें अपनी रचना में जिन्दगी से जोड़ते हुए चित्रण करना ही लेखकीय सफलता है। वास्तव में सरदार जाफरी भारत के एक ऐसे महान शायर हैं जिन्होंने अपने अनुभवों द्वारा यह रहस्य जाना कि संसार में व्यक्तियों तथा समुदायों की पराजय तो हो सकती है किन्तु मानव अजेय है जाफरी के इस विश्वास को ही उनकी रचनाओं में देखने को मिलता है। उनकी शायरी में किसी प्रकार की निराशा तथा अवसन्नता का चित्रण नहीं मिलता बल्कि वो आशावाद से सदैव भरी रहती है। सरदार जाफरी भारतीय राष्ट्रीय एकता और अखण्डता के समर्थक थे।³ वे सच्चे अर्थों में अग्नि-पथ के यात्री थे, जो न कभी थके, कभी न थमे तथा कभी न झुके और चलते रहे अग्निपथ पर अविराम। इंसान जब स्वप्न देखता है तभी तक उसमें आशंका का संचार होता है और इंसान जब सपने देखना छोड़ देता है तो वह ना उम्मीदी के बीच घिर जाता है उसके जीवन की समरसता समाप्त होने लगती है। जहा तक सरदार जाफरी की शायरी की बात है, तो स्पष्ट है कि जाफरी जी देश के लिए स्वप्न देखते रहे, और उन्हीं सपनों की ताकत है कि वे उर्दू शायरी को एक नई समझ तथा विचार की नई दिशा दी। उन्होंने शायरी को आदमी से निकालकर आम आदमी की जिन्दगी से जोड़ा उसे गाँव कारखानों और खेतों तक पहुँचाया। उन्होंने मिल-मजदूरों के हाथों पर नज्म लिखी, काम करने वाली महिलाओं और गली के बच्चों तथा किसान के माथे पर झलकते पसीनों पर भी लिखा वास्तव में जाफरी के पूर्व पहले कभी उर्दू शायरी के विषय नहीं बने थे और उनके रूप में उर्दू साहित्य ने सबसे पहले जन जीवन की हकीकत के बीसवीं सदी में उनकी रचनाओं के माध्यम से हुआ।

जाफरी जी की कुछ लोकप्रिय नज्मों हैं—
निवाला—

“मौ है रेशम को कारखाने में,
बाप मसरूप सूती मिल में है,
कोख से मां की जब से निकला है,
बच्चा खोली के काले दिल में है,
जब निकल कर यहाँ से जावेगा,
अपने मजबूर पेट के खातिर,
भूक सरमाये की बढ़ायेगा,
हाथ सोने के फूल उगलेंगे,
जिस्म चांदी का धन लुटायेगा,
खिड़कियां होगी बैंग की रोशन,

खून उस का दिये जलायेगा,
ये जो नन्हा ह भोला भाला है,
खूनी सरमाये का निवाला है—
पूछती हैं ये उसकी खामोशी,
कोई मुझ को बचाने वाला है”

और तभी तो शायर अपनी रचनाओं में मानव प्रेम की मशाल जला सका है और कह सका है—

“नया चश्मा है पत्थर के शिगाफों से उबलने को,
जमाना किस तरह बेताब है करवट बदलने को,”

कविता ही मनुष्य के हृदय को स्वार्थ-सम्बन्धों के संकुचित दायरे से ऊपर उठाकर विस्तृत जगत में ले आती है। और तभी तो भारतीय मनीषा साहित्यकार के लिए कहा गया है—

न स शब्दो न तद् वाक्यम्,
न स न्यायों न स कला,
जायते यत् काव्यां कला,
जायते पत् काव्यां अहों,
यारों महान कवै।

पश्चिमी जगत में भी कवि को समाज की सहज विधिकर्ता (लेजिस्लेटर) कहा जाता है कवि की इस महान भूमिका का निर्वहन कराकर जाफरी ने बहुत कुछ अपनी रचनाओं में किया हैं उन्होंने भी एक शायर के मंगलमय शुभ उद्देश्य का चित्रण अपने नज्म में किया है—

मैं हूँ शादियों का तफक्कुर, मैं हूँ करनों का ख्याल,
मैं हूँ हम आगोश अजल से, मैं अबद से हम-किनार,
मेरे नगमे कैदे-माहो- सालों से आजाद है,
मरे हांथों में है लाकानी तमन्ना का सितार,
नक्शें मायूसी में भर देता हूँ उम्मीदों का रंग,
मैं अदा करता हूँ शाखे-आरजू को बार-बार,
चुन लिए हैं बागे इन्सानो से अरमानो के फूल,
जो महकते ही रहेगे मैने गूँधे हैं वो हार,
आर्जी जलवों को दी है ताबिश-हुस्नों-दबाम,
मेरी नजरों से है रौशन आदमी की रहगुजार।³

हमारे देश की कला और संस्कृति के निर्माण में उर्दू भाषा और साहित्य का बड़ा हाथ रहा है उर्दू के रंगा रंग फूलो ने भारत के सौंदर्य में चार चोंद लगा दिये हैं और जाफरी जैसे उर्दू भाषा में लिखने वाले शायर की रचनाओं में इस समूचे देश के दिल की धड़कन सुनाई देती हैं उर्दू के सच्चे साहित्यकारों ने इस देश की गंगा जमुनी सभ्यता और संस्कृति, लोक कथाओं, रीति-रिवाजों तथा विश्वासों को अपनी रचना का वर्ण्य विषय बनाया है। भारतीय संस्कृति के विकास में जाफरी का योदान कुछ कम नहीं रहा। महाकवि इकबाल ने भी कहा था—

“पिरोना एक ही तसबीह मे इन बिखरे दानों को
तब उनके कहने का भाव यह रहा कि उस महादेश की विविधताओं को एक सूत्र में पिरोना है क्योंकि भारतवासियों की एकता उनकी विविधता में निहित है। हमे भारत को अपने दिल के अन्दर बसाना है और जब भारत हमारे लहू में रच उठेगा तभी संगठित राष्ट्रीयता का स्वप्न साकार होगा। इन्सान की मुक्ति आपसी पम और भाईचारे में है। राष्ट्रीयता एवं राष्ट्रीय एकता के गीत गाने वाले उर्दू

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शायरों में अली सरदार जाफरी अगण्य पंक्तियों में गिने जा सकते हैं। मानव को अजेय गौरव से चित्रित करना कवि का काम है। स्व. सरदार जाफरी अपने देश की हालत पर चिन्तित रहा करते थे उनका कहना था कि आज के राज नेताओं ने ही नहीं उन लेखकों ने भी जो किसी न किसी रूप से सन्तान से जुड़ हुये हैं। अपने दिमाग को गिरवी रख दिए हैं।

किसी देश के लिए यह शुभ लक्षण नहीं है सरदार जाफरी जी से जब एक साक्षात्कार में पूछा गया कि आज कहाँ सकून पाते हैं तब उन्होंने अपना एक शेर सुनाते हुये कहा—

“इसी उम्मीद में बेताबी—ए—जो बढ़ती जाती हैं सुकून ए दिल जहाँ मुमकिन शायद वो मुकाम आए”—

“जाफरी जी ने कहा—कि सुकून—ए—दिन वह कभी नहीं आता और जब आयेगा वह मौत होगी शायर की”।

वह इसलिए कि तलब खत्म हो जाएगी। हर व्यक्ति के सुकून की सोच कि अलग—अलग होती है जैसे एक जुआरी का सुकून यह कि वह हर हाथ को जीते और एक अच्छे आदमी का सुकून यह है कि उसके पास जो कुछ है वह सब बाट दे। देश के राजनीतिज्ञों को जाफरी गम्भीरता से नहीं लेते थे। उनका कहना था कि आजादी की लड़ाई में कुर्बानी का जज्बा था। उस समय के राजनेताओं में महात्मागान्धी, जवाहरलाल नेहरू, मौलाना अबुल कलाम आजाद इन सबके दिल बहुत बड़े थे। वे इंसान की कद्र करना जानते थे और आज की राजनीति में कुर्बानी का जज्बा नहीं है अब तो वह पैसा कमाने का साधन बन गया है और देश की राजनीति में कैसे—कैसे लोग पहुँच कर अपना सिक्का जमा चुके हैं यह सारा देश जानता है। पंडित जवाहरलाल नेहरू जी ने भविष्य का जो एक सपना देखा था वह सपना इतना खूबसूरत है कि वह हजार वर्ष तक नहीं आयेगा। ऐसा लगता है कि चारों तरफ से हजारों सूरज उग रहे हैं निकल रहे हैं अब चारों तरफ डूब रहे हैं। समय की धारा नदी की तरह सीधी नहीं बहती है। जैसे नदी की एक लहर नीचे जाती है फिर ऊपर उठती है ठीक उसी तरह स्वतंत्रता के पूर्व जब यह देश आजादी के लिए लड़ रहा था उसकी धारा ऊपर उठ रही थी और अब नीचे चली गई है किन्तु ऐसा विश्वास है एक समय बाद वह फिर उठेगी।¹ सचमुच जाफरी के गद्य में मानवीय संघर्षों की गाथा का जिक्र है इसीलिए तो महाकवि निराला ने गद्य को जीवन संग्राम की भाषा कहा था। सरदार जाफरी जी ने अपने जिन्दगी का आधा हिस्सा सफर में व्यतीत किया कभी कभी वो वर्ष भर सफर पर ही रहते थे। उन्होंने रूस की अनेको बार यात्रा की थी। ऐसी ही एक यात्रा का जिक्र प्रख्यात साहित्यकार अमृता प्रीतम जी ने अपनी आत्मकथा (रसीदी टिकट में किया है— “ ताशकंद में आजकल हिन्दुस्तान से उर्दू कवि अली सरदार जाफरी भी आये हुए हैं आज अचानक मुलाकात हो गई तो जुल्फिया ने उन्हें अपने घर दावत पर बुला लिया। जाफरी साहब ने जुल्फिया के नाम की व्याख्या करते हुये कहा— जुल्फ शब्द को हिन्दी में अलक कहते हैं और इसलिए मैं उसका भारतीयकरण करते हुए जो टोस्ट मुझे पेश किया गया है

उसे अलका कुमारी के नाम पेश करता हूँ। जाफरी जी के कुछ खास शेर जो पसन्द किये जाते हैं दृष्टव्य हैं—

“एक साहिल है कि उभरा है भंवर की गोद से,
एक किशती है कि तूफानों से टकराई है आज,
इश्क का नगमा जुनू के साज पर गाते हैं हम,
अपने गम की आंच से पत्थर को पिघलाते हैं हम,
जग उठते हैं तो सूली पर भी नींद आती नहीं,
वक्त पड़ जाये तो अंगारों पे सो जाते हैं हम”।

उर्दू के नये कलाकारों पर अपनी प्रतिक्रिया व्यक्त करते हुए जाफरी जी ने कभी कहा था कि आज जो थोड़ा लिख रहा है कल बहुत लिख सकता है मैं उर्दू के नये कालाकारों के भविष्य पर चिन्तित नहीं हूँ किन्तु मेरी सबसे बड़ी चिन्ता है आदमी के लिये क्योंकि इससे बड़ा जीनियस पैदा नहीं हुआ और इससे बड़ा ऋषि, मुनि भी पैदा नहीं हुआ। आदमी न ज्यादा बड़ा जानवर भी नहीं हुआ। क्योंकि हमने देखा है बच्चों को 1947—48 में भालों और तलवारों के ऊपर उछालते हुए यह शैतानियत नहीं तो क्या है।

महाकवि इकबाल ने कहा था कि मंजिल पर पहुँच कर आदमी के लक्ष्य का अन्त नहीं हो जाता सितारों के आगे जहाँ और भी है यही तो आदमी की प्यास है आदमी के प्यास का बुझना उसका अन्त होना है। हमारी जिन्दगी में एक प्यास बुझती है और नदी प्यास जन्म लेती है मिलन और उसके बाद बिछड़ना और बिछड़ने के बाद नया मिलाप और मिलाप के बाद फिर बिछड़ने की इच्छा और सच पृष्ठिये तो विछड़ने की इच्छा सब लोग समझ नहीं पाते।

गालिब ने कहा है—

“खुश्क होते नहीं बसर में यूँ मर नहीं जाते,
आई सब हिजरा की तमका मरे आगे”

जब हम मिले अपने महबूब से तो मारे खुशी के दम निकल गया,

और उस वक्त सोचा कि काश न मिले होते,
और अभी तक हमारी आरजू रहती”।।

कविवर जाफरी भी अपने एक “कतआ” में कहते हैं—

“नसीमें सुबह तसव्वुर ये किस तरफ से चली,
कि मेरे दिल में चमन—दर— किनार आती है,
कहीं मिले तो मेरे गुल—बदन से कह देना,
तेरे ख्याल से बू—ए बहार आती है”।²

जिन्दगी में सुख—दख न जाने कितने अवसर आते रहते हैं कटु और मधुर नर्म और गर्म इसी के सम्मिश्रण का नाम ही तो जीवन है। जाफरी के जीवन में भी सुख—दुख के अनेक अवसर आये थे वेदना की अनुभूति के वक्त कवि ने लिखा होगा—

“गम का सितारा”—

“मेरी वादी में वो इक दिन यूँ ही आ निकली थी,
रंग ओर नूर का बहता हुआ धारा बनकर,
महफिलें शौक में इक धूम मचा दी उसने,
खलवते—दिल में रही अजुमन—आरा बनकर,
शोला—ए—इश्क सरे—अर्श को जब छूने लगा,
उड़ गई वो मेरे सीने से शरारा बनकर,
और अब मेरे तसव्वुर का उफक रोशन है,

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वो चमकतो है, जहाँ गम का सितारा बनकर”⁷

अली जाफरी सन् 1936 में प्रगतिवादी आन्दोलन के साथ—जुड़ गये किन्तु कालान्तर में उनकी चेतना और विचारधारा में बदलाव आने के कारण तथा उनके वैचारिक और और आध्यात्मिक स्तर पर मध्यकालीन कवियों से लेकर आधुनिक कवियों के अध्ययन के कारण उन्हें प्रगतिशील आन्दोलन में कमजोरियां नजर आने लगी अतः उन्होंने उससे अपना सम्बन्ध कम करना प्रारम्भ कर दिया और दीवान—ए—गालिब, दीवान—ए—मीर कबीर और प्रेमबानी जैसे सुप्रसिद्ध ग्रन्थों के संपादन में वे लग गये। इन ग्रन्थों का स्वागत हिन्दू और उर्दू दोनों क्षेत्रों में किया गया। कबीर बानी की भूमिका में जाफरी जी लिखते हैं—महान कविता की यह आनोखी विशेषता है कि बहुधा वे अपने रचायिता से असम्बद्ध हो जाती है। फिर उस अस्तित्व से कवि का अस्तित्व पहचाना जाता है क्योंकि उसके जीवन के हालात बीते हुये समय के धुलके में खो जाते हैं और घटनायें कहानियों का रूप धारण कर लेती हैं। कबीर के विषय में भी यह सत्य है अपनी भूमिका में कबीर के पदों की व्याख्या करते हुए वे लिखते हैं—इस्लाम में इंसान की जिम्मेदारियों को दो हिस्सों में बांटा गया है एक खुदा का हक, दूसरा बन्दों का हक।

इबादत (उपासना) खुदा का हक है और सामाजिक जिम्मेदारियां बन्दों का हक खुदा के गुनहगार को जिसने हके इबादत अदा नहीं किया, खुदा माफ कर सकता है लेकिन बंदों के गुनहगार को जिसने अपने सगे सम्बन्धियों, पड़ोसियों, देशवासियों या इस संसार में रहने वाल दूसरे इंसान का हक अदा नहीं किया उसको खुदा माफ नहीं करता। सिर्फ बन्दे ही उसे माफ कर सकते हैं, उसके बाद रहमत के दरवाजे खुलेंगे। इसलिए कबीर ने दोनों हकों का जिक्र किया है—

“सरगुन की सेवा करो, निरगुन का करो ज्ञान
निरगुन सरगुन के परे, तहीं हमारा ध्यान”⁸

कबीर, मीर, गालिब और इकबाल ने एक आन्तरिक रिश्ते की पहचान उर्दू साहित्य में सबसे पहले जाफरी ने ही की। वास्तव में वे जिन्दगी से जुड़ शायर हैं। उन्होंने कबीर बानी में यह दिखलाने की कोशिश की है कि कबीर की आस्था इस्लामी आस्थाओं की भूमि से उठकर वेदान्त के शून्य आकाश में भी पहच जाती है। और तब उनकी चेतना निर्गुण और सगुण से भी ऊंची हो जाती है किन्तु कबीर तो अद्भुत व्यक्तित्व के महापुरुष थे वे कभी —कभी अपनी रचनाओं में इस्लामी शब्दों का प्रयोग करते हैं और फिर हिन्दू पद्धति अपना लेते हैं जैसे “नदी आखों में मौजूद है, काले और सफेद तिलों के बीच में एक तारा है जिसमें लाखों सूरज उदय होते हैं। मगर रस हजार रंग अन्दाज के अन्दर अभीष्ट है एक ही शब्द जो एक शब्द प्रेम में समा जाता है और यही कबीर की विचारधारा का केन्द्रीय रहस्य है। उनका प्रेम हिन्दू मुसलमान दानों से ऊपर उठकर समस्त मानव जाति के लिए है यही कारण था कि जैसे अद्वैत के अनन्त सागर की लहरे अपने अलग—अलग नाम नहीं रख सकती इसीलिए कबीर ने हिन्दू या मुस्लिम नाम धारण करने से इन्कार कर दिया— उन्होंने कहा — मैं न हिन्दू हू न

मुसलमान मैं तो गैब के खेल के अन्दर पाच तत्व का पुतला हूँ—

हिन्दू कहो तो मैं नहीं, मुसलमान भी नाही,
पाच तत्व का पूतला, गबी खेले माहीं।।

कबीर बानी की तरह दीवान—ए— गालिब और दीवान—ए—मीर भी जाफरी की प्रसिद्ध पुस्तकें हैं। जाफरी जी ने मीर के लिए कहा था—

शाअिर को खुदा का शिष्य भी कहा गया है और पैगम्बर का भी स्थान दिया गया, लेकिन मीर तकी मीर अकेले शायर ह, जिन्होंने खुदा—ए—सुखन (शायरी का खुदा) कहा जाता है। आम लोकप्रियता के विचार से यद्यपि गालिब और इकबाल मीर से कहीं आगे हैं पर मीर के शेर लोगों के जवान पर ज्यादा है। उनका प्रभाव वर्तमान शायरी पर अधिक स्पष्ट है यही कारण था कि हर हाल में बड़े से बड़े शायर ने मीर का नाम आते ही अपना सर झुका लिया है।⁹

जनाब अली सरदार जाफरी की लोकप्रियता का एक रहस्य यह भी है कि उनकी कविता रूसी, उजबेकी, फारसी, अंग्रेजी, फ्रान्सीसी अरबी, तथा कई भारतीय भाषाओं में अनूदित हो चुकी है। जाफरी साहब उर्दू के साथ अंग्रेजी के भी विद्वान थे उन्होंने साहित्य समाज तथा राजनीति सम्बन्धी अनेक विषयों पर टिप्पणियां आलेख और कालम भी बड़ी संख्या में लिखे हैं। उनके आलेख लालकिला, साबरमती आश्रम, और तीनमूर्ति निवास पर आधारित लोकप्रिय ध्वनि और प्रकाश कार्यक्रम के अन्तर्गत हैं।

जाफरी साहब उच्च कोटि के समालोचक और अनुवादक की हैसियत से भी ख्याति प्राप्त की। उनकी साहित्य तथा आलोचना सम्बन्धी किताबों में तरक्की—तरक्की पसन्द, अदब लखनऊ की पाँच रातें तथा पैगम्बरान—ए— सुखन मशहूर हैं। सरदार जाफरी ने लगभग 87 वर्ष की आयु पाई और सारा जीवन कर्मशीलता में तथा व्यस्तता में व्यतीत किया। उन्होंने कुछ फिल्मों के लिए संवाद भी लिखे। कहानियों और कुछ वृत्ति चित्रों के आलेख भी लिखे साथ ही पत्र और पत्रिकायें संपादित की तथा शैक्षिक और सांस्कृतिक संस्थाओं से जुड़े रहे व दुनिया के अनेक देशों की यात्राएं करते रहे। इस प्रकार जाफरी साहब का सम्पूर्ण जीवन एक रोमांच पूर्ण जीवन यात्रा रहा है।¹⁰ उनकी आवाज देश की सीमाओं से बाहर और संसार की अनेक भाषाओं के माध्यम से बहुत दूर तक सुनी जाती रही है। उनके व्यक्तित्व के अनेक पहलू थे वे एकसाथ एक कवि एक नाटककार, और एक कहानीकार एक फिल्म निर्माता, एक क्रान्तिकारी और एक सामाजिक कार्यकर्ता आदि अनेक रूपों में उनका व्यक्तित्व सामने आता है। अली सरदार जाफरी ने वर्षों पूर्व लिखा था आबला—पा— जिसमें वे कहते हैं—दरखतों के साये में बैठे हुये इन्सानों तुम तो वक्त के मेहमान हो और क्या कभी तुमने यह सोचा है कि किस देश से आये हो और किस देश को जाना है? फिर वे इस कविता में प्रश्न पूछते हैं, कि वक्त के मेहमानों, देखों दर्द का सहारा है, इक धूप का जंगल है, अथवा प्यास का दरिया है। जरा सोचो तो दरिया के परे क्या है

पत्थर है कि चश्मा है नगमा है नाला है शबनम है कि शोला है, फिर शायर खुद ही उत्तर देता है कि शायद कोई शाहिर है जो डूबते सूरज के दरवाजे पर बैठा है महान शायर जाफरी का विश्वास था—

कल सुबह के दामन में तुम होगे न हम होगे बस रेत के सीने में कुछ नक्श-ए-कदम होंगे। ऐसा नामी गिरामी शायर मुम्बई में बीमार रहने के पश्चात इस दुनिया से चल बसे।¹¹

निष्कर्ष यह है कि अली सरदार जाफरी ने साहित्य के माध्यम से भारत की एकता, अखण्डता व सदभावना के बीज बोये थे वे आज के मुस्लिम साहित्यकारों के लिए प्रेरणा स्रोत हैं। उनके इस साहित्यिक योगदान को भुलाया नहीं जा सकता। उन्होंने अपनी कलम के माध्यम से जनमानस को आवाज दी और जीवन की सच्चाई को कलमबद्ध किया। साहित्य के लिए दिये गये अली सरदार जाफरी के योगदान का यह देश ऋणी रहेगा और साहित्य युगों-युगों तक देश के लिए प्रासांगिक रहने के साथ आने वाली पीढ़ियों के लिए प्रेरणा स्रोत भी।

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संत कबीरदास एवं गुरुनानक का सामाजिक चिंतन

सारांश

हिन्दी साहित्य के भक्तिकाल की प्रारंभिक व्यवस्था को अत्यधिक प्रभावित करने वाले संतों में कबीर और गुरुनानक का प्रमुख स्थान है। इन्होंने व्यक्ति साधना के साथ ही सामाजिक चिंतन को भी अत्यधिक प्रभावित किया है। इन दोनों संतों ने पंडितों, मौलवियों तथा राजदरबारों के आदेशों की परवाह न करते हुए जन-जीवन में आत्म चेतना के बल पर एक नए विश्वास का संचार किया था। इन्होंने मानव समाज में जातिवाद एवं सम्प्रदायवाद की कटु आलोचना करते हुए परस्पर प्रेम एवं सौहार्द स्थापित करने का अथक प्रयत्न किया था।

मुख्य शब्द : साम्प्रदायवाद, भक्तिकाल

प्रस्तावना

इन संतों के साहित्य अनगढ़ भाषा, समाजसुधार, क्रांतिकारी विचार एवं आध्यात्मिक रहस्यानुभूतियों पर समय-समय पर साहित्य मर्मज्ञों ने गंभीरता पूर्वक विचार मंथन किया है। उपर्युक्त दोनों संतों ने भारतीय दर्शन एवं साहित्य पर अपनी अमिट छाप छोड़ी है। यही कारण है कि उनके नाम पर क्रमशः कबीर पंथी एवं सिख पंथी परम्परा का प्रादुर्भाव हुआ। उक्त महात्माओं के दार्शनिक सिद्धान्तों का विश्लेषण करते हुए आज के बुद्धिवादी एवं वैज्ञानिक युग में उनकी उनकी प्रासंगिकता पर विचाररत है।

दोनों ही संतों के आगमन के समय वर्ण भेद, ब्राह्मणों की सर्वोच्चता, शूद्रों की दुर्दशा, अन्याय, भ्रष्टाचार एवं रिश्वतखोरी, समाज में नारी की दुर्दशा, कुरीतियों का बोलबाला था। इसके अलावा मुगल सम्राटों के अत्याचार, सुल्तानों की विलासप्रियता, पर्दा प्रथा की बहुलता, हिंदुओं के जीवन में दारिद्र्य एवं निराशा तथा दास प्रथा जैसी राजनीतिक परिस्थितियाँ समाज को अपने शिकंजे में घेरी हुई थी।

यदि हम मध्ययुग की धार्मिक पृष्ठभूमि पर नजर डालें तो सनातन हिंदू धर्म में अवतारवाद एवं मूर्तिपूजा ने भारत में अपना स्थान बनाया।

मध्य युग की दार्शनिक पृष्ठभूमि का आधार आचार्य शंकर का अद्वैत वेदांत दर्शन, स्वामी रामानुजाचार्य एवं उनका विशिष्ट द्वैतवाद, मध्वाचार्य एवं उनका द्वैतवादी सिद्धान्त, निंबर्काचार्य एवं उनका द्वैतावाद विष्णुस्वामी एवं उनका शुद्धाद्वैतवाद आदि थे।

इसके अलावा पतंजलि का योग दर्शन, सूफी मत और इस्लाम धर्म आदि मत समाज में थे।

कबीर का व्यक्तित्व:-

मध्यकालीन संतों एवं भक्तों में कबीर जी निर्भीक, स्पष्टवादी, अकखड़ मस्तमौला, अदम्य साहसी, निरभिमान, महान भक्त, संत, विलक्षण बुद्धि संपन्न, क्रांतिकारी, समाज सुधारक मानवीय एकता के कवि थे। उन्होंने समाज में व्याप्त धार्मिक अंधविश्वासों एवं परम्परागत रूढ़ियों पर प्रहार करते हुए प्रचलित धार्मिक पाखण्ड एवं कुरीतियों को दूर करने का सफल प्रयास किया। डॉ. तारकनाथ बोली ने कहा है "कबीर ने जो कुछ मूल्यांकन किया था, सबको आत्मसात् किया, उसमें अपनी अनुभूति की सुगन्ध का संचार किया, उसे अपनी प्रतिभा की किरणों से रंजित किया और भारतीय संस्कृति के विकास की श्रंखला में एक सुरभित स्वर्णिम कड़ी जोड़ दी जिसके पीछे क्रांतिमान कंडियों की लड़ियों बँधती हुई चली गयी। कबीर ने जीवन के सभी स्तरों में क्रांति के रमणीय बीज बोये, उन्होंने सीचा और पल्लवित किया। इन बीजों से अनेक विराट वृक्षों का जन्म हुआ। जिसकी अनुभूति की छाया में आज भी अनेक पथ भ्रष्ट आत्माएँ आलोक की किरणें फटती देखी है।"

कबीर का जन्म ऐसे सघर्षमय समय में हुआ था जब देश में सामाजिक दृष्टि के पतन का काल था। कबीर ने अपनी वाणी के माध्यम से समाज में व्याप्त कुरीतियों, वैमनस्य, कुप्रथायें पारस्परिक द्वेष, आडंबर, हिंसा, पापाचार,



ममता सहगल

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भेदभाव, छूआछूत, वर्णभेद, मिथ्याचार, धर्म के स्थान पर बाह्याचार अंध-विश्वास के प्रति करारा व्यंग्य किया तथा समाज को श्रेष्ठ बनाने का पूर्णतः प्रयास किया।

कबीर का मूल उद्देश्य लोक कल्याण तथा समाज सुधार था। कबीर का मुख्यतः समाज सुधारक रूप ही अधिक मुखर रहा है। उन्होंने समाज में व्याप्त बुराईयों के अनेक चित्र प्रस्तुत किए हैं। डॉ. सरनाम सिंह शर्मा ने लिखा है— “उनकी वाणी समाज के रंगीन चित्र प्रस्तुत करती है, एक नहीं अनेक, केवल रेखाचित्र ही नहीं, सरल रंगीन चित्र भी: इन चित्रों में कबीर का संपूर्ण युगीन समाज अपने सच्चे जीते जागते रूप में साकार हो उठा है। यह और बात है कि उसके कुरूप पक्ष पर भी कबीर का ध्यान केन्द्रित रहा है इसका मुख्य कारण सम्भवतः समयुगीन समाज की परिस्थितियाँ थी। कबीर ने न ही कोई ग्रंथ लिखा और न ही किसी संस्था की स्थापना की। उन्होंने जो जीवन अपनी आँखों से देखा, भोगा उसे अपनी वाणी के माध्यम से जन-साधारण तक पहुँचाया।

कबीर का किसी व्यक्ति, जाति, धर्म या समुदाय से कोई द्वेष नहीं था। उन्होंने सब सन्तों के समान ही जाँत-पाँत के भेदभाव को महत्व नहीं दिया। उनके अनुसार आत्मा की कोई जाति नहीं है और सब जीव उस परम परमात्मा से ही उत्पन्न हुए हैं, न कोई निम्न है और न ही कोई उच्च:

एक जाति थे सब उतपनाँ, कौन बाँह्न कौन सूदा।।

कबीर ग्रंथावली पृ.82

संत कबीर ने निर्गुण, निराकार ईश्वर की भक्ति पर बल दिया है। उन्होंने अवतारवाद तथा बहुदेवोपासना का विरोध किया है। उन्होंने ईश्वर को अक्षय पुरुष कहा है तथा निरंजन उसकी डाली को बताते हुए (त्रिदेव) ब्रह्मा, विष्णु और महेश को उसकी शाखाएँ घोषित की है— अक्षय पुरुष इक पेड़ है, निरंजन बाकी डार। त्रिदेवा शाखा भये पात भाय संसार ।।

समय — समय पर कबीर ने अपनी वाणी के माध्यम से विपरीत और विराम परिस्थितियों में भी लोगों का मार्गदर्शन किया। आडंबर चारियों के विराम में कबीर कहते हैं ये लोग जो आडंबर रचते हैं वे स्वयं सत्य ज्ञान से मीलों दूर होते हैं। माथे पर तिलक लगाकर, कानों में मोटे-मोटे कुंडल धारण करके मन को स्वतंत्र रखकर तथा सिर पर जटा लगाने, शरीर को कष्ट देने से कोई योगी नहीं बन जाता है। योगी तो वही है जिसने तन तथा मन दोनों को अपने वश में कर लिया हो। पाखंड और आडंबर रचने वाले साधु वास्तव में धूर्त हैं। वह अपने आडंबरों की आड़ में जनता को ठगते हैं। ऐसे ‘धूर्त’ साधु-समाज साधु वेश और साधु-धर्म को अपमानित करते हैं। धूर्त तथा कपटी साधु के विषय में वे कहते हैं—

मन मैला तन उजरा, बगुला कपटी अंग ।

ता सौं तो कौवा भला तन-मन एकहि अंग ।

हिन्दू ही नहीं, मुसलमानों के बह्विध पर भी उन्होंने तीखा प्रहार किया है। मुसलमानों के सुन्नत, बाँग, करबानी आदि की उन्होंने खरी आलोचना की है। काजी का किताब (कुरान) पढ़ते-पढ़ते जीवन व्यतीत हो गया किन्तु वह उसके मर्म को नहीं जानता—

काजजी कौन कतेब बखाने,

पढ़त-पढ़त केते दिन बीते, गति एक नहीं जाने।

सकति से नेह पकरि करि सुनति यह न बूंद रे भाई

जोर खुदाई तुरक मोहि करता ता आपे करि किन जाई

(हजारी प्रसाद द्विवेदी, कबीर पृ. 326 पद 1681)

मध्यकाल के संतों में कबीर की ही तरह नानक जी भी एक महान समाज सुधारक संत थे। उन्होंने कर्मकांडों के विरुद्ध विदोह प्रकट किया तथा उसकी सर्वोच्चता के गुणों से अवगत कराया। नानक जी ने एक आदर्श समाज की स्थापना की। यहाँ पर हम गुरुनानक जी के समाजिक चिंतन पर विचार करेंगे—

1. बाह्य आडंबरों का विरोध — नानक जी ने आडंबरों का विरोध किया। नौ वर्ष की आयु में उन्होंने जनेऊ धारण करने से मना कर दिया। वह कहते हैं—

दहिया कपाह संतोखु सूतु, जतु मंडी सत वटु।।

ऐहु जनेऊ जीअ का, हई न पाड़े घटु।।

न ऐहु तुटै, न मलु लगै, ना ऐहु जने न जाइ।।

धनु सु माणस नानका, जो गलि चले पाइ।।

तगु कपाहहु कतीअ, जो गलि चले पाइ।।

तगु सु माणस नानका, बामण वटे आइ।।

कुहि बकरा रिनि खाहिया, सभु को आखै पाइ।।

होहि पुराणा सुटीअ भी फिरि पाईअ होरु।।

नानक तगु न तुटई, जो तगि होवै जोरु।।

(सलोक महला1, बार आसा पृ.471)

तात्पर्य यह है कि यज्ञोपवीत धारण करने से मनुष्य की आत्मा को किसी प्रकार का लाभ नहीं है, इसके स्थान पर तो मनुष्य को प्रभु प्यार तथा सदाचारक गुणों दया, संतोष, ऊँचे व निर्मल किरदार का मालिक बनना चाहिए, तो ही मनुष्य की आत्मा पवित्र होती है न कि इस धागे को शरीर में धारण करने से मनुष्य को मुक्ति मिलती है।

गुरुनानक जी ने अपने प्रचारक दौरों के माध्यम द्वारा एक स्थान से दूसरे स्थान तक जाकर लोगों को बाह्य-आडंबरों को त्यागने का उपदेश दिया। उनका प्रथम प्रचारक दौरा हिंदू तीर्थों का सितम्बर 1507 तक, द्वितीय प्रचारक दौरा सुमरे पर्वत का सितम्बर 1517 से 1518 के अर्धकाल तक तथा तीसरा प्रचारक दौरा इसलामी धर्म स्थानों पर 1518 से 1512 तक रहा।

2. वर्ग भेद का अनौचित्य — गुरुनानक जी ने सुल्तानपुर के लोगों को प्रथम उपदेश दिया “न को हिंदू न मुसलमान”। इसका तात्पर्य है कि आप सभी लोग वर्ण-भेद का त्याग करो। इस संसार में न ही कोई हिंदु है और न ही कोई मुसलमान। सभी की रचना परमात्मा ने की है। हमें आपस में भेदभाव का त्याग कर ऊँचें तथा निर्मल आध्यात्मिक और सदाचारक गुणों को अपनाना चाहिए।

नानक जी ने अपने प्रचारक दौरों के माध्यम से भी वर्ग भेद समाप्त करने का भरसक प्रयास किया। आपका मिशन तो सामाज में वर्ण भेद को नष्ट कर नीच जाति को ऊँचा बनाकर सभी मनुष्यों में समानता लाना था।

नीचा अंदरि नीच जाति, नीची हू अति नीच।

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नानक तिन के संगि साथि, बड़िआ सिद्धु किया रीस।।

जिथै नीच समालीअनि, तिथै नदरि तेरीह बखसीस।।

(बार सिरि राग, सलोक महला 1 पृ.15)

3.दलित जातियों में निर्भीकता को प्रोत्साहन:-

जिस समय गुरुनानक जी का आगमन हुआ उस समय देश की समाजिक दशा अत्यंत दयनीय थी। ब्राह्मण की वर्ण भेद नीति ने देश में निम्न जातियों को बहुत अपमानित किया। जाँति-पाँति के बने बंधनों के कारण नानक का हृदय बहुत दुःखी हुआ। गुरुनानक जी ने भी कबीर की तरह ही भारतीय जाँति-पाँति के बंधनों को तोड़कर समाज को एक सूत्र में बाँधने का प्रयास किया। कबीर कहते हैं—

जाति पाति पूछे नहीं कोई।

हरि को भजै सो हरि का होई।।

तो नानक ने भी आगे बढ़कर इन सभी बंधनों को तोड़कर मानव की ही जाति बनाने का प्रयास किया। कबीर ने तो जाति प्रथा के लिए तीखा प्रहार किया परंतु नानक ने उसका पालन भी किया। उन्होंने मरदाना जो कि निम्न जाति का था उसे जीवन भर अपना साथी तथा आत्मीय बनाकर रखा।

नानक ने दलितों के उत्थान का प्रयास किया तथा उन्हें निर्भीकता से जीवन जीने की प्रेरणा दी। वे कहते हैं कि हमारी सामाजिक अव्यवस्था जिसके कारण लोग नीचाई की सीमा तक पहुँचा दिये गये। जहाँ पर उन्हें दलित, हीन अपमानित तथा उपेक्षित किया गया। ऐसे लोगों कि निंदा करे हुए वे कहते हैं कि तुम अपने ऊपर परमात्मा की दया दृष्टि चाहते हो तो सर्वप्रथम निम्न लोगों को संभालो तब उन्हें गले लगाकर ऊपर उठाओ न कि उनका अपमान करो।

4.नारी का सम्मान :-नानक जी के आगमन के समय 'तूद्रों की भाँति ही स्त्रियों की दशा दयनीय थी। यहाँ तक ब्राह्मणी धर्म पुस्तकों में भी स्त्रियों को दीन-हीन माना गया है। मनु महाराज जी कहते हैं—

“स्त्रियाँ मूर्ख हैं वेद मंत्रों से शून्य हैं तथा झूठ की मूर्ति हैं।

(मनु स्मृति अध्याय 5 सलोक 47-48)

इसी प्रकार कबीर दास जी ने भी कहा है —

नारी की झाँई परत अंधा होत भुजंग।

कबीरा तिन की कौन गति जिन नारी के संग।।

जहाँ पर इन सब मतों का प्रचलन था वहाँ स्त्री को सम्माननीय कैसे समझा जा सकता था ? वह तो पुरुषों की वासना पूर्ति का साधन मात्र थी। इन सब प्रचलित मान्यताओं का नानक जी ने कड़ा विरोध किया। इन्होंने अपनी वाणी के माध्यम से कहा—

भंडि जमिए भंडि निभीऐ, भंडि भंगणु वीआहु

भंडहु होवे दोसती भंडहु चलै राहु।

भंडु हुआ भंडु भीलिये भंडि, होवै बंधानु

सो किए मंदा आरवीऐ जितु जंमहि राजनु

(वार आसा, महला पृ.473)

नानक जी कहते हैं कि स्त्री मात्र पुरुषों की काम-पिपासा को संतुष्ट करने का साधन नहीं है बल्कि वह तो सम्माननीय है। उसने योगियों, तपियों, शूरवीरों,

राजाओं को जन्म दिया है। उसी के कारण यह सृष्टि बनी है। सच्चा धर्म लिंग — भेद को कभी भी स्वीकार नहीं करता है वाहिगुरु की दृष्टि में सभी स्त्री तथा पुरुष बराबर स्थान रखते हैं। इसलिए सभी प्राणियों में हमें समानता रखना चाहिए। तभी हम एक आदर्श जीवन स्थापित कर सकते हैं।

नानक जी की सबसे महत्वपूर्ण विशेषता थी कि उन्होंने गृहस्थ जीवन को सर्वोपरि माना तथा नारी को समाज और परिवार में श्रेष्ठ स्थान प्रदान करने की कोषि की। नानक जी ने कहा है कि जब समाज में स्त्री तथा पुरुष का समान दर्जा होता है तभी आदर्श समाज को स्थापना हो सकती है। नारी पुरुष की सहभागिनी है तथा उसका स्थान भी अक्षुण्ण है।

5.धन का समान विवरण :-गुरुनानक जी एक ऐसे समाज का निर्माण करना चाहते थे जहाँ पर कोई अमीर तथा कोई गरीब न हो। वह सबको समान रूप में देखना चाहते थे। नानक का सोचना था कि जिस समाज में रुपये-पैसे का समान वितरण नहीं होता है वह समाज हमेशा गरीबी, बीमारी, भुखमरी का शिकार होता है। दरिद्र व्यक्ति पशुओं की भाँति अपना जीवन व्यतीत करता है। रोटी, कपड़ा मकान पाने को लालसा में वह अपना सारा जीवन नष्ट कर देता है। उसके पास इतना समय भी नहीं रहता कि वह ईश्वर को याद कर सके। अमीर व्यक्ति के पास सब कुछ होने के कारण वह बाहरी पाखंडों तथा अहंकार में ही व्यस्त रहता है। इस प्रकार हमारे समाज में गरीब अमीर दो वर्गों में बँटने के कारण एक सुंदर स्वच्छ समाज का निर्माण नहीं हो सकता।

6.अवतारवाद का खंडन तथा निर्गुब्रह्म के उपासक

कबीर की तरह नानक भी निर्गुणब्रह्म के उपासक थे। दोनों ही ने न तो अवतारवाद में, न मूर्तिपूजा, न ही तीर्थ यात्रा और न ही ब्राह्मचर्यों के प्रति आस्था दिखाई। हों उनकी साधना प्रणाली में ब्रह्म को निराकार, अव्यक्त अगोचर माना है। दोनों मध्यकालीन संत ने राम नाम का सहारा तो अवश्य लिया है परंतु दोनों ने दशरथ के पुत्र राजा-राम का नहीं अपितु निर्गुण ब्रह्म के विषय में कहा है। उन्होंने अपनी वाणी में ब्रह्म को राम, केशव, माधव, शून्य निरंजन आदि नाम से संबंधित किया है, कबीर ने निर्गुण ब्रह्म के लिए कहा है—

“दुलहिन गावहुँ मंगलाचार हम घर आए राजा राम भरतार।”

इसी प्रकार नानक ने भी निर्गुण ब्रह्म के लिए कहा है—

हम हरि साजन आए, साचे मेलि

मिलाए।।

सहजि मिलाए हरि मन भाजे सुखु पाइआ।

हम घरि साजन आए, साये मेलि मिलाए।।

सहजि मिलाए हरि मनि भाजे पंच मिले सुखु पाइआ।

कबीर तथा नानक दोनों ने ही आत्मा को स्त्री तथा परमात्मा को पति कहा है कबीर की भक्ति का मूलाधार—प्रेम था। भगवत् प्रेम पर उनकी दृष्टि इतनी दृढ़— निबद्ध थी कि इस ढाई अक्षर (प्रेम) को, ही वे प्रधान मानते थे। नानक आध्यात्मिक पथ प्रदर्षक एवं समन्वयवादी विचारक थे। उनका उद्देश्य ईश्वर प्राप्ति ही

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था और उसी 'वाहिगुरु' की प्राप्ति का मार्ग उनकी भक्ति का ही मार्ग था।

कबीर एवं गुरुनानक की मत भिन्नता –

कबीर एवं गुरुनानक में विचारों की समानता के साथ-साथ मत भिन्नता भी मिलती है। दोनों ही संत-परंपरा की अन्यतम विभूतियाँ हैं, परंतु दोनों में कितना महान अंतर है कबीर का स्वभाव अत्यंत तेजस्वी और उग्र है, नानक का शांत और मृदु। कबीर बार-बार व्यंग्य का प्रयोग करते हैं जबकि नानक प्रेम की सहज वाणी के माध्यम से ही अपना मन्तव्य व्यक्त करते हैं। कबीर को ज्ञान का बल है, नानक को केवल भक्ति का संबल प्राप्त है। इसलिए कबीर तर्क का आश्रय लेते हैं जबकि नानक का माध्यम केवल अनुभव है। कबीर का मार्ग आदेश और उपदेश का मार्ग है परंतु नानक आत्मीय भाव से परामर्श देते हैं। परिणामतः कबीर का प्रभाव जहाँ अधिक प्रखर और तीव्र था, वहाँ नानक का प्रभाव अधिक व्यापक और स्थाई सिद्ध हुआ। दोनों संतों की मत भिन्नता का मूल्यांकन निम्न रूपों में किया जा सकता है—

1. वर्ग भेद का प्रभाव— शिक्षा का प्रभाव: नानक जी जाति से खत्री थे। यह एक सम्मानित जाति थी। उनके परिवार को आदर्श परिवार माना जाता था। इसके विपरीत कबीर जी जुलाहा थे जिनकी जाति निम्न थी तथा परिवार दीन-हीन था। इस कारण से उनका बचपन आभावों में व्यतीत हुआ। यही कारण था जिससे कबीर को शिक्षा से भी वंचित रहना पड़ा। परंतु नानक जी पाठशाला गए। अपनी कार्यक्षमता, उत्तरदायित्व से उन्होंने गुरु से अल्पकाल में ही सारी विधाएँ प्राप्त कर ली थी। एक दिन उन्होंने वर्णमाला के सभी अक्षरों (अ,आ,क, एवं ख.....) के आध्यात्मिक अर्थों को प्रकट कर अपने गुरु (पांढा जी) का आश्चर्य चकित कर दिया था। यह वर्णन आसा राग में संग्रहित है। गुरुनानक ने पंडित ब्रजनाथ से शिक्षा प्राप्त की। इन्होंने अपनी विलक्षण बुद्धि के कारण सबको आश्चर्य में डाल दिया। नानक ने फारसी का ज्ञान मुल्ला जी से प्राप्त किया। अपने गुरु मुल्ला साहब को परमात्मा की भक्ति की शिक्षा दी एवं उनके पास जाना बंद कर दिया। निष्कर्ष रूप से कहा जा सकता है कि नानक जी को पंजाबी, संस्कृत, फारसी आदि भाषाओं का ज्ञान था। उन्होंने अपने जीवन में अनेक सम्प्रदाय के पंडितों, दार्शनिकों, विद्वानों, मुल्लाओं से भी शास्त्रार्थ किया। नानक जी अलौकिक प्रतिभाशाली तर्कशक्ति के धनी थे।

2. भाषा की तीक्ष्णता – क्रांतिकारी कबीर तथा शांतिप्रिय नानक— नानक की जीवनी का अध्ययन करने पर यह बात हमारे सामने आती है कि नानक जी का स्वभाव मृदु, कोमल, सरस था। उनकी वाणी में कोमलता तथा सरलता झलकती थी। नानक जी दयालु प्रकृति के थे।

नानक जी की दयालुता का कारण समझे तो हम यह कह सकते हैं कि नानक जिस कुल में जन्म लिये थे वह सामाजिक तथा आर्थिक दोनों ही दृष्टिसे उच्च तथा सम्मानीय समझा जाता था। यही कारण था कि नानक जी को मनोवैज्ञानिक दृष्टि से उन परिस्थितियों का सामना नहीं करना पड़ा जो कबीर को करना पड़ा। कबीर का क्रांतिकारी रुख होना का सबसे बड़ा कारण यह था कि कबीर जुलाहा थे तथा उन्हें निम्न जाति का समझा जाता था। दोनों संतों के आगमन के समय जाँति-पौंति का बोलबाला था। वर्ग भेद के विभाजनों के कारण निम्न श्रेणी के लोगो को उस समय की विषम परिस्थितियों का सामना करना पड़ा। उनकी आर्थिक स्थिति जर्वाडोल थी तथा आसपास का दूषित वातावरण उनके जीवन में आक्रोश पैदा करता है। तभी तो उन्होंने जो जीवन अपनी

आँखों से देखा तथा भोगा उस पर उन्होंने सीधा तीखा प्रहार किया। समाज में व्याप्त कुरितियाँ, आडंबर, मिथ्याचार, पापाचार देखकर उनका हृदय दहल उठा तथा उनका क्रोध अंगार की भाँति फूट पड़ा इसके परिणाम स्वरूप कबीर का क्रांतिकारी स्वरूप हमारे समक्ष दृष्टिगोचर होता है। उन्हें उपेक्षा एवं अपमान सहना पड़ा। वह रामानंद जी को अपना गुरु बनाना चाहते थे पर उन्होंने भी कबीर (निम्न श्रेणी के कारण) को तिरस्कृत किया। शायद यही कारण था कि कबीर की वाणी में तीखी उक्तियाँ हैं जबकि नानक की वाणी कोमल है।

वर्तमान युग में कबीरदास एवं गुरुनानक की प्रासंगिकता—दोनों ही संत आज के वातावरण में बहुत प्रासंगिक हैं, क्योंकि आज की परिस्थितियाँ भले ही समाज के अनुरूप बदली हो लेकिन उसकी प्रवृत्तियाँ वहीं हैं जो इन संतों के समय थी। परंतु दुर्भाग्य यह है कि आज कोई कबीर नानक नहीं है। दोनों संतों की वाणी को अपने आचरण और कर्म में साकार करने वाले बहुत मिलते हैं।

“कबीर की तरह नानक ने भी आगाह किया था कि प्रेम का खेल बड़ा कठिन है। मगर आज तो सब कुछ दौब पर लगाकर खेलना होगा क्योंकि बिना यह दायित्व निभाए इस देश का और हमारा अस्तित्व ही नहीं निभ पाएगा। आज की पहली जरूरत प्रेम के मार्ग पर पैर रखना और बिना संकोच के सिर देना है क्योंकि बिना प्रेम में डूबे निभने और निभाने के कोई अर्थ रहते हैं”।¹

कबीर के सिद्धांतों पर कबीर पंथ तथा नानक के सिद्धांतों पर सिख पंथ की स्थापना हुई। दोनों की पंथ का भारतीय जनमानस पर गहरा प्रभाव पड़ा है। कबीर पंथ के अनुयायी मध्यप्रदेश में मंडला, अमरकंटक, कबीर चबूतरा, छिन्डोरी, कुदुरमाल, रतनपुर (छ.ग.) दुर्ग (छ.ग.) भिलाई (छ.ग.) शिवपुरी, धमतरी (छ.ग.) आदि प्रधान क्षेत्रों में हैं। इसके अलावा गुजरात, अहमदाबाद बड़ौदा, राजस्थान, पंजाब, बैंगलोर आदि सभी स्थानों पर भी पंथ का प्रभाव है। कबीर जी का सबसे बड़ा मंदिर काशी बनारस में है जिसको कबीर चौरा कहा जाता है।

नानक जी के सिद्धांतों का भी भारतीय जनमानस पर गहरा प्रभाव पड़ा। उनके सिद्धांतों के अनुरूप ही लंगर प्रथा का प्रचलन आज भी है। सिख धर्म के अनुयायी पूरे भारत व^१ में फैले हुए हैं इसके अतिरिक्त अमेरिका ग्रेट ब्रिटेन तथा विश्व के अनेक देशों में सिखपंथ के अनुयायी पाये जाते हैं। जिन्हें सिख कहा जाता है। स्थान-स्थान पर गुरुद्वारे (अर्थात् गुरु का घर) बने हुए हैं। जहाँ पर सभी धर्म के लोग जा सकते हैं। नानक जी तथा दशम गुरु के नाम पर अनेक उच्चतर माध्यमिक 'शाला' तथा महाविद्यालय बने हुए हैं। इन उच्चतर माध्यमिक शालाओं तथा महाविद्यालय में सिख धर्म के ही नहीं अपितु हर धर्म के लोग विद्याध्ययन कर सकते हैं। वर्तमान में भी इन धर्म गुरुओं को याद किया जाता है तथा उनकी जयंती पर लंगर, कीर्तन, प्रभात फेरी का आयोजन किया जाता है।

वर्तमान युग की इन समस्याओं, अलगाववाद, उपभोक्तावाद, जातिवाद, समाजवाद, द्वेषता, साम्प्रदायिक, विद्वे^१ धार्मिक आडंबर आदि से मुक्ति के लिए दोनों ही संतों के ज्ञान के प्रकाश की आवश्यकता है। दोनों ही संतों ने वर्ण-जाति, धर्म के महासंगम, इस देश की प्रमुख जटिल समस्याओं का समाधान प्रस्तुत किया, जिसका महत्व आज भी अक्षुण्य है। भारतीय संविधान में जिस सर्वधर्म की परिकल्पना की गई, उनके मूल स्रोत ये ही संत कवि हैं। उक्त संतों की विचारधारा को गहराई से समझने की आज भी आवश्यकता है, जिसमें साहित्य और समाज को नई दिशा, मिलेगी।

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Periodic Research

प्रसाद कृत 'चन्द्रगुप्त' : संदभ-राष्ट्रीय चेतना

बिजय रवानी

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सारांश

प्रसाद का समय राष्ट्रीयता और जागरण का युग था। यही कारण है कि प्रसाद साहित्य में कला, समाज, संस्कृति राजनीति धर्म आदि के प्रति नई जागरूक दृष्टि देखने को मिलती है, जिनमें सामंती रूढ़ियों के तिरस्कार और राष्ट्रीयता के साथ आधुनिकता का स्वर सन्निविष्ट था।

राष्ट्रीय चेतना एक व्यापक अवधारणा है जिसमें राष्ट्र प्रेम के सभी सम्बद्ध तत्व समाहित हो जाते हैं और प्रसाद की बहुचर्चित नाट्यकृति 'चन्द्रगुप्त' में इसी राष्ट्रीयता की अभिव्यक्ति है। 'चन्द्रगुप्त' के प्रथम अंक के प्रथम दृश्य में ही चन्द्रगुप्त कहता है कि आत्म सम्मान के लिए मर मिटना ही दिव्य जीवन है। यही आत्मसम्मान अलका में है जो सिंहरण को देश के लिए सुरक्षित रखती है। उसमें नयी शक्ति भरती है। भारतीय अस्मिता की श्रेष्ठता के लिए प्रसाद ने कार्नेलिया से कई बार भारत भूमि का गुणगान कराया है। उसकी गीत-योजना में भी प्रसाद ने इस तत्व को नहीं भुलाया है। प्रसाद ने 'चन्द्रगुप्त' में चन्द्रगुप्त, अलका, कार्नेलिया, चाणक्य आदि पात्रों के माध्यम से राष्ट्रीय भावना को दिखाया है।

किसी देश, राष्ट्र के विकास में राष्ट्रीय-चेतना का होना अति आवश्यक है और वर्तमान भारत वर्ष में इसका अभाव खलता है। ऐसी स्थिति में " 'चन्द्रगुप्त' में राष्ट्रीय चेतना का स्वरूप" शीर्षक शोध-पत्र का महत्व असंदिग्ध है।

मुख्य शब्द : राष्ट्रीय दृष्टिकोण, राष्ट्रवाद, संकीर्ण मानसिकता

प्रस्तावना

राष्ट्रीय चेतना एक व्यापक अवधारणा है जिसमें राष्ट्र प्रेम के सभी सम्बन्धी तत्व समाहित हो जाते हैं। प्रसाद के चन्द्रगुप्त नाटक में इसी राष्ट्रीयता की अभिव्यक्ति है। प्रसाद के प्रायः सभी नाटकों में गहन राष्ट्रीय भावना अभिव्यक्त हुई है, किन्तु 'चन्द्रगुप्त' की राष्ट्रीय चेतना अन्यतम है। कुछ विद्वानों के अनुसार, "चन्द्रगुप्त" प्रसाद का सर्वश्रेष्ठ नाटक है, और कुछ के अनुसार, इसका स्थान 'स्कंदगुप्त' के बाद है।¹

'चन्द्रगुप्त' के कथानक में राष्ट्रीय भावना की प्रवृत्ति मिलती है, जिसमें पराधीन देश की आजादी और संघर्ष करने की इच्छा शक्ति है। इसी इच्छा शक्ति के बल पर चन्द्रगुप्त जैसा नायक नन्द जैसे कठोर शासक से प्रजा को मुक्ति दिलाता है, जिसका प्रेरक चाणक्य है। डॉ० दशरथ ओझा प्रसाद के कथानक के सन्दर्भ में कहते हैं कि- " 'चन्द्रगुप्त' में उनकी ऐतिहासिक शोधशक्ति जितनी प्रस्फुटित हुई है, उतनी ही उनकी काव्य- प्रतिभा भी प्रखर हो उठी है।"² प्रसाद के नाटक अपने युग की उपज है। उनमें तत्कालीन राष्ट्रीय चेतना की अभिव्यक्ति मिलती है। आचार्य शुक्ल ने लिखा है कि- "यद्यपि प्रसाद के नाटक ऐतिहासिक हैं, पर उनमें आधुनिक आदर्शों और भावनाओं का आभास इधर-उधर विखरा मिलता है, स्कन्दगुप्त और चन्द्रगुप्त दोनों में स्वदेश प्रेम, विश्वप्रेम और आधुनिकता का आधुनिक रूप-रंग बराबर झलकता लगता है।"³

राष्ट्रीय भावना की पहली शर्त आत्मसमान है। 'चन्द्रगुप्त' के प्रथम अंक के प्रथम दृश्य में ही चन्द्रगुप्त कहता है कि- "आत्म सम्मान के लिए मर मिटना ही दिव्य जीवन है।"⁴

आत्मसम्मान पराधीनता में रहते हुए नहीं प्राप्त हो सकती है इसी आत्मसम्मान के लिए सब कुछ न्यौछावर होता है और यही स्वाधीनता की पहली कड़ी है जिस पर चलकर लक्ष्य को प्राप्त किया जा सकता है, यही आत्मसम्मान अलका में है जो सिंहरण को देश के लिए सुरक्षित रखती है। उसमें नयी शक्ति भरती है, कहती है, " मालववीर तुम्हारे मनोबल में स्वतन्त्रता है और तुम्हारी दृढ़ भुजाओं में आर्यावर्त के रक्षण की शक्ति है, तुम्हें सुरक्षित रहना ही चाहिए।"⁵

प्रसाद की राष्ट्रीयता संकुचित नहीं है और न ही उग्र राष्ट्रवाद, जैसा पश्चिम के कुछ देशों में देखने को मिलता था। डॉ० दशरथ ओझा का कथन है; "प्रसाद की राष्ट्रीयता में संकीर्णता को स्थान नहीं। उनकी राष्ट्रीयता महात्मा

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गांधी की राष्ट्रीयता के सदृश्य विशाल है, जिसका मूलधार आस्तिकता और ब्राह्म रूप देश-सेवा है।⁶

इसी सन्दर्भ में राजेश्वर प्रसाद अग्रवाल का मत है कि— “ प्रसाद अपने देश के सामने दूसरे देश की प्रशंसा नहीं सुन सकते। इसी कारण रायबाबू के और प्रसाद जी के चन्द्रगुप्त नाटक में बहुत अन्तर हो गया है।⁷ ‘चन्द्रगुप्त’ में न केवल मगध की स्वाधीनता के लिए युद्ध होता है वरन् पुरु या पर्वतेश्वर के लिए भी सहायता की जाती वही पर्वतेश्वर जिसने नन्द का अपमान किया है। चाणक्य को कुछ महत्व नहीं दिया है। उसी को सिकन्दर के युद्ध के समय चन्द्रगुप्त द्वारा सहायता की जाती है। इसी राष्ट्रीयता के कारण पर्वतेश्वर सिकन्दर से एक नरपति का दूसरे नरपति के साथ व्यवहार करने की बात करता है। सिकन्दर कहता है, “मैंने एक अलौकिक वीरता का स्वर्गीय दृश्य देखा है। होमर क कविता में पढ़ी हुई जिस कल्पना से मेरा हृदय भरा है, उसे यहाँ प्रत्यक्ष देखा।⁸ इसी कारण सिकन्दर बार-बार नतमस्तक होता है चाहे वह दाण्ड्यान के आश्रम में या मालव युद्ध में। प्रसाद की राष्ट्रीयता का स्वर यही है, जो विदेशी आक्रान्त से प्रशस्तिगान कराता है।

प्रसाद की राष्ट्रीय चेतना ‘राष्ट्रवाद’ की तथाकथित एकल-दृष्टि से निर्देशित नहीं थी, बल्कि यह व्यापक मानवतावाद की धरातल पर फली-फूली थी जैसा कि प्रभाकर श्रोत्रिय का कहना है— “देश की पराधीनता प्रसाद के लिए समकालीन यथार्थ का महत्वपूर्ण पक्ष था परन्तु उनकी गहरी सांस्कृतिक चेतना और विश्व मानवतावाद ने उनकी राष्ट्रीयता और देश-प्रेम को संकीर्ण राष्ट्रवाद नहीं बनने दिया, बल्कि उन्होंने देश की स्वाधीनता और आत्मगौरव की रक्षा को ‘राष्ट्रवाद’ की मनोवृत्ति से अनेक स्तरों पर अलगया है।⁹ कार्नेलिया का यह कथन है कि— “और देश तो मनुष्यों की जन्मभूमि है, भारत मानवता की जन्मभूमि है।¹⁰ समग्र विश्व को एकसूत्रता प्रदान करती है मानवीयता के आधार पर यही मानवता का पाठ जिसे पूरे विश्व ने भारत से सीखा है। राष्ट्रीय प्रेम के सन्दर्भ में ‘चन्द्रगुप्त’ में दो गीत हैं। एक गीत विदेशी कन्या कार्नेलिया द्वारा गाया गया है। “अरुण यह मधुमय देश हमारा।¹¹ दूसरा गीत अलका द्वारा गाया गया है, “हिमाद्री तृंग श्रृंग से प्रबुद्ध शुद्ध भारती।¹² अलका द्वारा गाया गीत देश में नवजागरण की चेतना भरती है एवं राष्ट्रीय उद्बोधन का गीत है। जिससे भारतीय महिमा के गायन के साथ उद्बोधन भी है ऐसा उद्बोधन जो कायरों के मन में भी वीरता का संचार कर दे। प्रसाद ‘चन्द्रगुप्त’ में इसी माध्यम से तत्कालीन स्वतंत्रता संग्राम में अपना सहयोग देते हैं। यह भारतीय नवयुवक का गीत है जो उसके अमरत्व को, शूरता, साहस को जगाता है। अलका कहती भी है, “पराधीनता से बढ़कर विडम्बना और क्या है?”¹³

राष्ट्रीय उद्बोधन के तीन पक्ष हैं (क) स्वराज की मांग (ख) बलिदान की भावना (ग) राष्ट्रीय आन्दोलन की अभिव्यक्ति चन्द्रगुप्त की राष्ट्रीयता में देश से गहरा अपनापन है एक ऐसा लगाव जो सब कुछ से मिलकर

जाना गया है। इस राष्ट्रीयता में देश के जर्-जर् से प्यार है, प्रेम है जिसका रक्त ही इन शरीरों में बह रहा है। अलका कहती है— “मेरा देश है, मेरे पहाड़ हैं और मेरे जंगल हैं। इस भूमी के एक एक परमाणु मेरे हैं और मेरे शरीर के एक-एक क्षुद्र अंश इन्हीं परमाणुओं से बने हैं। फिर मैं कहूँ, जाऊँगी यवन।¹⁴ धीरेन्द्र कुमार ‘नाटककार जयशंकर प्रसाद’ में लिखते हैं— “‘चन्द्रगुप्त’ उस युग की रचना है जब हमारा देश अंग्रेजी साम्राज्यवाद के विरुद्ध संघर्षरत था। प्रसाद अपने युग की स्थितियों का लगभग ढाई हजार वर्ष पूर्व की परिस्थितियों के माध्यम से साक्षात्कार कराते हैं, जिनमें बाहर की ओर से राष्ट्र की सुरक्षा, विदेशी कूटचक्र एवम संघर्ष और राष्ट्र की एकता और अखण्डता का अन्दरूनी संघर्ष समानान्तर दिखता है।¹⁵

सभी विद्वानों ने इस तथ्य का उल्लेख किया है कि ‘चन्द्रगुप्त’ में तीन मुख्य घटनाएँ हैं— सिकन्दर का अभियान, नन्द-नाश और सिल्यूकल की पराजय। इन तीनों का केन्द्रीय पात्र चन्द्रगुप्त है।

‘चन्द्रगुप्त’ की राष्ट्रीयता संकीर्ण मानसिकता की वही है वहाँ पर केवल और केवल अपन लिए ही युद्ध नहीं होता है बल्कि पूरे देश के लिए संघर्ष होता है। ‘चन्द्रगुप्त’ में खण्डित देश का दुस्वप्न नहीं है बल्कि सम्पूर्ण एक राष्ट्र की अवधारणा है साथ ही समग्र आर्यावर्त की बात है जो क्षेत्रीयता से मुक्त है। चाणक्य कहता है— “तुम मालव हो और यह मागध यही तुम्हारे मान का अवसान है न? परन्तु आत्मसमान इतने से संतुष्ट नहीं होगा। मालव और मागध को भूलकर जब तुम आर्यावर्त का नाम लोगे, तभी वह मिलेगा।¹⁶ प्रसाद की सबसे गहरी चिन्ता अखण्ड राष्ट्र की थी जिसका सबसे बड़ा बाधक तत्त्व क्षेत्रीय भावना का उदय था। प्रसाद जानते थे कि चाहे वह प्राचीन काल रहा हो या मध्य काल, भारतीय पराजय का मुख्य कारण देश का छोटे-छोटे टुकड़ों में विभक्त होना है। इसलिए राष्ट्रीय एकता का सुन्दर निदर्शन ‘चन्द्रगुप्त’ में दिखाई देता है जहाँ सारी शक्तियाँ एकजुट होकर यवनों से युद्ध करती हैं— चाहे वह पंचनद का क्षेत्र हो या मालव प्रदेश। प्रसाद इस बात की ओर संकेत कर रहे थे कि आज हमारी सबसे बड़ी आवश्यकता एकजुट रहने की, एक साथ रहने की है, उसी में हमारा आत्मसम्मान है। सिंहरण राजकुमारी से कहती है— “परन्तु मेरा देश मालव हो नहीं गांधार भी है, यही क्या समग्र आर्यावर्त है?”¹⁷ अलका के द्वारा भी प्रसाद ने मालव-मागध का भेद मिटा कर केवल आर्यावर्त की स्थापना करवाई है। अलका अपने देशद्रोही भाई आम्भीका के सम्मुख आर्यावर्त का व्यापक आदर्श प्रस्तुत करती है— “भाई तक्षशिला मेरा नहीं और तुम्हारा भी नहीं, तक्षशिला आर्यावर्त का एक भू-भाग है, वह आर्यावर्त का होकर रहे, इसके लिए मर मिटो।¹⁸ ‘चन्द्रगुप्त’ का अंत भी इसी भावना के साथ दिखाई देता है जो चाणक्य के कथनों के द्वारा अभिव्यक्त होता है। चाणक्य आम्भीका से कहता है— “तुम जानते हो कि चन्द्रगुप्त ने दक्षिणापथ के स्वर्ग गिरी से पंचरद तक, सौराष्ट्र से बंग तक एक महान राज्य स्थापित किया है,

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यह साम्राज्य मगध का नहीं है, यह आर्य साम्राज्य है।¹⁹ यही प्रसाद का लक्ष्य है एवं उद्देश्य है। उस पराधीनता में रहकर प्रसाद ने जो दृष्टि प्रतिपादित की वह स्तुत्य है। प्रसाद इसी कारण नाटक के प्रारम्भ से लेकर अंत तक इसी दिशा में लगे रहे, किन्तु स्वतंत्रता प्राप्ति के बाद भी ऐसा सम्भव नहीं हो पाया है।

‘चन्द्रगुप्त’ की राष्ट्रीय चेतना मूलतः सर्जनात्मक एवं संघर्षपरक है। इसमें घटनायें ऐतिहासिक हैं जो मूल कथा से सम्बन्ध रखती हैं किन्तु नवीन भी हैं। उनकी नवीनता प्रसाद की मौलिक उद्भावना है। ‘चन्द्रगुप्त’ में जो ऐतिहासिकता है उसके सम्बन्ध में सिद्धनाथ कुमार का कथन है— “प्रसाद ने महाभारत युद्ध के बाद से लेकर हर्षवर्धन के राज्यकाल तक के भारतीय इतिहास को अपना लक्ष्य बनाया है, क्योंकि यही भारतीय संस्कृति की उत्पत्ति और प्रसार का स्वर्णयुग कहा जाता है।²⁰ डॉ० लक्ष्मीनारायण लाल ने लिखा है: “प्रसाद ने पारसी रंगमंच की तरह ही अपने नाटकों के लिए इतिहास—पुराण का उपयोग किया।²¹ चाणक्य का लक्ष्य यदि अखण्ड आर्यावर्त है तो वह उसे प्राप्त करता है भले ही वह कूटनीति के कारण संभव हो पाया है। यह कूटनीति राजनीतिक छल—प्रपंच के बीच से कम उनकी निष्ठा एवं सोपदेश्यता से अधिक प्रभावित है। प्रसाद अपनी सर्जनात्मक शक्ति से ऐसे पात्रों में भी ऐसे भाव भर देते हैं जिनमें वह उपस्थित नहीं है जैसे आम्भीका एवं पर्वतेश्वर ये दोनों चरित्र बाद में देश प्रेम की ओर उन्मुख होते हैं एवं मालविका जैसे पात्र प्राणों का उत्सर्ग भी करते हैं।

राष्ट्रीय अपमान का हस्तक्षेप भी प्रसाद आवश्य समझते हैं। ‘चन्द्रगुप्त’ में आहत सिकन्दर का सिंहरण बध नहीं करने देता तथा कहता है— “ठहरो, मालव वीरो! ठहरो यह भी एक प्रतिशोध है। यह भारत के उपर एक ऋण था, पर्वतेश्वर के प्रति उदारता दिखाने का यह प्रत्यतर है यवन शीघ्र जाओ।²² प्रसाद जी अन्तर्राष्ट्रीय आक्रमणों से रक्षा के लिए जहाँ प्रतिहिंसा, प्रतिशोध, शौर्य एवं पारस्परिक संगठन आदि की आवश्यकता पर बल देते हैं, वहीं क्रूर विश्व को सद्भावना एवं सदाचार की शिक्षा देना भी भारतवासियों का दायित्व मानते हैं। डॉ० हरीन्द्र का कथन है, “प्रसाद जी भारतवर्ष को अन्तर्राष्ट्रीय क्षेत्र में एक ऐसे सुसंगठित एवं पुष्ट राष्ट्र के रूप में प्रस्तुत करते हैं जिनमें आक्रमणकारियों को मुँह तोड़ उतर देने की पूर्ण क्षमता हो तथा जिसका दायित्व विनम्र विश्व को सदाचार की शिक्षा देकर क्रूरता से सद्भाव की ओर ले जाना हो।²³ प्रसाद की यह धारणा बड़ी प्रबल है कि यह कार्य भारतवर्ष ही करता है। अतः वे बार—बार उस हीन अवस्था एवं हीन वीर्यता के कलमष को भारतीयों के मन से पूर्णतः हटाने का प्रयास करते हैं, जिसे योजनापूर्वक कुछ स्वाधी पाश्चात्य विद्वानों एवं उनके मानस— पुत्रों ने अपने अन्तर्राष्ट्रीय हितों के लिए हम पर आरोपित किया है।

‘चन्द्रगुप्त’ की राष्ट्रीय चेतना संघर्षपरक है, यह संघर्ष कुछ अधिक ही तीव्रता के साथ उभरता है। दो विरोधी स्थितियों के बीच द्वन्द्व की स्थिति बार—बार बनती है। अपनी संघर्ष चेतना के कारण ही चाणक्य अपमानित होता है। एवं विरोधी शक्तियों को एक साथ लाता है।

उसके मन में भी द्वन्द्व चलता रहता है। उसके मन में संकल्पों एवं विकल्पों का द्वन्द्व चलता है। वह कहता है— “एक बार चलो नन्द से कहूँ, नहीं। परन्तु मेरी वृत्ति, वही मिल जाय— मैं शास्त्र व्यवसायी नहीं रहूँगा मैं कृषक बनूँगा। राष्ट्र की भलाई—बुराई से क्या। तो चलो।²⁴ चाणक्य की राष्ट्र प्रेम उसे संगठनकर्ता नायक बना देता है। हर बार युद्ध में वह सामने होता है चाहे मालव युद्ध हो या नन्द का नाश। यह संघर्ष कई स्तरों पर उभरता है। बुद्धि के स्तर पर, युद्ध रणनीति के अवसर पर एवं राष्ट्रीय जागरण के अवसर पर। हर बार उसका उद्देश्य प्रखर राष्ट्रीयता ही होती है एवं गहरा देश प्रेम ही होता है।

‘चन्द्रगुप्त’ नाटक का सबसे प्रबल स्वर राष्ट्रीयता का है। राष्ट्रीय जीवन से सम्बन्ध अनेकानेक समस्याओं का राष्ट्रीय दृष्टिकोण से प्रसाद ने गंभीरता से विचार किया और समाधान प्रस्तुत किए। उनकी राष्ट्रीय भावना किसी विदेशी तत्व ज्ञान पर आधारित न होकर पूर्णतः स्वदेशी है, किन्तु साथ प्रसाद जी ने राष्ट्रीयता का विनाशकारी रूप ग्रहण न करके उसे विश्व—शान्ति का माध्यम बनाया है। ‘चन्द्रगुप्त’ की राष्ट्रीय चेतना जो अनुप्राणित है। वह किसी भी राष्ट्र के जीवन के लिये यह चेतना अनिवार्य है। जब तक राष्ट्र रहेगा, राष्ट्रीय भावना की आवश्यकता बनी रहेगी और अपनी राष्ट्रीय चेतना का बोध अपेक्षित रहेगा।

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मृदा प्रबन्ध इकाई एवं मृदा वर्गीकरण का एक भौगोलिक विश्लेषण जयपुर एवं दौसा जिले (राजस्थान) का एक विशेष अध्ययन

सारांश

कृषि मानव की सबसे महत्वपूर्ण आर्थिक क्रिया है। कृषि व्यवसाय की अपार सम्भावनाएँ मृदा संरक्षण एवं मृदा प्रबन्धन पर निर्भर करती है एवं मृदा कृषि कार्य के लिए भौतिक आधार बनाती है। जयपुर एवं दौसा जिले की जलवायु अर्द्ध-शुष्क व वार्षिक औसत वर्षा 568 मिमी हैं। परस्तुत अध्ययन का उद्देश्य मृदा प्रबन्ध इकाई एवं मृदा वर्गीकरण का विश्लेषण तथा भौगोलिक कारकों के प्रभाव का वर्णन करना है। अतः मृदा प्रबन्ध इकाई एवं मृदा वर्गीकरण बस्सी रोजड़ी सहवर्ग तथा रोजड़ी चाकसू सहवर्ग कुल भौगोलिक क्षेत्र का सर्वाधिक 41.44 प्रतिशत एवं मृदा प्रबन्ध इकाई III एवं मृदा वर्गीकरण चन्द्रारण पड़ासोली सहवर्ग 2.07 प्रतिशत कुल क्षेत्र में निम्नतम पाई गई है जिसका प्रभाव कृषि फसलों, प्रणाली एवं प्रतिरूप पर परिलक्षित हो रहा है।

मुख्य शब्द : भौगोलिक कारक, मृदा प्रबन्ध, अर्थव्यवस्था प्रस्तावना



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भारतीय अर्थव्यवस्था में कृषि का स्थान महत्वपूर्ण है। यही वजह है कि वातावरण और मौसम में आ रहे बदलाव के साथ ही मृदा के संगठन एवं स्वरूप में भी बदलाव आ रहा है जो कृषि उत्पादकता पर परिलक्षित हो रहा है। मृदा एक अनवरत प्रक्रिया का प्रतिफल होती है, जो भूगर्भिक युगों से होते हुए मूल शैलों की संरचना पर निर्भर करती है, जिसके विखण्डन से उसकी उत्पत्ति हुई है, अपितु इस लम्बी प्रक्रिया में अनेक भौतिक एवं रासायनिक परिवर्तन होते हैं साथ ही उसमें जीवाश्म एवं वनस्पति अंश सम्मिलित होकर उसे एक निश्चित स्वरूप प्रदान कर देते हैं। मृदा, पौधों की वृद्धि का एक प्राकृतिक माध्यम है तथा मृदा की उत्पादकता ही क्षेत्रीय कृषि विकास का एक आधार होता है (सक्सेना, 2012, पृ.72)। भूमि उपयोग को सामान्यतः भूमि नियोजन के द्वारा बढ़ाया जा सकता है वरन् भारत में प्रति व्यक्ति भूमि सन् 1951 में 0.89 हैक्टेयर थी जो सन् 2001 में 0.3 हैक्टेयर रह गई है। इस प्रकार भारत में प्रति व्यक्ति कृषि भूमि सन् 1951 से 2001 तक 0.48 हैक्टेयर का हास हुआ है।

मृदा कृषि कार्य के लिए भौतिक आधार बनाती है। गठन, संरचना, लवणों तथा ह्यूमस के उचित संयोजन से समृद्ध मृदाएँ उत्तम परिणाम प्रदान करती हैं। अतः मृदाओं की भौतिक एवं रासायनिक बनावट की जानकारी आवश्यक है। साथ ही अध्ययन क्षेत्र में तीव्र बढ़ती जनसंख्या के कारण सीमित भूमि संसाधनों पर दबाव निरन्तर बढ़ता जा रहा है। जनसंख्या के भरण-पोषण के लिए भूमि से अधिकाधिक फसलें प्राप्त करने के प्रयासों तथा वाणिज्य कृषि हेतु भूमि पर निरन्तर एक ही प्रकार की फसलों का उत्पादन से मृदा की उत्पादकता तथा उर्वरता का निरन्तर हास हो रहा है (गौतम, 2009, पृ. 153)। मनुष्य की तीव्र आर्थिक क्रिया-कलापों तथा दोषपूर्ण कृषि पद्धतियों को अपनाने के कारण मृदा अपरदन तीव्रतर हो रहा है। उक्त कारणों से यह आवश्यक हो गया है कि मृदा का स्वास्थ्य भी बना रहे तथा उससे उत्पादन भी भरपूर हो सके। इसके लिए मृदा वर्गीकरण एवं मृदा प्रबन्ध इकाइयों का कृषकों द्वारा सुनियोजित उपयोग आवश्यक है जिसके लिए भूमि की भौतिक विशेषताओं को ध्यान रखकर किया जाना होगा।

अध्ययन क्षेत्र

जयपुर व दौसा जिले राजस्थान के 26°32' से 27°51' उत्तरी अक्षांश तथा 74°55' से 76°50' पूर्वी देशान्तर के मध्य अवस्थित है जिसका कुल भौगोलिक क्षेत्रफल 14575 वर्ग कि.मी. है जो राजस्थान का कुल क्षेत्रफल 342239 वर्ग कि. मी. का 4.25 प्रतिशत हिस्सा है। अध्ययन क्षेत्र भारतीय सर्वेक्षण विभाग के भूपत्रक संख्या 54B/1,2,3,4,5,6,7,8,9,10,11 में अवस्थित है जिसे Fig. 1 में प्रदर्शित किया है।

Periodic Research

प्रशासनिक दृष्टि से अध्ययन क्षेत्र के जयपुर जिले में जमुआ, रामगढ़, बस्सी, चाकसू, आमेर, सांभर, कोटपूतली, चौमूं, शाहपुरा, विराटनगर, दूदू, फागी उपखण्ड तथा दौसा जिले के दौसा, सिकराय, महुआ, लालसोट एवं बांदीकुई उपखण्ड हैं। जिसके उत्तर में राजस्थान का सीकर जिला तथा हरियाणा राज्य का महेन्द्रगढ़ जिला, दक्षिण में राजस्थान का टोंक जिला, पूर्व में अलवर जिला एवं सवाईमाधोपुर जिला तथा पश्चिम में नागौर एवं अजमेर जिले की सीमाएं लगती हैं।

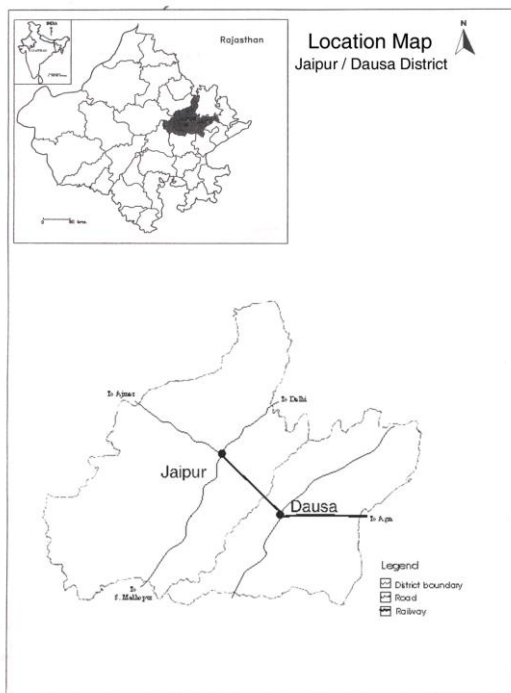


Fig. 1

अध्ययन क्षेत्र की जलवायु अर्द्ध-शुष्क हैं, अधिकतम तापमान 45°C एवं न्यूनतम तापमान 1.8°C रहता है। औसत वर्षा 568 मि.मी. होती है जो अधिकतर जुलाई से सितम्बर के मध्य महीनों में होती है। जिलों की मृदाएं जलोढ, गहरी से अधिक गहरी पीली भूरी, मटमैली भूरी बालू, दोमट एवं साधारण चूना रहित तथा उत्तम जल निकास युक्त पाई जाती है।

अध्ययन क्षेत्र में वनों का क्षेत्रफल 1228.29 वर्ग कि. मी. पाया जाता है जो राजस्थान के वनों का 3.7 प्रतिशत है। जनसंख्या 2001 में 65.68 लाख तथा 2011 में 83.10 लाख है जिसकी वृद्धि दर 25.37 प्रतिशत दशकीय रही है जो राजस्थान की वृद्धि दर 21.44 से 3.93 प्रतिशत अधिक है।

उद्देश्य

1. अध्ययन क्षेत्र की मृदा प्रबन्ध इकाइयाँ एवं मृदा वर्गीकरण का विश्लेषण करना।
2. अध्ययन क्षेत्र की मृदा प्रबन्ध इकाइयाँ एवं मृदा वर्गीकरण पर भौगोलिक कारकों के प्रभाव का अध्ययन करना।

समंक एवं विधितंत्र

शोध अध्ययन में द्वितीयक समंकों का उपयोग किया गया है जिसे मृदा सर्वेक्षण भारतीय कृषि अनुसंधान संस्थान, दुर्गापुरा, जयपुर से प्राप्त कर मृदा की गहराई, रंग, संरचना, गढ़ापन, पारगम्यता आदि का विश्लेषण किया है, तत्पश्चात् मृदा प्रयोगशाला, दुर्गापुरा, जयपुर में परीक्षण से प्राप्त अभिलक्षणों के आधार पर अंकीय मानचित्र AutoCAD सॉफ्टवेयर से तैयार किए गए हैं।

परिणाम एवं विवेचना

मृदा प्रबन्ध इकाई एवं मृदा वर्गीकरण

जिलों की मृदा वर्गीकरण को सात मृदा प्रबन्ध इकाइयों में विभक्त किया है। यह मृदा प्रबन्ध इकाई ऐसी मृदाओं का समूहन है जिनकी विशेषताएँ समान परिलक्षित होती हैं अपितु अन्तर होता है। इसी तरह इन मृदाओं की समस्याओं के सुधार हेतु एक ही जैसे उपायों की आवश्यकता होती है। अध्ययन क्षेत्र में मृदा वर्गीकरण एवं मृदा प्रबन्ध इकाई का क्षेत्रफल तथा प्रतिशत सारणी-1 में इंगित किया है।

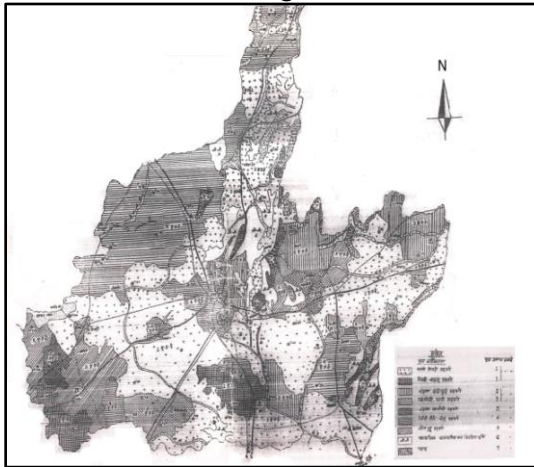
सारणी-1

जयपुर व दौसा जिले की मृदा प्रबन्ध इकाई एवं मृदा वर्गीकरण का क्षेत्रफल/प्रतिशत

मृदा प्रबन्ध इकाई	मृदा वर्गीकरण	क्षेत्रफल (हेक्टेयर)	प्रतिशत
I	बस्सी रोजड़ी सहवर्ग रोजड़ी चाकसू सहवर्ग	580160	41.44
II	चन्द्रारण बांदीकुई सहवर्ग पड़ासोली फागी सहवर्ग	153328	10.95
III	चन्द्रारण पड़ासोली सहवर्ग	29008	2.07
IV	रेतीले टीले चौमूं सहवर्ग	314,944	7.70
V	नरेना दुदु सहवर्ग	107744	7.70
VI	अत्यधिक अवनालिका एवं विरदित भूमि	120176	8.58
VII	पहाड़	82880	5.92

स्रोत: भू-सर्वेक्षण संगठन, पंत कृषि भवन, राजस्थान, जयपुर, 2010

मृदा वर्गीकरण एवं मृदा-प्रबन्ध इकाई मानचित्र
जिला जयपुर एवं दौसा



स्रोत— भू-सर्वेक्षण संगठन, पंत कृषि भवन, राजस्थान,
जयपुर, 2010

Fig. 2

मृदा प्रबन्ध इकाई-I

यह इकाई अध्ययन क्षेत्र के सर्वाधिक 41.44 प्रतिशत क्षेत्र में पाई जाती है जो जिले के पूर्वी, मध्य-दक्षिण, दक्षिण-पश्चिम, पश्चिम एवं मध्य-उत्तरी हिस्सों में पाई जाती है। यह मृदा इकाई अत्यधिक गहरी, मध्यम गठन युक्त, अच्छे निकास वाली एवं अल्प से साधारण जल अपरदित है। ये मृदा लगभग समतल से अल्प ढलान वाले धरातल पर पाई जाती है। इस मृदा प्रबन्ध इकाई में बस्सी रोजड़ी वर्ग (0-3 प्रतिशत ढलान) एवं रोजड़ी चाकसू वर्ग (0-2 प्रतिशत ढलान) आते हैं जिसे Fig. 2 में प्रदर्शित किया है।

यह मृदा जलोढ़ मैदानों में कृषि के लिए उपयोगी है तथा फसल सघनता 100 से 200 प्रतिशत तक है। इन मृदाओं में शुष्क खेती अधिक की जाती है तथा सतही एवं भूजल के विश्लेषण के आधार पर 50 से 60 प्रतिशत नमून समस्या से ग्रस्त है। यद्यपि यह मृदा कृष्य रूप से सर्वाधिक उपयोगी है। इन मृदाओं के संरक्षण एवं प्रबन्धन के लिए परम्परागत तकनीकों के साथ-साथ आधुनिक तकनीकों का भी उपयोग किया जाना उपयोगी सिद्ध हो सकता है।

मृदा प्रबन्ध इकाई-॥

यह मृदा प्रबन्ध इकाई जिलों के लगभग 10.95 प्रतिशत क्षेत्र में स्थित है जो क्षेत्र के पूर्वी-उत्तरी मध्य सीमा एवं दक्षिण-पूर्वी हिस्से में पाई जाती है। जिसे Fig. 2 में प्रदर्शित किया है। यह मृदाएँ अत्यधिक गहरी, मुख्यतया बारीक गठन युक्त, अल्प से साधारण जल निकास युक्त तथा अल्प से साधारण जल अपरदित हैं जो लगभग समतल से मामूली ढलान पर पाई जाती हैं। इस मृदा इकाई में चन्द्राणा बांदीकुई वर्ग (0-3 प्रतिशत ढलान) एवं पड़ासोलो फागी वर्ग (0-2 प्रतिशत ढलान) आते हैं।

इन मृदाओं में बारीक अवशेष के जलोढ़क मैदान की अत्यधिक गहरी मृदाएँ पाई जाती हैं जिनमें सम्पूर्ण

क्षेत्र पर खेती की जाती है, यथा रबी एवं खरीफ फसलें उगाई जाती हैं। ये मृदाएँ शुष्क खेती के काम भी आती हैं, अपितु सिंचाई अधिक की जाती है क्योंकि अपवाह जल एकत्रित होने के कारण भूजल की मात्रा अच्छी है।

मृदा प्रबन्ध इकाई-III

यह मृदा अध्ययन क्षेत्र के कुल भौगोलिक क्षेत्र का 2.07 प्रतिशत पाई जाती है जो क्षेत्र के मध्य, दक्षिण-पश्चिम सीमा के हिस्सों में फैली हुई है जिसे Fig. 2 में प्रदर्शित किया है। यह मृदाएँ मध्यम गहरी से गहरी, बारीक गठन युक्त साधारण जल निकास वाली हैं जो लगभग समतल से मामूली ढलान वाले धारातल पर मिलती है। इनमें जल अपरदन मध्यम है तथा चूनेदार परत 40 से 105 से.मी. नीचे मिलती है। इस मृदा प्रबन्ध इकाई में चन्द्राणा पड़ासोली वर्ग (0-3 प्रतिशत ढलान) पाया जाता है। यह पुरातन जलोढ़क समतल मैदान है जिसमें काफी जल अपवाह बनता है। इन मृदा इकाई वर्ग में रबी व खरीफ की खेती की जाती है और सिंचाई करने पर यह मृदाएँ अच्छी उपज देती है। शुष्क खेती बहुत कम की जाती है और सतही तथा भूजल की स्थिति साधारण प्रकार की है जिससे कृषि उपज साधारण होती है।

मृदा प्रबन्ध इकाई- IV

इस मृदा प्रबन्ध इकाई का क्षेत्रफल कुल भौगोलिक क्षेत्रफल का 22.50 प्रतिशत हिस्सा है जो अध्ययन क्षेत्र के उत्तरी, उत्तरी-पश्चिम मध्य, दक्षिण-पश्चिम, दक्षिण-मध्य एवं पूर्वी हिस्सों में पाई जाती है। जिसे Fig. 2 में प्रदर्शित किया है। इस इकाई में चौमूं श्रेणी की मृदाएं व अर्द्ध स्थिर-बालू के टीले आते हैं जो अत्यधिक गहरी, मोटे गठन, दोमट रेतीली हल्की पीली भूरी, अत्यधिक जल निकास युक्त एवं चूना रहित हैं।

ये मृदा समतल से मध्यम ढलान वाले धरातल पर पाई जाती हैं। बीच-बीच में बालू टीले भी पाए जाते हैं तथा इस मृदा पर वायु प्रभाव काफी अधिक है। इस क्षेत्र में प्रायः शुष्क खेती की जाती है जिसे चारागाह व उच्च टीलों वाली मृदा के अतिरिक्त करीब पूरे क्षेत्र में खेती की जाती है। भूजल इन मृदाओं में अंतः स्पंदन हो जाता है जिसके कारण सतही जल बहुत कम मात्रा में एकत्रित हो पाता है।

मृदा प्रबन्ध इकाई-V

इस प्रकार की मृदाएँ जिलों के 7.70 प्रतिशत क्षेत्र में फैली हैं जो अध्ययन क्षेत्र के उत्तरी-पूर्वी मध्य, पश्चिम एवं पश्चिम सीमा पर पाई जाती हैं। जिसे Fig. 2 में प्रदर्शित किया है। इन मृदाओं में नारायणा दूदू (0-2 प्रतिशत ढलाव) वर्ग की मृदाएँ हैं, जो अल्प से गहरी, मध्यम गठन युक्त, अवरुद्ध जल निकास वाली, अल्प से अत्यधिक चूनेदार तथा साधारण से अधिक क्षारीय व लवणीय युक्त हैं। यह मृदाएं अल्प से काफी अधिक जल से अपरिदत हैं। यह मृदाएँ अधिकतर चारागाह के ही काम में ली जाती हैं। अच्छी वर्षा के सालों में बाजरा, ज्वार, ग्वार, तिल आदि खरीफ की फसल बोई जाती है। इस मृदा में क्षारीय एवं लवणयुता मुख्य समस्याएँ हैं। भूजल कम गहराई पर मिलता है किंतु जल की मात्रा कम एवं समस्याग्रस्त है।

Periodic Research

मृदा प्रबन्ध इकाई— VI

इस प्रबन्ध इकाई का क्षेत्रफल कुल भौगोलिक क्षेत्र का 8.58 प्रतिशत है जो अध्ययन क्षेत्र के उत्तरी-पश्चिमी मध्य, मध्य-उत्तरी एवं मध्य-दक्षिण सीमा पर फैली हुई है जो Fig. 2 में प्रदर्शित किया है। यह मृदा अत्यधिक गहरी, मध्यम गठन युक्त तथा चूनेदार है। इनमें चूने के ककड़ मृदा के साथ मिले हुए हैं। अतः यह मृदा अत्यधिक अवनालिका एवं विरदित भूमि हैं जो कृषि योग्य नहीं है क्योंकि मुख्य समस्या अधिक से अत्यधिक जल भू-क्षरण है। इन मृदाओं पर 95 प्रतिशत अनियंत्रित चराई की जाती है और फसल प्रायः खरीफ की ही उगाई जाती है। भूजल की गहराई 3-5 मीटर पाई जाती है किंतु कटी-फटी अवनालिका युक्त भूमि के कारण भूजल का उपयोग नहीं किया जा सकता।

मृदा प्रबन्ध इकाई— VII

इस प्रबन्ध इकाई का क्षेत्रफल 5.92 प्रतिशत कुल भौगोलिक क्षेत्र का हिस्सा है जो अध्ययन क्षेत्र के मध्य, उत्तरी-मध्य, उत्तरी-मध्य सीमा एवं पूर्वी सीमा पर पाई जाती है। जो Fig. 2 में प्रदर्शित किया है। यह मृदा पहाड़ी एवं चट्टानी प्रकार की है जो अरावली एवं देहली निकाय की पर्वत श्रेणियों का हिस्सा है। इस मृदा प्रबन्ध इकाई के पूरे क्षेत्र में खुला चारागाह एवं चुनाई के पत्थरों तथा खनिजों की खुदाई की जाती है। भूजल का अभाव होता है क्योंकि चट्टानी भू-गर्भिक स्थिति तथा सतही जल का तीव्र ढाल के साथ बह जाना प्रमुख कारण हैं। यह मृदाएँ अत्यधिक समस्याग्रस्त एवं अकृष्य हैं जिसका उच्चावच अधिक है।

इस प्रकार जिलों में मृदा प्रबन्ध इकाई के एक से पाँच तक की इकाइयाँ कृषि एवं चारागाह के उपयुक्त हैं जबकि शेष दो अन्तिम इकाइयाँ कृषि योग्य नहीं हैं। ये इकाइयाँ चारागाह, पुनः निर्माण जल संभरण प्रबन्ध, वन विभाग तथा वन्य जीवन के काबिल हैं। जिलों में कृष्य मृदाओं का मृदा प्रबन्ध शुष्क खेती तथा सिंचित खेती दोनों के तहत वर्णित किया गया है तथा विभिन्न प्राकृतिक संसाधनों को दृष्टिगत कर प्रत्येक मृदा प्रबन्ध इकाइयों के लिए अनुशंसित सुझाव भी दिए गए हैं जिससे प्रत्येक मृदा प्रबन्ध वर्ग की क्षमताओं का पूर्ण दोहन हो सके तथा जिले का पूरुरूपेण विकास हो सके।

निष्कर्ष

मृदा प्रबन्ध इकाई की प्रथम इकाई 41.44 प्रतिशत क्षेत्रफल में पाई जाती है सर्वाधिक क्षेत्रफल पर फैली हुई है तथा रेतीले टीले चौमूँ सहवर्ग का मृदा वर्गीकरण जो मृदा प्रबन्ध इकाई IV है वह 7.70 प्रतिशत पर अध्ययन क्षेत्र में फैली हुई है। जो कृषि कार्यों के लिए अच्छी है। अध्ययन क्षेत्र में मृदा प्रबन्ध इकाई III एवं मृदा वर्गीकरण चन्द्रारण पड़ासोली सहवर्ग का क्षेत्रफल 2.07 प्रतिशत है जो सबसे कम क्षेत्रफल पर फैली हुआ है। इस प्रकार मृदा प्रबन्ध इकाई की I से V इकाइयाँ 84.66 प्रतिशत क्षेत्र पर फैली हुई है जो मुख्यतः कृषि कार्यों के लिए मध्यम से उत्तम स्थिति में है जबकि अंतिम दो इकाइयाँ VI व VII 15.34 प्रतिशत हिस्से पर पाई जाती है जो चारागाह एवं अकृषि योग्य है।

इस प्रकार मृदा प्रबन्ध इकाइयों को ध्यान में रखते हुए उनको क्षमता के अनुसार उन्नत कृषि की नई तकनीकों के साथ यदि मृदा परीक्षण के परिणामों के अनुसार फसलों की बुवाई की जावे तो वर्तमान प्रति इकाई उपज में वृद्धि की जा सकती है जिससे कृषकों को आर्थिक लाभ होने से उनके जीवन स्तर में सुधार होगा।

संदर्भ सूची

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वैदिक शाश्वत मूल्य परित्याग एवं दुष्प्रभाव

सारांश

सारे वि"व का गुरु कहलाने वाला भारत आज अपने शा"वत मूल्यों (नैतिक मूल्यों) के पतन से चारित्रिक पतन की ओर अग्रसर है। चाहे राष्ट्रीय चरित्र की, राजनैतिक चरित्र की या व्यक्तिगत चरित्र की बात हो, वैदिक मूल्यों के विस्मरण का दुष्प्रभाव सर्वत्र परिलक्षित हो रहा है। जो दे"ा अपनी प्राचीन गौरवमयी वैदिक संस्कृति व सभ्यता के कारण सम्पूर्ण संसार में वि"वगुरु की उपाधि से सु"ोभित था तथा जिन शा"वत मूल्यों, आदर्शों व सिद्धान्तों के परिपालन से भारत की वि"व में जो पहचान थी आज वे मूल्य लुप्त होते नजर आ रहे हैं। केवल मात्र मूल्यों के अव"ोष दृष्टिगोचर होते हैं। भारतीय वैदिक संस्कृति को मानवीय शा"वत मूल्यों की जननी कहा जाये तो कोई अति"योक्ति नहीं होगी लेकिन विगत कुछ वर्षों से इन मूल्यों में जो पतन दिखाई दे रहा है इसक लिये पा"चात्य संस्कृति का अन्धानुकरण, संयुक्त परिवार प्रणाली का विघटन, िक्षा में वैदिक मूल्यों की उपेक्षा आदि कारण उत्तरदायी हैं। वर्तमान में आव"यकता इस बात की है कि वर्षों से विकृत हुई मानसिकता के परिवर्तन तथा गलत मान्यताओं व अवधारणाओं के बदलने को है। मूल्यपरक िक्षा तथा सद्चिंतन से ही जागृति व क्रान्ति उत्पन्न की जा सकती है। पुनः इस भारत भू पर वैदिक शा"वत मूल्यों को प्रतिष्ठित कर, दे"ा के खोये हुये गौरव और गरिमा को प्राप्त करने के लिये वेद के आदे"ा व संदे"ा को चरितार्थ करें "मनुर्भव" "कृण्वन्तोवि"वमार्थम्" अर्थात् मनन"ील व श्रेष्ठ मानव बनकर सभी को श्रेष्ठ बनायें तभी दे"ा समृद्ध बन सकता है तथा स्वर्णिम अतीत की उपस्थिति अब भी हो सकती है।

सत्यवती

व्याख्याता —संस्कृत
माँ जालपा देवी राजकीय
महाविद्यालय तारानगर (चूरु)

मुख्य शब्द : शाश्वत मूल्य, भारतीय संस्कृति, वेद विद्या

प्रस्तावना

वेद भारतीय संस्कृति की आत्मा हैं। ये मानव जाति के लिये प्रकाश स्तम्भ हैं। विश्व को संस्कृति का ज्ञान देने का श्रेय वेदों को जाता है। वेद ही विश्व शान्ति, विश्व बन्धुत्व और विश्व कल्याण के प्रथम उद्घोषक हैं। वेद का ही उद्घोष है " मनुर्भव जनया दैव्यं जनम् " अर्थात् मनुष्य बन और देवों को उत्पन्न कर अर्थात् हे प्राणी तू मानव बन। वेद तथाकथित धर्म, लिंग, जाति, मत, पन्थ और सम्प्रदाय आदि से दूर सर्व प्राणिमात्र की कल्याण की कामना करते हैं। वेदों में ज्ञान-विज्ञान की सभी विचार धाराओं का सूत्र रूप में उल्लेख किया गया है अतः वेद ज्ञान के अक्षय भण्डार हैं। ये भारतीय साहित्य के ही नहीं अपितु विश्व साहित्य के प्राचीनतम ग्रन्थ हैं। वेद हमारी संस्कृति और दर्शन के मूल स्रोत हैं तथा अज्ञान अंधकार में पड़े हुए मनुष्यों को प्रकाश की ओर ले जाने वाले ज्ञान के दीपक हैं। वेदों में निहित शाश्वत मूल्य मानव के पथ प्रदर्शक हैं। मानव के कर्तव्य पर प्रकाश डालते हुए ऋग्वेद का ऋषि कहता है " पुमांसं परिपात विश्वतः " ¹ अर्थात् मनुष्य परस्पर सभी की सभी प्रकार से रक्षा करें। सम्पूर्ण मानव जाति की रक्षा की बात मनुष्य से इतर प्राणि नहीं सोच सकता। हित की बुद्धि केवल और केवल मनुष्य के पास है जहां भी जीवन के मूल में शाश्वत मूल्य या वैदिक सिद्धान्त होंगे और जीवन वैदिक मूल्यों से नियन्त्रित होगा वहां पर चारों ओर मानवता, मनुष्यता और परस्पर सौहार्द का वातावरण होगा। मानवता ही मानव का धर्म है जिसमें छोटा-बड़ा, ऊंच-नीच का भाव लेश मात्र भी न हो और प्रत्येक प्राणी परस्पर उन्नति चाहता हो। ऋग्वेद में वर्णन प्राप्त होता है कि " मनुष्यों में कोई बड़ा नहीं कोई छोटा नहीं सभी समान हैं तथा सभी मिलकर ऐश्वर्य प्राप्ति के लिये आगे बढ़ें और उन्नति करें " ² परन्तु विडम्बना यह है कि आज मानव अनेक दुर्गुणों व दुर्व्यसनों को अपनाकर मानव के स्थान पर दानव का रूप ग्रहण कर रहा है। मानव ने ही मानव के बीच में धर्म, लिंग, जाति, वर्ग और धन के बल पर अनेक दीवारें खड़ी कर दी हैं। वर्तमान में चारों ओर भ्रष्टाचार, हिंसा, लूटपाट, बलात्कार, अराजकता तथा आतंक का ताण्डव हो रहा है। कोई ऐसा मार्ग दिखाई नहीं दे रहा जिस पर चल कर भय, भूख और भ्रष्टाचार से मुक्त हो सकें। वेदों के शाश्वत मूल्य ही हमारा पथ प्रशस्त करते हुए दिखाई देते हैं। ऋग्वेद में समस्त प्राणि मात्र के कल्याण की कामना करते हुए मानवों से आह्वान किया है कि " हम प्रतिदिन कल्याण मार्ग का अनुसरण करें जैसे सूर्य और चन्द्रमा बिना किसी विश्राम के जगत् का

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कल्याण करते हैं।³ परन्तु जब-जब वैदिक मूल्यों में अज्ञान और प्रमाद ने स्थान बना लिया तब से अनैतिकता, अनाचार, बेईमानी, रिश्वतखोरी, कत्तव्यहीनता तथा अज्ञान का आवरण छा जाने से पतन दर पतन होता गया। वेदों की आज्ञाओं का उल्लंघन करने से समाज में नैतिक व्यवस्था खण्डित होती गई। वर्तमान में भ्रष्टाचार, आतंकवाद, हिंसा मूल्यों के पतन का ही दुष्परिणाम है। मनुष्य येन केन प्रकारेण अनुचित तरीके अपनाकर धन बटोरना चाहता है।

इसी के कारण भ्रष्टाचार की समस्या बेहद विकट हुई है। भ्रष्टाचार ने देश को खोखला बना दिया है। जब लोगों का लोकतान्त्रिक प्रक्रिया पर विश्वास नहीं रहता, समता पर विश्वास नहीं होता,

मानव मर्यादा पर विश्वास नहीं होता तब भ्रष्टाचार पनपता है। यही भ्रष्टाचार की बुनियाद है। आज हमने भ्रष्टाचार को शिष्टाचार का अमली जामा पहनाकर भ्रष्टाचार का भी दर्शन बना बैठे। रिश्वत के बदले में होने वाले कार्य को सिस्टम का हिस्सा मान बैठे। इसके पीछे हमारी मान्यताएं एवं अवधारणाएं भी ऐसी ही बन चुकी हैं जो भ्रष्टाचार के दर्शन को इंगित करती हैं। आज हम दूसरे की वस्तु या धन पर गिद्ध की तरह दृष्टि लगाये बैठे हैं। जबकी यजुर्वेद के चालीसवें अध्याय के प्रथम मन्त्र में मनुष्य को चेताया गया है कि “हे मानव तू किसी के धन का तनिक भी लालच मत कर, उस ईश्वर प्रदत्त धन का त्याग भाव से उपभोग कर”⁴ अर्थात् जो धन तूने पुरुषार्थ से अर्जित किया है उसमें से भी यथा शक्ति दान कर। भारतीय संस्कृति त्याग की संस्कृति रही है लूट की नहीं। इतिहास में त्याग के बहुत उदाहरण दृष्टिगोचर होते हैं। त्याग रूपी वैदिक मूल्य के विस्मरण का ही दुष्परिणाम सर्वत्र परिलक्षित हो रहा है। वैदिक शाश्वत मूल्यों का भाव ही प्रकारान्तर से योग दर्शन के आठ अंगों में परिलक्षित होता है। इन मूल्यों के अनुरूप उत्तम जीवन व्यतीत करने के जो उद्देश्य, लक्ष्य हमारे थे उनको हमारी बढ़ती परिग्रह की आकांक्षा ने (योग के प्रथम अंग) यम का पांचवा अंग (अपरिग्रह) की मूल थीम को ही मिटाने में भरपूर सहयोग किया है। जब समाज आवश्यकता पर आधारित न हो कर लोभ पर आधारित होता है तब कठिनाई यह होती है कि आवश्यकता का तो अंत हो जाता है परन्तु लोभ का कभी अन्त नहीं होता। अपरिग्रह तथा त्याग का जीवन में पालन न होने से ही भ्रष्टाचार रूपी समस्या ने अपनी जड़ें जमा ली हैं। कठोर परिश्रम से धन कमाना कष्ट साध्य दिखाई देता है। वेद में मानव को बार-बार सावधान किया गया है कि “जो व्यक्ति अकेला (स्वयं) खाता है या भोग करता है वह अन्न न खाकर केवल मात्र पाप को खाता है।”⁵ वेद की इसी ऋचा का भाव भगवद् गीता के तृतीय अध्याय में प्राप्त होता है कि “जो पापी स्वयं के लिये पकाते हैं वे वस्तुतः पाप ही खाते हैं।”⁶ जब समाज में निर्दोष व्यक्तियों के अधिकार छीने जाते हैं जंगलराज की भांति बलवान निर्बल को सताता है तब समाज में हिंसा तथा अशान्ति को बढ़ावा मिलता है। हिंसा व अशान्ति के कारण सारा विश्व त्राहि-त्राहि कर रहा है। सारा संसार अशान्ति की

ज्वाला की लपटों में झुलस रहा है। कहीं कहीं तो इस हिंसा और अशान्ति की अग्नि ने दावानल का रूप धारण किया हुआ है जिसमें मनुष्यों की संवेदनाएं जलकर राख हो रहा हैं। अशान्ति होने पर समाज में प्रसन्नता का वातावरण नहीं रहता। अशान्ति व हिंसा के कारण भिन्न-भिन्न हो सकते हैं परन्तु इतना निश्चित है कि इस समस्या ने मानव जगत् को संतुलित कर रखा है। वेद हिंसा का निषेध करता हुआ कहता है “हे मानव तू मनुष्य और इतर प्राणियों की हिंसा मत कर।”⁷

अथर्ववेद में तो परस्पर सद्भाव बनाये रखने की उद्घोषणा सुनाई देती है “भगवन् आपकी महती कृपा से मैं सभी मानवों के प्रति चाहे मैं उनसे परिचित हूं अथवा नहीं सद्भाव रखूं।”⁸ इतना ही नहीं वेद का मानवीय चिन्तन प्रशंसनीय एवं नितान्त ग्राह्य है। ऋग्वेद का ऋषि कहता है कि “दुष्ट दलन में (दुष्टों के विनाश में) अपने मन को भद्र ही रखना, मन में कभी किसी के प्रति कोई दुर्भाव न आने पाये।”⁹ वेदों की कितनी उदात्त भावना और संदेश हैं कि हम व्यक्ति से द्वेष न करके उसकी बुराई से द्वेष करें। वेदों में ही विश्व में शांति स्थापित करने और परस्पर भ्रातृत्व भावना बढ़ाने की

प्रेरणा प्राप्त होती है। वेदों की गोद में पली भारतीय संस्कृति सदा से ही विश्व शान्ति की उपासक रही है। वेद में वर्णन प्राप्त होता है “भाई-भाई से द्वेष न करे, बहन-बहन से द्वेष न करे।”¹⁰ ऋग्वेद का संगठन सूक्त जो एकता सूक्त के नाम से भी प्रसिद्ध है में वर्णन प्राप्त होता है सभी के मन एक हों, विचार एक हों, सभा, समिति एक हों।¹¹ अथर्ववेद में वर्णन प्राप्त होता है कि “हे मनुष्यों! तुम सहृदय और अनुकूल मन वाले बनो, परस्पर द्वेष न करो, एक दूसरे से ऐसी प्रीति रखो जैसे गौ अपने नवजात बछड़े के प्रति रखती है।”¹² वेदों का संदेश है कि व्यक्तियों में, समाज में और राष्ट्रों के मध्य सर्वत्र भ्रातृभाव, प्रेमभाव विकसित हो। यजुर्वेद के एक मन्त्र में कहा गया है कि “सभी व्यक्ति मुझे मित्र की दृष्टि से देखें, मैं भी सभी व्यक्तियों को मित्र की दृष्टि से देखूं और समाज में हम सभी परस्पर मित्र की दृष्टि से देखें।”¹³ इससे भी उदात्त भाव यजुर्वेद के चालीसवें अध्याय के मन्त्र संख्या 6 व 7 में प्राप्त होता है। “सभी प्राणियों को अपनी आत्मा में देखता हूं और सबकी आत्मा में अपने को देखता हूं ऐसी अनुपम अवस्था के प्राप्त होने पर कैसा शोक (दुःख) और कैसा मोह?”¹⁴

अथर्ववेद में वर्णन प्राप्त होता है कि यदि शाश्वत मूल्यों के मानने वाले धर्मात्मा पुरुषों के सत्परामर्श नहीं सुने जाते “और जहां वेद विद्या के जानने वाले नीति कुशल वेद वेत्ताओं का निरादर होता है वह राज्य उसी प्रकार नष्ट हो जाता है जिस प्रकार जल में टूटी नाव नष्ट हो जाती है।”¹⁵ ऐसा ही भाव अथर्ववेद के 5वें काण्ड के 18वें सूक्त में प्राप्त होता है। जैसे कैंचुली से निकल सर्पिणी दुष्ट विषैली होती है ठीक वैसे अविद्या के फैलने से नष्ट हुई वेद विद्या (वैदिक मूल्यों) से सभी और विपत्ति फैलती है। आज के मानव में सहनशीलता का अभाव नजर आता है। थोड़ा सा कष्ट देखकर घबराकर धैर्य खो बैठता है। धैर्यहीन हो कर आत्म हत्या करने पर उतारू हो

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जाता है तथा अपने जीवन को कीड़े-मकोड़ों की भांति व्यर्थ में ही गंवा बैठता है। सहनशीलता रूपी (मूल्य) गुण के अभाव में तथा आज की भागमभाग व तनावपूर्ण जिन्दगी में वेद के आदेशों का उल्लंघन कर स्वल्पायु में ही मृत्यु को गले लगा रहा है। जबकी यजुर्वेद में आत्महत्या करने वाले को महापापी तथा अत्यन्त निकृष्ट योनी में गिरने वाला बताया गया है।¹⁶ वहीं वेद में शतायु (दीर्घायु) होने के प्रमाण प्राप्त होते हैं। यजुर्वेद के मन्त्र में ही वर्णन प्राप्त होता है कि “हे मानव ! तेरे नेत्र, श्रोत्र और वाणी में इतना बल हो कि सौ वर्षों तक सुख पूर्वक जीवन व्यतीत कर सकें। इतना ही नहीं उससे भी अधिक लम्बी आयु वाला बने।”¹⁷ लम्बी आयु तथा बलिष्ठ शरीर बनाने में ब्रह्मचर्य के पालन की महत्वपूर्ण भूमिका रही है। आज की अस्त-व्यस्त व असंयमित, कर्तव्यविहीन जीवन शैली ने भी व्यक्ति को सक्षम बनाने की अपेक्षा अक्षम ही बना दिया। कहां तो ब्रह्ममूहूर्त में ऊठ कर जीवन जीने का विधान प्राप्त होता है और ब्रह्मचर्य के पालन की अपार महिमा बताई गई है। अथर्ववेद के ब्रह्मचर्य सूक्त में इसी का विशद वर्णन प्राप्त होता है। अथर्ववेद के एक मन्त्र में स्पष्ट कहा गया है कि “ब्रह्मचर्य रूपी तप के द्वारा विद्वान् देवगण मृत्यु पर भी विजय प्राप्त कर लेते हैं।”¹⁸ चारों वेदों में मानव को स्वस्थ तथा निरोग रहने की प्रेरणा बार-बार दी गई है क्योंकि वेद मानव हित की विद्याओं तथा विज्ञानों के भण्डार हैं। वेदों में जहां भौतिक एवं लौकिक विषयों की विवेचना मिलती है वहां दार्शनिक तथा आध्यात्मिक प्रश्नों का समाधान भी मिलता है तथा समाज को उन्नत, सशक्त व समर्थ बनाने के सूत्र भी प्राप्त होते हैं।

ईश्वर ने मनुष्य की रचना इस प्रकार की है वह अकेला नहीं रह सकता है अतः उसे समूह व समाज की नितान्त आवश्यकता है। ऐसे व्यवस्थित समाज की जिसमें भय, भूख, भ्रष्टाचार और हिंसा आदि का नामोनिशान न हो। यम नियमों का पालन हो। ऐसे सुव्यवस्थित समाज की संकल्पना पुनः वैदिक शाश्वत मूल्यों को जीवन में आत्मसात् करने से सम्भव हो सकती है। वेद की इन शिक्षाओं व आज्ञाओं को मानव समाज अपने जीवन में चरितार्थ करलें तो सभी समस्याओं का समाधान सम्भव है। मनुष्य के विनाश का मार्ग समाप्त होकर नवीन विश्व की रचना का मार्ग प्रपस्त हो सकता है। तुच्छ स्वार्थ, संकीर्णता, अवसरवादिता और आपसी मतभेद कोई ऐसी समस्या नहीं है जिन्हें हम दूर नहीं कर सकते। सिद्धांत या मूल्य स्वयं में बहुत अच्छे और उपयोगी होते हैं परन्तु जब तक जीवन के प्रत्येक व्यवहार में क्रियात्मक रूप में अवतरित न हो जायें तब तक उनकी उपादेयता शून्य ही होती है। वर्तमान में आवश्यकता इस बात की है कि वैदिक शाश्वत मूल्यों द्वारा प्रत्येक व्यक्ति को जागरूक किया जाये। सद्विचारों के माध्यम से ही विकृत हई मानसिकता को परिवर्तित किया जाये। क्योंकि विचारों से ही क्रान्ति आती है, विचारों से ही जागृति आती है। देश को स्वतंत्र करवाने के लिये प्रत्येक गांव-गांव व जन-जन में प्रसुप्त राष्ट्रीयता को जगाने के लिये विचार ही दिये गये थे। तलवार, लाठी आदि अस्त्र-शस्त्र नहीं दिये गये थे। उस वैचारिक क्रान्ति की वर्तमान में नितान्त आवश्यकता है। कब तक हम मूल्यों को बेचते रहेंगे तथा कब तक जड़ भौतिक सुविधायें चेतन का पथ भ्रष्ट करती रहेंगी। फिर से इस धरा पर शाश्वत मूल्यों को प्रतिष्ठित कर देश के खोये हुये गौरव और गरिमा को प्राप्त करने के लिये वेद के आदेश को, संदेश को चरितार्थ करें “ कृण्वन्तो विश्वमार्यम् ”¹⁹ सभी को श्रेष्ठ बनायें तभी वैदिक राष्ट्रीय प्रार्थना “आ ब्रह्मन् ब्राह्मणो ब्रह्मवर्चसी जायताम् योगक्षेमो नः कल्पताम् का संकल्प पूरा कर सकते हैं।”²⁰ यजुर्वेद के इस मन्त्र में राष्ट्र की सुख समृद्धि के लिए इतना व्यापक व सारपूर्ण चिन्तन दिया है कि संसार के

प्रत्येक भू-भाग में रहने वाले प्राणि इसके पालन से सब प्रकार से सुखी हो सकते हैं। वेदविद्या (वैदिक मूल्य) सर्वथा कल्याणि होने से सब बुराईयों को दूर कर सकते हैं तथा स्वर्णिम अतीत की उपस्थिति अब भी हो सकती है।

1. ऋग्वेद 6.75.14
2. अज्येष्ठासो अकनिष्ठास एते सम् भ्रातरो वावृधुः सौभगाय। ऋग्वेद 5.60.5
3. स्वस्ति पन्थामनुचरेम सूर्याचन्द्रमसाविव। ऋ. 5.51.15
4. तेन त्यक्तेन भुञ्जीथा मा गृधः कस्यस्विद्धनम्। यजु0 40-1
5. नार्यमणं पुष्यति नो सरवायं केवलाघो भवति केवलादी ऋग्वेद-10.117.6
6. भुञ्जते ते त्वघं पापा ये पचन्त्यात्मकारणात् श्रीमद्भगवद्गीता 3.13
7. मा हिंसीः पुरुषं जगत् यजुर्वेद 16.3
8. याश्च पञ्चामि याष्व न तेषु मा सुमतिं कृधि। अथर्ववेद 17.1. 17
9. भद्रं मनः कृणुष्व वृत्रतूये। ऋग्वेद 2.26.2
10. मा भ्राता भ्रातरं द्विषन् मा स्वसारमुत् स्वसा। अथर्ववेद 3.30. 3
11. समानो मन्त्रः समितिः समानी समानं मनः सह चित्तमेषाम्। ऋग्वेद 10.191.3
12. सहृदयं सामनस्यमविद्वेषं कृणोमिव। अन्यो अन्यमभिहर्षन्त वत्सं जातमिवाध्या।। अथर्ववेद 3.30.1
13. दूते दू ह मा मित्रस्य मा चक्षुषा सर्वाणि भूतानि समीक्ष्यन्ताम्। मित्रस्याहं चक्षुषा सर्वाणि भूतानि समीक्षे। मित्रस्य चक्षुषा समीक्ष्यामहे।। यजुर्वेद 36.18
14. (क) यस्तु सर्वाणि भूतान्यात्मन्येवानुपश्यति। सर्वभूतेषु चात्मानं ततो न विजुगुप्सते।। यजुर्वेद 40.6
(ख) यस्मिन् सर्वाणि भूतान्यात्मैवाभूद् विजानतः। तत्र को मोहः कः शोक एकत्वमनुपश्यतः।। यजुर्वेद 40.7
15. तद् वै राष्ट्र मा स्रवति नावं भिन्नामिवोदकम्। ब्रह्माणं यत्र हिंसन्ति तद् राष्ट्रं हन्ति दूच्छुना।। अथर्ववेद 5.19.8
16. असुर्या नाम ते लोका अन्धेन तमसाऽऽवृताः। तांस्ते प्रेत्याभिगच्छन्ति ये के चात्महो जनाः।। यजुर्वेद 40.3
17. पश्येमशरदः शतज्जीवेमशरदः शतश्रृणुयाम शरदः शतम्ब्रवाम शरदः शतमदीनाः स्याम शरदः शतम्भूयश्च शरदः शतात्।। यजुर्वेद 36.24
18. ब्रह्मचर्येण तपसा देवा मृत्युमुपाघ्नतः अथर्ववेद 11.5.19
19. ऋग्वेद 9.63.5

20. यजुर्वेद 22.22

संदर्भ पुस्तकें

1. ऋग्वेद भाष्य स्वामी दयानन्द प्रकाशक - परोपकारिणी सभा, सरस्वती अजमेर।
2. यजुर्वेद भाष्य स्वामी दयानन्द प्रकाशक - परोपकारिणी सभा, सरस्वती अजमेर।
3. अथर्ववेद भाष्य क्षेमकरणदास प्रकाशक - सार्वदेशिक आर्य प्रतिनिधि सभा, नई दिल्ली
4. योगदर्शन भाष्य आचार्य सत्यप्रिय प्रकाशक - वैदिक आश्रम तिजारा, अलवर

Periodic Research

रीवा नगर की आन्तरिक व्यावसायिक संरचना एवं विपणन आकारिकी : एक भौगोलिक अध्ययन

सारांश

प्रस्तुत अध्ययन "रीवा नगर की आन्तरिक व्यावसायिक संरचना पर आधारित है। जिसका मूल कार्य विपणन सुविधायें प्रदान करने तक दृष्टिगोचर होता है, परन्तु परोक्ष रूप से ये सामाजिक व सांस्कृतिक विकास सूचनाओं के प्रसार तथा नवाचार के भी केन्द्र होते हैं। आन्तरिक व्यावसायिक संरचना का तात्पर्य उपलब्ध वाणिज्यिक क्रियाकलापों के वैविध्य एवं स्वरूप तथा आकार से है। रीवा नगर क्षेत्र के अंतर्गत भी विपणन स्थलों जैसे उपरहटी, तरहटी, बिछिया, मलियान टोला आदि में कच्चे-पक्के मकानों में अर्थात् मिश्रित संरचना वाली दुकानें मिलती हैं। जबकि प्रकाश चौक से विभिन्न दिशाओं की ओर मार्ग के सहारे विकसित विपणन स्थलों में अधिकांशतः पक्की तथा दो मंजिली दुकानें बनी हैं। इनका कारण यहाँ निवास सघन जनसंख्या एवं उच्च सामाजिक, आर्थिक स्तर के कारण घटित हुआ है। इसके विपरीत इंजीनियरिंग कालेज, रेल्वे स्टेशन (पड़रा), नवीन बस स्टैंड, निरालानगर जैसे बाह्य विपणन स्थलों में उच्चवर्गीय जनसंख्या के संकेन्द्रण के कारण नियोजित विपणन स्थल अनेक सुविधाओं से वंचित हैं। आन्तरिक व्यावसायिक संरचना में नगर का सी.बी.डी. (कोर एरिया) प्रमुख व्यावसायिक क्षेत्र होता है जहाँ आवश्यकता की ज्यादातर वस्तुएँ उपलब्ध होती हैं। यह नगर का सुपर मार्केट भी कहलाता है। रीवा नगर में शिल्पी प्लाजा क्षेत्र नगर का कोर एरिया है। वर्तमान समय में यह नगर का सी.बी.डी. माना जाता है।

इन्द्रेश द्विवेदी

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मुख्य शब्द : विपणन स्थल, सुपर मार्केट, सी.बी.डी., व्यापारिक प्रतिष्ठान, पदानुक्रम।

प्रस्तावना

बाँधवगढ़ नरेश की राजधानी के नाम से प्रसिद्ध रीवा नगर ऐतिहासिक रूप से व्यवसाय का भी केन्द्र रहा है। चमड़ा उद्योग, लकड़ी का उद्योग, धातु के बर्तन बनाना, बीड़ी उद्योग, मिठाई बनाना आदि यहाँ के परम्परागत व्यवसाय रहे हैं, जो इस नगर की अर्थव्यवस्था को प्रभावित किये हैं। नगर की स्थिति गंगा-यमुना के उत्तरी मैदान एवं दकन प्रायद्वीप के जोड़ने में प्रवेश द्वार जैसी है। रीवा नगर विश्व के मानचित्र पर $24^{\circ}32'$ उत्तरी अक्षांश एवं $81^{\circ}15'$ पूर्वी देशान्तर के मध्य स्थित है तथा समुद्र तल से ऊँचाई 316 मीटर है। इसकी नगरीय सीमा के 52.57 वर्ग किलोमीटर है, जिसमें से वर्तमान में केवल 438.6 वर्ग किलोमीटर क्षेत्र ही विकसित है तथा नगर की कुल जनसंख्या 183232 है। नगर का विस्तार उत्तर में विश्वविद्यालय बाईपास से दक्षिण में कुतुलिया तथा पूर्व में जिउला से पश्चिम में चोरहटा बाईपास तक विस्तृत है।

शोध विधि

प्रस्तुत शोध कार्य में मुख्य रूप से स्थल परीक्षण पर आधारित प्राथमिक आंकड़ों का प्रयोग किया गया है। आवश्यक जानकारियों लिए द्वितीयक आंकड़ों का भी प्रयोग किया गया है जिसके आधार पर शोध पत्र का विश्लेषण किया गया है।

विपणन आकारिकी

रीवा नगर के अन्तःनगरीय विपणन स्थलों के वितरण प्रतिरूप और उनके पदानुक्रम वर्गों का अध्ययन करने के पश्चात् यह स्पष्ट होता है कि यहाँ पदानुक्रम और क्षेत्रीय संलग्नता के आधार पर विपणन स्थलों के तीन वर्ग बनते हैं। उच्चकोटि के विपणन स्थलों का संकेन्द्रित प्रतिरूप शिल्पी प्लाजा क्षेत्र में है, यहाँ शिल्पी प्लाजा से विभिन्न दिशाओं की ओर जाने वाली सड़कों के किनारे रेखीय प्रतिरूप में विपणन स्थलों का विकास हुआ है। ठीक सड़क के अग्र भाग पर दुकानें और पिछले भागों में आवासीय क्षेत्र हैं। यहाँ दुकानों की बहुत अधिकता है। मुख्य सड़क के अगल-बगल द्वितीय श्रेणी के मार्गों तथा गलियों में भी दुकानें मिलती हैं। ऐसी स्थिति में आवासीय क्षेत्र दूसरी, तीसरी मंजिल पर

बी.के.शर्मा

भूगोल विभाग,
शास.उ.अ.रम्मत सिंह,
स्नातकोत्तर महाविद्यालय,
रीवा (म.प्र.),

Periodic Research

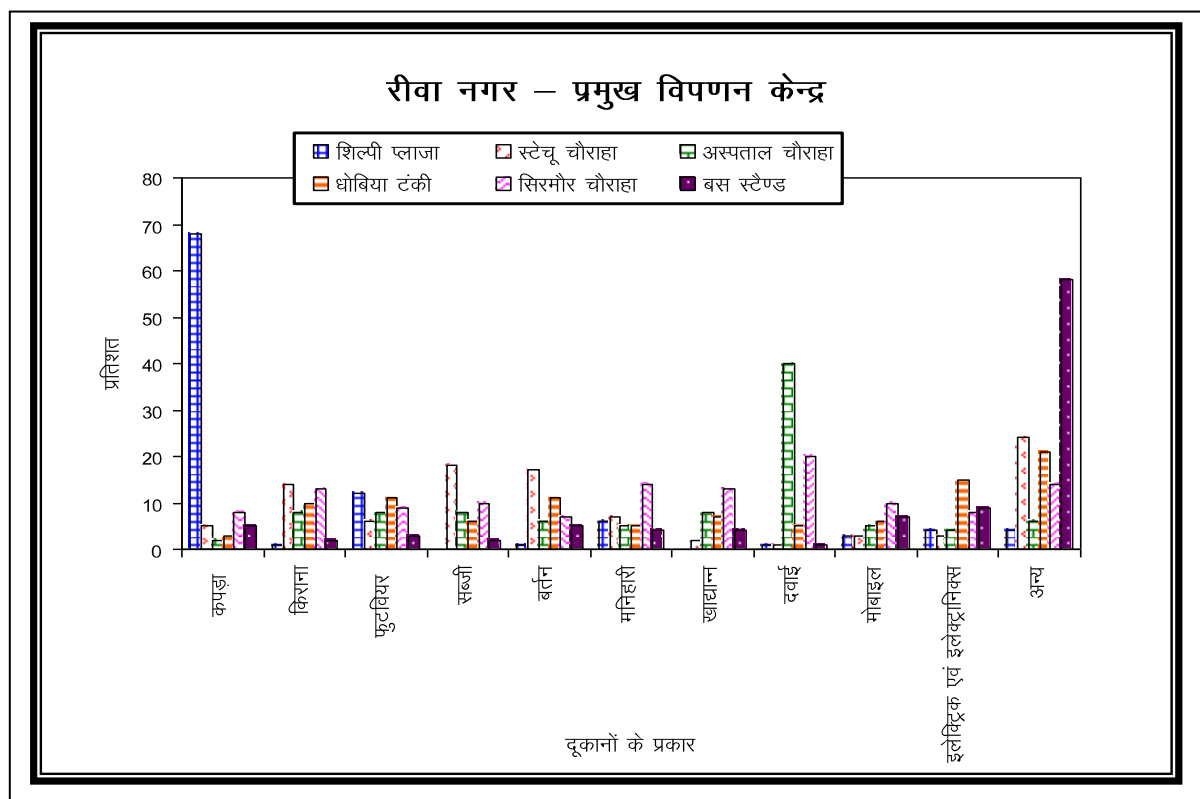
पाया जाता है। शिल्पी प्लाजा के विपणन स्थलों में दुकानों की संख्या और उनके प्रकार औसत से अधिक हैं। इसलिये इनकी आन्तरिक व्यावसायिक संरचना बाहरी विपणन स्थलों से बिल्कुल अलग है। इसके ठीक विपरीत द्वितीय कोटि के पदानुक्रम वाले विपणन स्थल सिरमौर चौराहा के चतुर्दिक, अस्पताल चौराहा के चतुर्दिक एवं स्टेचू चौराहा के चतुर्दिक फैले हुए हैं। यहाँ भी सड़कों के सहारे रेखीय रूप में ही विपणन स्थलों का विकास हुआ है। शिल्पी प्लाजा की अपेक्षा यहाँ अधिक चौड़ी सड़कें हैं। उनके किनारे दुकानों के लिये विस्तृत खुला क्षेत्र मिला है, इसीलिये अधिकांश दुकानें एक मंजिली हैं और उनकी संरचना पक्की है। इसी तरह यहाँ मिलने वाले दुकानों की संख्या और प्रकार दोनों कम हैं क्योंकि स्थानीय जनसंख्या के सामाजिक-आर्थिक स्तर और विभिन्न सुविधाओं की प्रकृति के अनुसार दुकानों के कार्य और प्रकार निर्धारित हो रहे हैं। पदानुक्रम के तृतीय वर्ग के अन्तर्गत परिधीय विपणन स्थल हैं, जो सड़कों के किनारे विशेष रूप से क्रासिंग पर उभड़ते बिन्दु के रूप में विकसित हो रहे हैं। इनको दूसरी विशेषता विभिन्न सुविधाओं के पास स्थित होने के कारण दुकानों के प्रकार सुविधाओं की प्रकृति के अनुसार है। यहाँ भी इनकी स्थलीय संरचना खुला क्षेत्र अधिक होने के कारण बड़े आकार वाली दुकानों से प्रभावित है। एक अन्य उल्लेखनीय तथ्य यह है कि अधिकांश दुकानें छोटे आकार में या एक कमरे में हैं क्योंकि यहाँ व्यापारी वर्ग भी निम्न स्तरीय है और वहाँ सम्पादित किये जाने वाले कार्य भी स्थानीय आवश्यकताओं के अनुसार हैं। रीवा नगर के प्रमुख विपणन स्थलों की जानकारी सारणी द्वारा व्यक्त की गई है—

रीवा नगर – प्रमुख विपणन केन्द्र में दुकानों का प्रतिशत

क्र.	दुकानों के प्रकार	प्रतिशत				
		शिल्पी प्लाजा	स्टेचू चौराहा	अस्पताल चौराहा	धोबिया टंकी चौराहा	सिरमौर बस स्टैण्ड
1.	कपड़ा	68	5	2	3	8
2.	किराना	1	14	8	10	13
3.	फुटवियर	12	6	8	11	9
4.	सब्जी	00	18	8	6	10
5.	बर्तन	1	17	6	11	7
6.	मनिहारी	6	7	5	5	14
7.	खाद्यान्न	00	2	8	7	13
8.	दवाई	1	1	40	05	20
9.	मोबाइल	3	3	5	6	10
10.	इलेक्ट्रिक एवं इलेक्ट्रॉनिक्स	4	3	4	15	8
1.	अन्य	4	24	6	21	14
	योग	100	100	100	100	100

स्रोत – क्षेत्र सर्वेक्षण 2011-12

उक्त सारणी से स्पष्ट होता है कि रीवा नगर में शिल्पी प्लाजा विपणन क्षेत्र की तरह सबसे ज्यादा दुकानें होजरी एवं कपड़ा की हैं, जिनका प्रतिशत 68 है। जिससे स्पष्ट होता है कि शिल्पी प्लाजा बाजार बनने के पहले भी यह क्षेत्र कपड़ा एवं होजरी का ही बाजार रहा है। चूँकि सुनियोजित नगरीय विकास में किसी भी वाणिज्यिक क्षेत्र में एक ही वस्तु की प्रधानता रहती है। इस व्यापारिक क्षेत्र में सबसे ज्यादा कपड़े की दुकानें हैं जिसका कारण यह पूर्व से ही कपड़ा बाजार केन्द्र रहा है जिसमें दीप काम्प्लेक्स, मार्तण्ड काम्प्लेक्स, कलामंदिर रोड आदि अच्छे कपड़ा व्यापार केन्द्र रहे हैं तथा बड़ी-बड़ी साज-सज्जा से युक्त दुकानें रही हैं जिनमें 98 प्रतिशत सिंधी व्यापारियों का आधिपत्य रहा है। वर्तमान में भी इस वाणिज्यिक क्षेत्र में 90 प्रतिशत सिंधी ही व्यापार कर रहे हैं प्रकार चाहे जो हो। सबसे कम इस क्षेत्र के मेडिकल स्टोर्स की संख्या जो कुल दुकानों का 1 प्रतिशत है, जिसका प्रमुख कारण पूर्व में नजदीक अस्पताल चौराहा है। इसी प्रकार स्टेचू चौराहा को देखा जाय तो यहाँ सबसे ज्यादा सब्जी की दुकानें 18 प्रतिशत हैं जबकि अन्य समस्त वस्तुओं को जोड़कर 24 प्रतिशत दुकानें होती हैं। यहाँ से फोर्ट रोड तरफ जाने पर बर्तन बाजार पड़ता है जो यहाँ का 24 प्रतिशत बाजार अधिग्रहीत करता है। यहाँ किराना व्यापार भी रीवा नगर में सबसे ज्यादा संचालित जिसमें थोक एवं फटकर व्यापारी सम्मिलित हैं जिसमें कुल बाजार का 14 प्रतिशत व्यापार होता है। अस्पताल चौराहे में देखा जाय तो सबसे ज्यादा दवा के दुकानों का प्रतिशत 40 है जो कि लाजमी भी है क्योंकि वहीं पर संभाग का सबसे प्रमुख अस्पताल गाँधी मेमोरियल, संजयगाँधी एवं मेडिकल कालज के अलावा निजी चिकित्सालय भी संचालित हैं। सिरमौर चौराहे में भी सबसे ज्यादा दवा की 20 प्रतिशत दुकानें हैं। इसके अलावा मनिहारी की 14 प्रतिशत तथा खाद्यान्न एवं किराना



की 13 प्रतिशत दूकाने हैं। इसी प्रकार बस स्टैण्ड भी रीवा नगर का प्रमुख व्यापारिक क्षेत्र है यहाँ जिला एवं संभाग के शहरी एवं ग्रामीण क्षेत्रों से लोगों का निरंतर आना जाना होता है जो यहाँ से वस्तुओं को क्रय कर अपने आवश्यकता की आपूर्ति करते हैं। यहाँ सबसे ज्यादा मशीनरी की एवं रिपेयरिंग की दूकाने हैं जो सारणी में अन्य के नाम से हैं। इनका प्रतिशत 58 है। इसके पश्चात यहाँ विभिन्न तरह का व्यापार होता है जिसका प्रतिशत 1-10 के बीच है।

प्रमुख विपणन स्थलों की आकारिकी :

नगर के प्रमुख विपणन स्थल एवं उनकी आकारिकी इस प्रकार है –

1. शिल्पी प्लाजा क्षेत्र :

यह विपणन क्षेत्र रीवानगर में कोर (Core) के रूप में विकसित हुआ है। वर्तमान समय में यह नगर ना सी.बी.डी. माना जाता है। नगर में सबसे ज्यादा कपड़ा, होजरी, कम्प्यूटर, मोबाइल, ए.टी.एम. मशीन, ज्वेलरी, इलेक्ट्रॉनिक्स, फुटवियर, टेलरिंग, श्रृंगार, ब्यूटी पार्लर आदि का केन्द्रीकरण यही हुआ है। पहले यह कोठी कम्पाउण्ड के नाम से जाना जाता था तथा रियासतकालीन बिल्डिंग में ज्यादातर कार्यालय स्थापित थे। वर्तमान में यह म.प्र. का सुपर मार्केट बन गया है। इसके पूर्वी एवं दक्षिणी भाग में विस्तृत बाजार क्षेत्र है परन्तु उत्तरी पश्चिमी भाग में व्यापारिक प्रतिष्ठानों की कमी है। पश्चिमी भाग में वाहन पार्किंग के लिए जगह छोड़ी गई है तथा इस 4 मंजिला इमारत की ऊपर के दो

तलों में विभिन्न सरकारी कार्यालय स्थापित हैं जिनके लिए मार्ग एवं पार्किंग स्थल बनाया गया है। इसके दक्षिणी भाग में प्रकाश चौक, उत्तरी भाग में कालेज चौक तथा दक्षिणी-पश्चिमी भाग में स्टेचू चौराहा स्थित है। पश्चिमी भाग में गंगाकछार (सिंचाई विभाग) का मुख्य कार्यालय है एवं न्यायालय तथा उसके पश्चिम में जिला एवं सत्र न्यायालय है। इसके पूर्वी भाग में आवासीय स्थित है जिसकी सघनता 700 व्यक्ति प्रति हेक्टेयर है।

आकारिकी एवं व्यावसायिक संरचना :

शिल्पी प्लाजा क्षेत्र रीवा नगर के वाणिज्यिक कार्य का हृदय स्थल है। यहाँ का सड़क मार्ग डिवाइडर बनाकर टू लेन में विभाजित किया गया है तथा दोनों ओर बड़ी-बड़ी दूकाने हैं जो आधुनिक साज-सज्जा से परिपूर्ण हैं। शिल्पी प्लाजा चौक से प्रकाश चौराहा तक दोनों ओर सिर्फ दूकानें हैं। शिल्पी प्लाजा की बिल्डिंग में अंदर भी गैलरी बनाकर दूकानें बनाई गई हैं। शोधार्थी द्वारा सम्पूर्ण बिल्डिंग का सर्वे करने से ज्ञात हुआ कि इस नगर का लगभग 10-15 प्रतिशत बाजार अकेले इस बिल्डिंग में संचालित होता है। यहीं से पूर्व की ओर जाने पर प्रियदर्शिनी सिनेमा हाल है जो वर्तमान में बंद है। इस रोड के सहारे भी दोने तरफ सिर्फ व्यापारिक प्रतिष्ठान हैं। आगे रीवा राज घराने का राजनिवास होटल है तथा सड़क के दक्षिण तरफ उत्सव राजविलास मैरिज लान है। यही सड़क आगे (पूरक की ओर) जाकर अस्पताल चौराहा से सिरमौर चौराहा वाली मेन रोड में मिल जाती है।

2. स्टेचू चौराहा :

यह शिल्पी प्लाजा क्षेत्र से दक्षिण की ओर जाने पर मिलने वाला व्यापारिक चौराहा है। यहां पर व्यापारिक

Periodic Research

प्रतिष्ठानों की बहुलता है परन्तु सघन एवं सकरा बहुत हैं। इसके चतुर्दिक सिर्फ दूकाने ही हैं। यहां भी दो मंजिला दूकाने देखने को मिलती हैं। इसके दक्षिण की ओर जाने वाले मार्ग को फोर्ट रोड के नाम से जाना जाता है जो किला तक जाता है। इस मार्ग में मुख्य रूप से सर्राफा बाजार एवं बर्तन बाजार है। इसके अलावा अन्य वस्तुओं की भी दूकाने हैं जैसे कपड़ा, होजरी, बैट, अटैची, श्रृंगार, क्राकरी, फुटवियर, जनरल स्टोर, होटल, हार्डवेयर एवं अन्य। पूर्व की ओर इस मार्ग का विस्तार अस्पताल चौराहा के निकट तक है तथा पश्चिम में जय स्तंभ चौराहा तक। इस मार्ग की सभी दूकाने सड़क मार्ग से सटी हैं कहीं भी वाहन खड़ा करने की जगह नहीं है। दूकान के सामने अगर थोड़ी जगह है तो उसमें वह अपने दूकान की वस्तुओं को दिखावा के लिए लगा देते हैं। यहां की दूकानों में ऋतुवत सामग्री बहुतायत में मिलती है जैसे बरसात के समय – पन्नी, छाता, ठंड के समय ऊलन कपड़े, गर्मी के समय शादी ब्याह के कपड़े एवं गमछा। इसके अलावा लोग ठेला और गुमटियों के सहारे ऋतुवत वस्तुओं का सड़क के किनारे व्यापार करते हैं जैसे – ईद के समय पर सेवई, गर्मी में आम, बरसात में जामुन एवं केला, बसंत में बेर, अंगूर एवं चीकू तथा अन्य।

दूकानों के प्रकार एवं संख्या :

स्टेचू चौराहा रीवा नगर के वाणिज्यिक क्षेत्र का केन्द्र है। इसके चतुर्दिक सिर्फ दूकाने ही नजर आती हैं जो बिल्कुल सड़क से सटी हुई हैं। यहां पर सबसे ज्यादा होजरी एवं रेडीमेड कपड़ों की दूकाने हैं। इसके अलावा विभिन्न तरह की दूकानें व्यावसायिक क्षेत्र के अन्तर्गत संचालित हैं।

3. अस्पताल चौराहा :

रीवा नगर के इस चौराहे का नाम यहां पर संचालित होने वाली कार्यों के आधार पर ही रखा गया है। यहां पूर्व से ही गांधी मेमोरियल अस्पताल स्थापित है जो संभाग का सबसे बड़ा अस्पताल रहा। वर्तमान में इसी से लगा हुआ संजय गांधी स्मृति चिकित्सालय भी बन गया है जो एशिया महाद्वीप की सबसे बड़ी अस्पताल (बिल्डिंग के मामले में) है। इस चौराहे के चतुर्दिक दवाओं की ही दूकाने नजर आती हैं। नजरीय अवलोकन एवं सर्वेक्षण से ज्ञात हुआ कि यहां का वाणिज्यिक कार्य अस्पताल में आने जाने वाले लोगों की मांग पर संचालित हैं जबकि आन्तरिक भाग में विभिन्न तरह की दूकाने संचालित हैं जो लोगो की आवश्यकता की आपूर्ति करती हैं। चौराहे से उत्तर तरफ की रोड सिरमौर चौराहा से जोड़ती है जिसके दोनों किनारों में दूकाने बनी हैं। पूर्व की ओर अस्पताल बनी है। दक्षिण की ओर अधिकतर दवाओं की ही दूकाने हैं। इसके अलावा अन्य अत्यावश्यक वस्तुओं की भी दूकाने हैं जैसे होटल, फल की दूकाने, प्लास्टिक के बर्तन, जनरल स्टोर आदि। पश्चिम की ओर जाने वाली सड़क, प्रकाश चौराहा, स्टेचू चौराहा होते हुए जय स्तंभ चौक के पास नेशनल हाइवे नं. 7 में मिल जाती है। सड़क के दोनों किनारों में दूकाने बनी हैं यहाँ काफी भीड़-भाड़ वाला क्षेत्र है। वाहन पार्किंग को कहीं जगह नहीं है। इस ओर दवाएं, सायकल, प्लास्टिक के सामान, मशाला,

जनरल स्टोर, मनिहारी, कपड़ा, होजरी, जूता-चप्पल, चश्मा, गिफ्ट सेंटर, बिजली के सामान, होटल रेस्टोरेंट, फल, स्टेशनरी आदि वस्तुओं की दूकाने हैं।

अस्पताल चौराहा में सबसे ज्यादा मेडिकल स्टोर (दवाइयों की दूकानें) हैं। जिसका कारण यहां पर गांधी मेमोरियल, संजय गांधी स्मृति चिकित्सालय तथा इसके चतुर्दिक निजी संचालित चिकित्सालय हैं। अस्पताल के पूर्वी क्षेत्र में डाक्टर कालोनी है जहां डाक्टर अपने बंगलें में सुबह-शाम मरीजों को देखते हैं जो यहीं से (अस्पताल चौक) दवाएं खरीदते हैं। इस क्षेत्र में 72 मेडिकल स्टोर हैं जो नगर के एक क्षेत्र में सबसे ज्यादा हैं तथा इस क्षेत्र की कुल दूकानों में इनका प्रतिशत सबसे ज्यादा 4 है जिसका प्रमुख कारण नजदीकी सरकारी अस्पताल है। इन दूकानों के अलावा अस्पताल के मुख्य गेट एवं अन्य गेट के सामने चाय, पान, फल, प्लास्टिक की वस्तुएं एवं अन्य आवश्यक वस्तुओं के विक्रय के लिए छोटे व्यापारी अपना ठेला लगाए रहते हैं। यहाँ पर सबसे कम प्रतिशत इलेक्ट्रानिक्स की दूकानों का है जिनका सम्पूर्ण दूकानों से प्रतिशत 4 है।

4. धोबिया टंकी चौराहा :

यह विपणन केन्द्र अस्पताल चौराहा से पूर्व की ओर जाने पर संजय गाँधी अस्पताल मुख्य गेट से पूर्व में स्थित है। यहाँ पर बहुत बड़ी पानी की टंकी बनी है जिसके कारण इसे धोबिया टंकी चौराहा के नाम से जाना जाता है। यन नगर की दक्षिणी छोर का प्रमुख व्यावसायिक क्षेत्र है। इससे पूर्व की ओर जाने पर सीधी रोड, दक्षिण को शहडोल रोड, पश्चिम को रानी तालाब रोड तथा उत्तर को अस्पताल चौराहा एवं शहर की जाने वाली रोड है। इस व्यावसायिक केन्द्र में 20 से 30 किलोमीटर तक के उपभोक्ता क्रय-विक्रय के लिए आते हैं।

5. सिरमौर चौराहा :

सिरमौर चौराहा विपणन स्थल राष्ट्रीय राजमार्ग 7 पर स्थित रीवा नगर का विस्तृत भू-भाग में फैला हुआ प्रमुख विपणन केन्द्र है जो आधुनिक रूप से विकसित सजी दूकानों के कारण आकर्षण का केन्द्र बना हुआ है। इसके चतुर्दिक सिर्फ दूकाने ही नजर आती हैं। इस चौराहा में सुधार न्यास द्वारा बनवाई गई बहुमंजिला इमारत-तानसेन काम्प्लेक्स एवं चौराहा के पूर्व दक्षिण में निजी व्यक्ति द्वारा निर्मित रमागोविन्द पैलेस इस चौराहे में चार चाँद लगा देते हैं। चौराहे से पूर्व में नेशनल हाइवे से लगी दूकानें हैं जो निरंतर रतहरा तक मिलती हैं। पश्चिम में कालेज चौराहा तक दूकाने हैं। उत्तर में खुटेही तथा दक्षिण में अस्पताल चौक तक व्यापारिक दूकाने हैं। इस चौराहे का प्रभाव चतुर्दिक 1.5 कि.मी. तक है। यहां पर विभिन्न तरह की वस्तुओं का व्यापार होता है। यह नगर का बहु वाणिज्यिक (Multi Commercial) क्षेत्र है। यहां प्रधानता किसी भी वस्तु की नहीं है, जबकि उपलब्धता प्रत्येक वस्तु की है यही इसकी विशेषता है।

सिरमौर चौराहे का प्रभाव क्षेत्र पूर्व में बजरंग नगर तक, पश्चिम में कालेज चौराहा तक, उत्तर में खुटेही एवं दक्षिण में अमहिया तक है। रीवा नगर में यही एक ऐसा

Periodic Research

स्थान है जहां पांचवे मंजिल तक किसी बिल्डिंग में व्यावसायिक कार्य सम्पादित होता है। यहां पर सम्पूर्ण दूकाने पक्की हैं तथा सड़क मार्ग पर्याप्त चौड़ा है। विपणन व्यवस्था में यहां मेडिकल स्टोर, स्टेशनरी, जनरल स्टोर, क्राकरी, बरतन, कपड़ा, स्टेशनरी, इंजीनियरिंग वर्क्स, हार्डवेयर, कम्प्यूटर, मोबाइल, इलेक्ट्रॉनिक्स, इलेक्ट्रिकल, झोला बैग, मोबाइल, होटल, फर्नीचर, प्लास्टिक वस्तुएं, दूध, खोवा, पनीर, घड़ी, जूस सेंटर, किराना, फल, तथा सब्जी आदि वस्तुओं की विभिन्न दूकाने हैं। यहां कई निजी अस्पताल संचालित हैं एवं कई सरकारी एवं गैर सरकार डाक्टर अपना क्लीनिक खोले हुए हैं। इन सबके अलावा यहां कई विभागों (सरकारी एवं गैर सरकारी) के कार्यालय जैसे – पोस्ट ऑफिस, आई.जी. ऑफिस, पी.डब्ल्यू.डी. ऑफिस, नगर निगम ऑफिस, जीवन बीमा ऑफिस आदि हैं। यही पर बने रमागोविन्द पैलेस (बहुमंजिला इमारत) में कई कोचिंग सेंटर एवं मेडिकल एजेन्सी हैं तथा कई निजी बहुराष्ट्रीय कम्पनियों के कार्यालय हैं। व्यापारिक दृष्टि से यह इमारत नगर की शान मानी जाती है। रीवा संभाग में इतने कोचिंग सेंटर कहीं नहीं होंगे जितने अकेले रमागोविन्द पैलेस में है।

6. बस स्टैंड :

अध्ययन क्षेत्र रीवा नगर का यह प्रमुख स्थान है, जहां पर विभिन्न जिलों, राज्यों से बसों का एवं यात्रियों का आवागमन होता है। रीवा नगर का यह प्रमुख व्यावसायिक क्षेत्र है, जो नेशनल हाइवे नं. 7 से लगा हुआ है। यह भौगोलिक दृष्टि से बीहर नदी के पूर्व में स्थित है। यहां पर बहुतायत मात्रा में व्यापारिक एवं व्यावसायिक प्रतिष्ठान हैं। इसके चारों ओर दुकाने ही नजर आती हैं। अधिकतर दुकाने एक मंजिला ही परंतु कुछ दुकाने दो मंजिला भी हैं। इससे पश्चिम की ओर जाने वाले मार्ग पर जय स्तंभ चौक पड़ता है, जहां पर व्यंकट रोड आकर मिलती है। यही से एक रोड बड़ी पुल तरफ जाती है। पूर्व में इसका प्रभाव झिरिया नाला एवं खन्ना चौराहा तक है, जहां आटोपार्ट की बहुतायत मात्रा में दुकाने हैं। बस स्टैंड के चतुर्दिक् 90 फीसदी दुकाने मशीनरी एवं कृषि उपकरण की हैं। 10 प्रतिशत में होटल, फल, स्टेशनरी, टायर-ट्यूब, चमड़ा एवं अन्य हैं। यहां पर सड़क के उत्तरी क्षेत्र में मोटर-गैरेज, रिपेयरिंग का काम इंजीनियरिंग वर्क्स का काम बहुतायत मात्रा में होता है, जबकि स्टैंड के दक्षिण तरफ मशीनरी, कृषि उपकरण, स्टेशनरी एवं इलेक्ट्रिकल्स की दूकानें हैं।

निष्कर्ष :

उपर्युक्त विश्लेषण से यह निष्कर्ष निकलता है कि विपणन स्थलों की संरचनात्मक विशेषताओं और व्यावसायिक आकारिकी के अनुसार विभाजन तर्क संगत हैं। इसलिये संरचना और आकारिकी का गहन विश्लेषण करने हेतु विभिन्न वर्गों से प्रतिदर्श विपणन स्थलों का चयन किया गया है। इनमें शिल्पी प्लाजा, प्रकाश चौराहा, अस्पताल चौराहा, सिरमौर चौराहा, बस स्टैंड, धोबिया टंकी बाजार केन्द्रीय विपणन स्थल क्षेत्र से, बस स्टैंड उपकेन्द्रीय विपणन स्थल क्षेत्र से, धोबिया टंकी परिधि क्षेत्र से चुने गये हैं। ये नगर के प्रमुख व्यावसायिक केन्द्र

हैं। यहाँ हर मौसम में लोगो की भीड़ लगी रहती है क्योंकि इन विपणन केन्द्रों में नगर के अलावा दूरस्थ आंचलों के ग्रामीण व्यावसायिकों एवं उपभोक्ताओं का निरंतर आना होता है। इन विपणन आवश्यकता की ज्यादातर वस्तुएं तो उपलब्ध हो जाती हैं परन्तु यहाँ प्रशासनिक एवं सफाई व्यवस्था की कमी के कारण इन व्यावसायिक केन्द्रों की सुन्दरता में ग्रहण लग जाता है। अतः इस क्षेत्र में विशेष सुधार की जरूरत है।

सन्दर्भ :

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Periodic Research

अनुसूचित जाति व विकास : विकास योजनाओं का अनुसूचित जाति के परिवारों पर प्रभाव व लाभ का अध्ययन करना



अनीता वर्मा

शोधार्थिनी- सिंहानिया वि०विद्यालय,
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सारांश

अनुसूचित जाति के विकास के लिए केन्द्र तथा राज्य दोनों सरकारों द्वारा विशेष ध्यान दिया जाता है। विभिन्न आयोग, संस्थाएं, कल्याणकारी कार्यक्रमों में अनुसूचित जाति एवं जनजाति आयोग जिसका कार्य संवैधानिक संरक्षणों, सरकारी सेवाओं में आरक्षण से सम्बन्धित सभी मामलों की जांच करना और उनके सशक्तीकरण हेतु अपेक्षित साधन और उपयुक्त विभिन्न प्रकार्य उचित रूप से सम्पादित किये जाने का प्रयास किया जा रहा है जिससे वह सामाजिक रूप से अपने को असहाय महसूस न करे और उनका सामाजिक, आर्थिक, शैक्षिक और राजनैतिक विकास हो सके। प्रस्तुत शोध पत्र में विभिन्न विकास योजनाओं के प्रति अनुसूचित जाति के परिवारों की जागरूकता व जानकारी को चुना गया है। यह शोध प्रपत्र लखीमपुर-खीरी जनपद के निघासन तहसील के अन्तर्गत अध्ययनरत तीन गांवों मोतीपुर, उमरा, भेड़ौरी में निवास करने वाले अनुसूचित जाति के 300 परिवारों के साक्षात्कार पर आधारित है। शोध कार्य में यह पाया गया कि केन्द्र सरकार और राज्य सरकार द्वारा अनुसूचित जाति के लिए बहुत सारी योजनाएं तथा सुविधायें उपलब्ध करायी जाती हैं जिससे अनुसूचित जाति के परिवारों का सामाजिक, आर्थिक विकास तथा उनके जीवन की गुणवत्ता को निर्धारित करने में महत्वपूर्ण भूमिका निभाती है। इन सुविधाओं का पूरा-पूरा लाभ कुछ योजनाओं से ही मिल रहा है लेकिन अधिक से अधिक लाभ उन्हीं लोगों को मिल रहा है जो शहरी क्षेत्र व उनके निकटस्थ स्थित गांवों में रहने वाले परिवारों से सम्बन्धित है। ग्रामीण क्षेत्र में रहने वाले गरीब परिवारों में विकास योजनाओं की जागरूकता की कमी है। जागरूकता की कमी के कारण ही इन विकास योजनाओं का लाभ नहीं मिल पा रहा है। योजना के विषय में जागरूकता का अभाव ही योजना की सफलता की मुख्य बाधा है।

शोध कार्य की उपलब्धियाँ यह सुझाव देती हैं कि विकास योजनाओं के प्रति लोगों को शिक्षित किया जाये जिससे आम लोगों की योजनाओं के प्रति जागरूकता बढ़े। योजनाओं के उद्देश्यों एवं लाभों को अशिक्षित तथा अज्ञानी परिवारों को ठीक ढंग से बताना तथा समझने की आवश्यकता है।

मुख्य शब्द : श्रेणीबद्ध विभाजन, मनरेगा विकास योजना

प्रस्तावना

अनुसूचित जाति का तात्पर्य उन जातियों से है जिन्हें धार्मिक, सामाजिक और राजनैतिक सुविधायें दिलाने के लिए है जिनका उल्लेख संविधान की अनुसूची में किया गया है। अनुसूचित जाति जिसे कई नामों से जाना जाता है। 1931 की जनगणना में उन्हें 'बाहरी जाति' के रूप में सम्बोधित किया गया। अम्बेडकर के अनुसार आदिकालीन भारत में उन्हें 'भग्नपुरुष' या बाह्य जाति माना जाता था। अंग्रेज उन्हें 'दलित वर्ग' व महात्मा गाँधी जी ने उन्हें 'हरिजन' का नाम दिया।

भारतीय समाज में जाति प्रथा सामाजिक संरचना की सर्वाधिक महत्वपूर्ण प्रणाली है। यह सामाजिक संस्तरण की ऐसी व्यवस्था है जिसने भारतीय समाज को वर्तमानुगत, श्रेणीबद्ध पद समूहों में विभक्त किया है। जातिगत विभाजन को ईश्वरीय प्रदत्त श्रेणीबद्ध विभाजन माना गया है जो विभिन्न जातियों के मध्य सामाजिक अन्तःक्रिया और सहवास का एक प्रतिमान निर्धारित करती है जो उच्च जातियों की श्रेष्ठता और निम्न जातियों की निम्न दूरस्थ सामाजिक स्थिति पर आधारित है इस संस्तरण प्रणाली में सर्वोच्च ऋषि पर ब्राह्मण और निम्नतम स्तर पर अस्पृश्य है। अस्पृश्यता समाज की एक ऐसी व्यवस्था है जिसके अन्तर्गत अस्पृश्य समझी जाने वाली जातियों के व्यक्ति सवर्ण हिन्दुओं को स्पर्श नहीं कर सकते हैं।

Periodic Research

अध्ययन का उद्देश्य

विभिन्न विकास योजनाओं का अनुसूचित जाति के परिवारों पर प्रभाव व लाभ का अध्ययन करना एवं समाधान व सुझाव देना।

अध्ययन विधि

इस शोध-प्रपत्र के लिए लखीमपुर-खीरी जनपद के निघासन तहसील के अन्तर्गत अध्ययनरत तीन गाँवों मोतीपुर, उमरा भेड़ौरी में निवास करने वाले अनुसूचित जाति के 300 परिवारों का चयन किया गया। उत्तरदाताओं से साक्षात्कार हेतु अनुसूची का प्रयोग किया गया जिसका प्रथम भाग सामान्य जानकारी व दूसरा भाग विकास योजनाओं का अनुसूचित जाति के परिवारों में जागरूकता तथा प्रभावों से सम्बन्धित है। इस शोध-प्रपत्र में आँकड़ों का संकलन अनुसूची के माध्यम से साक्षात्कार द्वारा किया गया है। सभी आँकड़ों को सारिणी के रूप में प्रदर्शित किया गया साथ ही सारिणियों के चरों की आवृत्ति एवं उनके प्रतिशत की गणना की गयी है। प्रतिशत व मध्यमान के सांख्यिकीय सूत्रों का प्रयोग भी किया गया है।

$$\text{प्रतिशत} = \frac{\text{चरों की बारम्बारता}}{\text{चरों का कुल योग}} \times 100$$

$$\text{मध्यमान} = \frac{\sum \text{प्राप्तांकों का योग}}{\text{प्राप्तांकों की संख्या}}$$

Review Literature

Tiwari et. al, 2005 The present work is an attempt to assess the impact of development programmes on socio-economic status of the most deprived, excluded, down-trodden section of the society i.e., schedule caste, to whom the economic development bypassed because of their socio-economic isolation. It differs from existing literature by differences in geographic coverage, time span, and use of self-reported household benefits across a broad range of programmes. Socio-economic status can be defined as ranking of the family in the surroundings to which the family belongs, in respect of defined variables viz., physical assets, economic status, education, occupation, social position, social participation, caste, muscle power, political influence, etc.

लुई (2003) ने जाति आधारित भेदभाव, संवैधानिक उपबन्धों तथा दलितों से सम्बन्धित अन्य मुद्दों पर प्रकाश डालते हुए बताया कि संस्थागत रूप से संचालित भेदभाव में दलित जातियों को अन्य जातियों की तुलना में निम्न स्तर पर ला दिया है अशिक्षा, गरीबी, कुपोषण, अस्वस्थ इत्यादि ही मात्र उनकी निम्न स्थिति का परिचायक ही नहीं है, बल्कि अन्तिम रूप से इन जातियों को अन्य संसाधनों के द्वारा भी शक्ति विहीन एवं आधार विहीन समुदाय बना दिया गया है।

सिंह, (1977) के अनुसार अनुसूचित जातियों में जिस परिवर्तन की हमें अपेक्षा थी वह कहीं देखने को नहीं मिला। अब भी हरिजन कच्चे मकानों में रहते हैं और जो विभाषाधिकार उन्हें मिले हैं उसका प्रयोग भी वे पूरी तरह से नहीं कर पा रहे हैं परिवर्तन तो तब समझा जायेगा जब जातियों की सोपान व्यवस्था में उनका स्थान ऊँचा उठ जाये।

प्रपत्र के शेष भाग में पायी गयी उपलब्धियों का विवरण प्रस्तुत किया गया है। इसी सन्दर्भ में सारिणी एक में

विभिन्न योजनाओं के नाम व प्रभाव को प्रस्तुत किया गया है।

आँकड़ा संकलन एवं सांख्यिकीय विश्लेषण

सारणी संख्या-1

अत्यधिक लाभ वाली योजना के नाम व प्रभाव

योजना का नाम	आवृत्ति	प्रतिशत
इन्दिरा आवास योजना	137	45.7
इन्दिरा आवास योजना, छात्रवृत्ति योजना, राष्ट्रीय परिवार लाभ योजना	1	.3
इन्दिरा आवास, महात्मा गाँधी, राष्ट्रीय रोजगार गारण्टी योजना	2	.7
इन्दिरा आवास, मनरेगा आ"ग योजना	2	.7
इन्दिरा आवास, मनरेगा, छात्रवृत्ति योजना	3	1.0
इन्दिरा आवास, आ"ग योजना, सम्पूर्ण ग्राम रोजगार योजना	1	.3
इन्दिरा आवास, छात्रवृत्ति योजना, आ"ग योजना	21	7.0
इन्दिरा आवास, छात्रवृत्ति योजना, विधवा पेंशन योजना	3	1.0
इन्दिरा आवास योजना, विधवा पेंशन योजना	1	.3
महात्मा गाँधी राष्ट्रीय रोजगार गारण्टी योजना	4	1.3
मनरेगा, छात्रवृत्ति योजना	13	4.3
मनरेगा, छात्रवृत्ति योजना, विधवा पेंशन योजना	2	.7
मनरेगा, छात्रवृत्ति योजना, विधवा पेंशन योजना	1	.3
मनरेगा, राष्ट्रीय परिवार योजना	1	.3
समन्वित बाल विकास सेवा कार्यक्रम	1	.3
सम्पूर्ण ग्राम रोजगार योजना, छात्रवृत्ति योजना	1	.3
छात्रवृत्ति योजना	24	8.0
छात्रवृत्ति योजना, राष्ट्रीय परिवार लाभ योजना	1	.3
छात्रवृत्ति योजना, विधवा पेंशन योजना	5	1.7
नहीं अन्य	76	25.4
योग	300	100

विकास योजनाओं का अनुसूचित जाति के परिवारों पर प्रभाव के अन्तर्गत 300 उत्तरदाताओं का अध्ययन किया गया है जिसमें अत्यधिक लाभ वाली योजना के प्रभाव में 137 उत्तरदाताओं को इन्दिरा आवास योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 45.7 है 1 उत्तरदाता को इन्दिरा आवास, छात्रवृत्ति योजना, राष्ट्रीय परिवार लाभ योजना का लाभ प्राप्त हुआ जिनका प्रतिशत .3 है। 2 उत्तरदाताओं को इन्दिरा आवास, महात्मागाँधी राष्ट्रीय रोजगार गारण्टी योजना का लाभ प्राप्त हुआ

Periodic Research

जिनका प्रतिशत 7 है। 2 उत्तरदाताओं को इन्दिरा आवास, मनरेगा, आंगन योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 7 है। 3 उत्तरदाताओं को इन्दिरा आवास, मनरेगा, छात्रवृत्ति योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 1.0 है। 1 उत्तरदाता को इन्दिरा आवास आंगन योजना, सम्पूर्ण ग्राम रोजगार योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 3 है।

21 उत्तरदाताओं को इन्दिरा आवास योजना, छात्रवृत्ति योजना आंगन योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 7.0 है। 3 उत्तरदाताओं को इन्दिरा आवास योजना, छात्रवृत्ति योजना, विधवा पेंशन योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 1.0 है। 1 उत्तरदाता को इन्दिरा आवास योजना, विधवा पेंशन योजना का लाभ प्राप्त हुआ जिनका प्रतिशत 3 है।

4 उत्तरदाताओं को मनरेगा विकास योजना का लाभ प्राप्त था जिनका प्रतिशत 1.3 है। 13 उत्तरदाताओं को मनरेगा, छात्रवृत्ति विकास योजना का लाभ प्राप्त था जिनका प्रतिशत 4.3 है। 2 उत्तरदाताओं को मनरेगा, छात्रवृत्ति योजना, विधवा पेंशन योजना का लाभ प्राप्त था जिनका प्रतिशत 7 है।

1 उत्तरदाता को मनरेगा, छात्रवृत्ति योजना, विधवा पेंशन योजना का लाभ प्राप्त था जिनका प्रतिशत 3 है। 1 उत्तरदाता को मनरेगा, राष्ट्रीय परिवार लाभ योजना का लाभ प्राप्त था जिनका प्रतिशत 3 है। 1 उत्तरदाता को समन्वित बाल विकास सेवा कार्यक्रम के अन्तर्गत आंगन योजना का लाभ प्राप्त था जिनका प्रतिशत 3 है। 1 उत्तरदाता को सम्पूर्ण ग्राम रोजगार योजना, छात्रवृत्ति योजना का लाभ प्राप्त हुआ था जिनका प्रतिशत 3 है। 24 उत्तरदाताओं को छात्रवृत्ति योजना का लाभ प्राप्त हुआ था जिसका प्रतिशत 8.0 है। 1 उत्तरदाता को छात्रवृत्ति योजना, राष्ट्रीय परिवार लाभ योजना का लाभ प्राप्त था जिसका प्रतिशत 3 है। 5 उत्तरदाताओं को छात्रवृत्ति योजना, विधवा पेंशन का लाभ प्राप्त हुआ था जिनका प्रतिशत 1.7 है। 76 उत्तरदाता को योजना का लाभ नहीं प्राप्त हुआ जिनका प्रतिशत 25.4 है।

इस सारणी से स्पष्ट है कि विकास योजनाओं में सबसे अधिक प्रभावपूर्ण इन्दिरा आवास योजना रही 300 उत्तरदाताओं में से 137 उत्तरदाताओं के परिवार पर इस योजना का प्रभाव अच्छा पड़ा सबसे अधिक लाभ वाली योजना इसलिए रही कि गरीबों की मूलभूत आवश्यकता की पूर्ति में इस योजना ने महत्वपूर्ण भूमिका निभायी तथा परिवार के लोगों के रहन-सहन की स्थिति में भी सुधार हुआ। 24 उत्तरदाताओं को छात्रवृत्ति योजना का लाभ प्राप्त हुआ था। इस योजना से बच्चों की शैक्षिक स्थिति में थोड़ा सुधार हुआ।

सारणी -2 में सरकारी आवासीय योजना के लाभ व प्रभाव को प्रस्तुत किया गया है।

सरकारी आवासीय योजना का लाभ व प्रभाव

सरकारी आवासीय योजना का लाभ	आवृत्ति	प्रतिशत
हाँ	175	58.3
नहीं	62	20.7
अन्य	63	21.0
कुल	300	100

सरकारी आवासीय योजना के लाभ में कुल 300 उत्तरदाताओं का अध्ययन किया गया जिसमें से 175 उत्तरदाताओं ने सरकारी आवासीय योजना के लाभ में हाँ का जवाब दिया था जिनका प्रतिशत 58.3 है। 62 उत्तरदाताओं को सरकारी आवासीय सुविधा का लाभ प्राप्त नहीं हुआ था। जिनका प्रतिशत 20.7 है। 63 उत्तरदाता ऐसे थे जिन्होंने कोई सन्तोष जनक उत्तर नहीं दिया था जिनका प्रतिशत 21.0 है।

इस सारणी से स्पष्ट होता है कि सरकारी आवासीय योजना के लाभ में 58.3 प्रतिशत उत्तरदाता को लाभ प्राप्त हुआ और अनुसूचित जाति के परिवारों पर इस योजना का अच्छा प्रभाव पड़ा जो परिवार बिना आवास के जीवन व्यतीत कर रहे थे उनके झोपड़ीनुमा आवास की दशा दयनीय थी इस योजना से उन्हें आवास प्राप्त हुआ तथा रहन-सहन की स्थिति में भी परिवर्तन आया। अतः गरीबों के बीच आवास की कमी को दूर करने में इन्दिरा आवास योजना ने महत्वपूर्ण भूमिका निभायी है। 20.7 प्रतिशत उत्तरदाता को आवास योजना का लाभ प्राप्त नहीं था 21.0 प्रतिशत अन्य उत्तरदाता थे ये वे उत्तरदाता थे जिनमें कुछ बीपीओएल सूची में नहीं थे कुछ को योजना की जानकारी नहीं थी।

सारणी संख्या -3 में महिला विकास कार्यक्रम का लाभ व प्रभाव को प्रस्तुत किया गया है।

महिला विकास कार्यक्रम का लाभ व प्रभाव

लाभ	आवृत्ति	प्रतिशत
हाँ	201	67.0
नहीं	99	33.0
कुल	300	100

महिला विकास कार्यक्रम के लाभ के सम्बन्ध में 300 उत्तरदाताओं का अध्ययन किया गया जिसमें 201 उत्तरदाताओं को महिला विकास कार्यक्रम का लाभ मिला था जिनका प्रतिशत 67.0 है। 99 उत्तरदाताओं को महिला विकास कार्यक्रम का लाभ नहीं मिला था। जिनका प्रतिशत 33.0 है।

उपर्युक्त सारणी से स्पष्ट होता है कि 67.0 प्रतिशत महिला उत्तरदाता महिला विकास योजना का लाभ उठा रही है इन महिलाओं पर महिला विकास कार्यक्रमों का अच्छा प्रभाव पड़ा है। यह अधिकांश संख्या में वे महिला उत्तरदाता थी जो नई पीढ़ी और कुछ पुरानी पीढ़ी की थी जिन्हें प्राप्त लाभ व विशेषकर समन्वित बाल विकास सेवा की सबसे निचले स्तर की इकाई के अन्तर्गत आंगनबाड़ी कार्यकर्ताओं के द्वारा एवं आंगन बहू के तहत जानकारी प्राप्त हुई। इसी कारण महिला विकास कार्यक्रमों

Periodic Research

का लाभ उठा पायीं। 33.0 प्रतिशत उत्तरदाता महिला विकास योजना की लाभार्थी नहीं थी। जानकारी करने पर यह ज्ञात हुआ कि इन महिलाओं को महिला विकास कार्यक्रमों की जानकारी नहीं है।

सारिणी संख्या-4 में आधारभूत मौलिक सुविधाओं का लाभ व प्रभाव को प्रस्तुत किया गया है।

आधारभूत मौलिक सुविधाओं का लाभ व प्रभाव

उपलब्धता	पीने का पानी		बिजली		शौचालय	
	आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत
हाँ	293	97.7	42	14.0	169	56.3
नहीं	3	1.0	92	30.7	117	39.0
अन्य	4	1.3	166	55.3	14	4.7
कुल	300	100	300	100	300	100

आधारभूत मौलिक सुविधाओं के लाभ में 300 उत्तरदाताओं के अध्ययन से आँकड़े सामने आये कि 293 उत्तरदाताओं को पीने के पानी की उपलब्धता है जिसका प्रतिशत 97.7 है। 42 उत्तरदाताओं को बिजली की उपलब्धता है जिनका प्रतिशत 14.0 है। 169 उत्तरदाताओं को शौचालय की उपलब्धता है जिनका प्रतिशत 56.3 है। 3 उत्तरदाताओं को पीने के पानी की उपलब्धता नहीं है जिनका प्रतिशत 1.0 है। 92 उत्तरदाताओं को बिजली की उपलब्धता नहीं है जिनका प्रतिशत 30.7 है। 117 उत्तरदाताओं को शौचालय की सुविधा नहीं है जिनका प्रतिशत 39.0 है। 4 (1.3) उत्तरदाताओं को पीने का पानी 166 (55.3) उत्तरदाता को बिजली 14 (4.7) उत्तरदाता को शौचालय की उपलब्धता में वे लोग थे जिन्होंने कोई उत्तर नहीं दिया।

इस सारिणी से स्पष्ट होता है कि आधारभूत मौलिक सुविधाओं के लाभ में पीने के पानी की सुविधा का प्रभाव अच्छा पड़ा है।

सारिणी संख्या -5 में अत्यधिक लाभ वाली योजनाओं का पूरे परिवार पर, स्त्रियों पर, बच्चों पर प्रभाव को प्रस्तुत किया गया है।

अत्यधिक लाभ वाली योजनाओं का प्रभाव

प्रभाव	पूरे परिवार पर		स्त्रियों पर		बच्चों पर	
	आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत	आवृत्ति	प्रतिशत
उच्च	79	26.3	99	33.0	103	34.3
मध्यम	215	71.7	196	65.3	182	60.7
निम्न	4	1.3	3	1.0	13	4.3
अन्य	2	0.7	2	0.7	2	0.7
कुल	300	100	300	100	300	100

अध्यधिक लाभ वाली योजनाओं के प्रभाव के अन्तर्गत 300 उत्तरदाताओं का अध्ययन किया गया जिसमें 79 (26.3) उत्तरदाताओं के पूरे परिवार पर अच्छा प्रभाव पड़ा। 99 (33.0) उत्तरदाताओं के स्त्रियों पर उच्च प्रभाव दिखा। 103 (34.3) उत्तरदाताओं के बच्चों पर उच्च प्रभाव दिखा।

215 (71.7) उत्तरदाताओं के पूरे परिवार पर अत्यधिक लाभ वाली योजनाओं का प्रभाव मध्यम दिखा। 196 (65.3) उत्तरदाताओं के बच्चों पर मध्यम प्रभाव पड़ा। 4 (1.3) उत्तरदाताओं के पूरे परिवार पर 3 (1.0) उत्तरदाताओं की स्त्रियों पर 13 (4.3) उत्तरदाताओं के बच्चों पर निम्न प्रभाव पड़ा। 2 (0.7) उत्तरदाताओं के पूरे

परिवार पर प्रभाव, स्त्रियों पर 2 (0.7) बच्चों पर प्रभाव में अन्य थे।

उपरोक्त सारिणी से स्पष्ट होता है कि सरकारी योजनाओं का चयनित अनुसूचित जातियों के पूरे परिवार पर सरकारी आवासीय योजना का सबसे अच्छा प्रभाव पड़ा है उनके रहने की दृष्टि में सुधार हुआ, उनकी पारिवारिक स्थिति पहले की अपेक्षा वर्तमान में अच्छी है। अन्य सरकारी योजनाओं का प्रभाव मध्यम पड़ा जिसका कारण यह सामने आया कि परिवार के लोगों को अन्य योजनाओं की जानकारी ठीक से नहीं है जिसका मूल कारण उत्तरदाताओं की अज्ञानता व गरीबी, बेरोजगारी भी है। अनुसूचित जाति की स्त्रियों पर विकास योजनाओं का प्रभाव मध्यम पड़ा है। सबसे कारगर और प्रभावयुक्त योजनाओं में आँगा बहू जिन्होंने गर्भवती स्त्रियों को प्रसव के पहले व प्रसव के उपरान्त आयरन की गोली टीकाकरण व अन्य स्वास्थ्य सेवाओं के बारे में जानकारी भी समय-समय पर दी और लाभ भी दिलवाया लेकिन यह लाभ भी कुछ ही महिलाओं पर प्रभावी था क्योंकि दूसरी अन्य महिलाओं का अधिकांश प्रसव घर पर ही होते हैं। उन परिवार की स्त्रियों पर इस योजना का लाभ व प्रभाव अच्छा नहीं पड़ा। इसका प्रभाव उन्हीं महिलाओं पर अच्छा पड़ा जिनका प्रसव अस्पताल में होता है और आँगा बहू की देखभाल में। उत्तरदाताओं के बच्चों पर विकास योजनाओं का प्रभाव मध्यम पड़ा।

सारिणी संख्या -6 में बचत या ऋण जैसी सरकारी सुविधाओं के लाभ व प्रभाव को प्रस्तुत किया है।

बचत या ऋण जैसी सरकारी सुविधाओं का लाभ व प्रभाव

लाभ	आवृत्ति	प्रतिशत
हाँ	6	2.0
नहीं	283	94.3
अन्य	11	3.7
कुल	300	100

बचत या ऋण जैसी सरकारी सुविधाओं का लाभ के अन्तर्गत 6 उत्तरदाताओं को लाभ प्राप्त हुआ था जिनका प्रतिशत 2.0 है। ये कम संख्या में वे उत्तरदाता थे जिन्हें बचत व ऋण वाली सरकारी सुविधाओं की जानकारी अच्छे से थी तथा शिक्षित भी थे। 283 उत्तरदाताओं को बचत व ऋण जैसी सरकारी सुविधाओं का लाभ प्राप्त नहीं था जिनका प्रतिशत 94.3 है। ये अधिक संख्या में वे उत्तरदाता थे जो अत्यधिक गरीब व अशिक्षित जिन्हें ऐसी योजनाओं की जानकारी नहीं थी।

इस सारिणी से स्पष्ट होता है कि बचत या ऋण जैसी सरकारी योजनाओं का प्रभाव अनुसूचित जाति के परिवारों पर अच्छा नहीं पड़ा जिसका कारण सरकारी बचत व ऋण योजनाओं की जानकारी अच्छे से न होना दूसरा समय पर ऋण का भुगतान न कर पाना और मूल कारण गरीबी, बेरोजगारी अज्ञानता भी है।

Periodic Research

सारणी संख्या-7 में अत्यधिक लाभ वाली योजनाओं की जानकारी के स्रोत को प्रस्तुत किया गया है।

अत्यधिक लाभ वाली योजनाओं की जानकारी का स्रोत

स्रोत	आवृत्ति	प्रतिशत
प्रधान	211	70.3
ग्राम सेवक	3	1.0
स्कूल	10	3.3
अन्य	76	25.4
कुल	300	100

अत्यधिक लाभ वाली योजनाओं की जानकारी के सन्दर्भ में 211 उत्तरदाताओं को प्रधान के माध्यम से जानकारी प्राप्त हुई थी जिनका प्रतिशत 70.3 है। 3 उत्तरदाताओं को जानकारी का स्रोत ग्राम सेवक के द्वारा प्राप्त हुई थी। जिनका प्रतिशत 1.0 है। 10 उत्तरदाताओं को स्कूल के द्वारा जानकारी प्राप्त हुई थी जिनका प्रतिशत 3.3 है। 76 उत्तरदाताओं को अन्य के द्वारा जानकारी प्राप्त हुई थी जिनका प्रतिशत 25.4 है।

इस सारणी से स्पष्ट है कि अत्यधिक लाभ वाली योजनाओं की जानकारी का स्रोत में 211 उत्तरदाताओं को ग्राम प्रधान से जानकारी प्राप्त हुयी थी। इसका कारण हो सकता है कि ग्राम प्रधान ग्राम में ही रहते हैं 3 उत्तरदाताओं को सबसे कम हैं जिन्हें जानकारी ग्राम सेवक से प्राप्त हुई थी।

निष्कर्ष एवं सुझाव

विभिन्न विकास योजनायें जो केन्द्र व राज्य दोनों सरकारों द्वारा चलायी जाती हैं जिसका प्रभाव समाज के सभी वर्गों पर पड़ता है ये वर्ग चाहे किसी भी जाति के हों।

किसी भी विकास योजना की सफलता-असफलता इस बात पर निर्भर करती है कि सम्बन्धित योजना की आम-आदमी को या सम्बन्धित व्यक्ति समुदाय संस्था जिसको ध्यान में रखकर योजना बनायी गयी है को कितनी अच्छी जानकारी है जितनी अधिक से अधिक जानकारी योजना के विषय में लोगों को होगी उतना ही उसका लाभ जनसामान्य को होगा और उसका प्रभाव भी अच्छा पड़ेगा।

लखीमपुर जनपद में अनुसूचित जाति के विकास के लिए केन्द्र तथा राज्य दोनों सरकारों द्वारा कल्याणकारी कार्यक्रमों को संचालित किया जा रहा है इन विकास योजनाओं में कुछ ही विकास योजना का लाभ इन परिवारों को मिल पा रहा है। सरकारी आवासीय योजना का अनुसूचित जाति के परिवारों को लाभ प्राप्त हुआ इस योजना का अच्छा प्रभाव भी पड़ा गरीबों के बीच आवास की कमी को दूर करने में इन्दिरा आवास योजना ने महत्वपूर्ण भूमिका निभायी है मनरेगा का समुचित लाभ समाज के पिछड़े एवं कमजोर तथा वंचित वर्गों तक पहुँचाने के लिए इसमें और अधिक तेजी लाने की

आवश्यकता है। लेकिन विकास योजनाओं की प्रक्रिया धीमी है। इसका लाभ समय पर नहीं मिल रहा है।

सुझाव दिया जा सकता है कि सर्वप्रथम अनुसूचित जाति के परिवारों को शिक्षित किया जाये तभी उनमें जागरुकता आयेगी और अधिक जागरुकता बढ़ाने के लिए आम-जनता को नई व पुरानी विकास योजनाओं को अच्छी तरह से जानना तथा समझने की आवश्यकता है। ग्रामीण स्तर पर उच्च शिक्षा से सम्बन्धित विद्यालय की स्थापना की जाये खासकर महिलाओं को अपने शिक्षा के स्तर को बेहतर करना होगा क्योंकि सरकारी योजनाओं एवं नीतियों को समझने के लिए वे अन्य किसी पर निर्भर न रह सकें। तभी महिला विकास कार्यक्रम प्रभावी होंगे।

अतः सुझाव दिया जाता है कि विकास योजनाओं को प्रभावी एवं सक्रिय बनाने के लिए योजनाओं को कार्यान्वित करने वाले विभागों को और अधिक सामंजस्य तथा सूझ-बूझ का परिचय देकर योजनाओं को समाज के प्रत्येक वर्ग तक पहुँचाने का प्रयास करना चाहिए तथा योजनाओं का निर्माण लोगों की स्थानीय समस्याओं के अनुरूप होनी चाहिए।

सन्दर्भ सूची

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