

A Study of Environmental Awareness among the High and Higher Secondary Students in District Kangra, Himachal Pradesh



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Abstract

The present study attempts to study environmental awareness among the high and higher secondary level students of district Kangra, Himachal Pradesh. The sample comprised of 300 students, 150 from high school level students and 150 from higher secondary level. Environmental Awareness Ability test developed by Dr. Praveen Kumar Jha was used as a tool to measure the extent of awareness of students about the environment. The study revealed that higher secondary level girls were more aware than boys and high school level students. The students of private schools were more environmentally aware than their counter parts in government school students. The awareness level of higher secondary students and girls was higher than high school students and boys of high and higher secondary students. The differences were statistically significant as was revealed by F-ratio, as an interactional effect of sex and higher secondary stage on Environmental Awareness. The study is an interesting study of its own kind.

Keywords: Environment, Environmental Awareness, Awareness Level, Higher Secondary Students, Environmental Degradation & Pollution.

Introduction

Environment etymologically means surroundings. The scheme of environment education was designed to create awareness about the surroundings and the steps for its conservation, and to cover more than 11,000 schools in various states and union territories. India is the first country to insert an amendment in its constitution allowing for the states to intervene and to protect public health, forest and wild life. The 42nd amendment was adopted in 1976, in the constitution for the protection of natural resources and environment in the country.

In the last two decades there has been a growing awareness of the changing status of the environment related issue all over the world. Environment degradation represents one of the greatest challenges of the 21st century. In the Moscow conference of 1987, the need for International Corporation in environmental education includes awareness, real life situation, conservation and sustainable development. The ministry of education has launched a, "National Environment Awareness Campaign" since July 1986. The objective is to create environmental awareness at national level for varied target groups to develop environmental awareness among masses.

The international union for the conservation of nature and natural resources commission of education has remarked in the international working group meeting on environmental education in the school curriculum, held under the auspices of UNESCO in Paris in 1970, that, "Environmental Education is the process of recognizing value and clarifying the concepts for developing skills and attitudes necessary to understand and appreciate the interrelationship among men, their culture and their biophysical surrounding".

June 5th is being very meticulously observed every year about it, in our long term interest. How to make people aware about the environment? Yes, "Environment Education" is the answer. Concept of environmental education national policy on the education in 1986

emphasizes that, "There is a paramount need to create environmental consciousness or aims at creating a consciousness of environment".

Several Governmental and Non – Governmental organizations educate the people and create environmental awareness among them. A department of environment has been set up in 1982 on environment information systems. There is a centre of environmental education (CEE) at Ahmadabad. There are more than 200 private organizations working on environmental education.

We in India, account for about 15 % of the world's population and have become the 10th largest industrial nation of the world. But at the same time, is one of the most polluted countries of the world as for as industrial pollution hazardous waste is concerned. The report of "The national commission on urbanization" submitted in august 1988, has estimated that by the turn of the century, the urban population will be about 340 million, roughly a third total population of India. M. B. Buch (1982) has rightly warned that, "The urban ecosystem is in crises, which will increase in geometrical progression as urbanization accelerates and availability of financial resources for urban development declines."

In India, river pollution has now reached a crises point assessed by the scientist of the National Environment Engineering Research Institute (NEERI), Nagpur, nearly 70 % of water in India is polluted.

We find, today environment pollution is global issue .So it is essential and vital to develop awareness about the environment Taking in to consideration this situation, the investigator felt a need to conduct a study, to examine environmental awareness among the high and higher secondary schools. During such efforts, it was observed from the findings that a lot of research studies have taken a lead in India and abroad on "environment and environment education" but state of Himachal Pradesh being a tourist state is still lagging behind in such kind of research studies .It was in this context, that the investigator selected the problem for study.

In the present study the investigator has reviewed the researches done in the field of environment in India and other countries.

Various Studies Conducted, Pasuk (1991) reveal that instructional material was used often and co-curricular activities were practiced. But due to lack of budget, shortage of modern instructional media and environmental illiteracy were stumbling blocks in creating awareness about environment among people. Santipapwiantna (1991) studied knowledge and opinion concerning environmental conservation of prathomsuksa students in Ampur Chiangkha, phayao provinces, in the northern part of the Thailand. Some of the major findings were, Knowledge of students about soil, forest and water was good but knowledge about wild life, air was medium. Robinson, J.W. (1996) conducted a study on "The effect of global thinking: project on middle school student's attitude towards the environment". He found a positive change in the experimental group of students and their attitude towards environment after participation in the global thinking project. Daudi (2001) conducted a study to describe level of environmental literacy in communities

with varying levels of formal literacy in Islamabad of Pakistan. As a result negligible correlation between environmental literacy and demographic or 'external variables of age, sex, and location etc. was found low and moderate correlation were found between literacy and age, sex, location etc. but no correlation was found between environmental literacy and formal literacy.

Letzenberg (2006) conducted a study on "An assessment of teacher's view of local environmental education and its impact on their curricula and teaching methodology in Maryland elementary school." Major findings indicate that there is need to teach environmental education more in kindergarten. Students were becoming attentive, and their behavior was improved while using the outside environment for instruction. Thakur, (2001) conducted "Comparative study of environmental awareness among public and government school students in Shimla." Thus conclusion drawn was that overall all types of schools and both the sex groups included in the sample had showed equal awareness regarding the environment. Biasan (2005) conducted "Comparative study of environmental awareness among govt. and private secondary schools students in Kangra District of Himachal Pradesh". The major findings of the study were: in case of both govt. and private secondary school students, environmental awareness was found to be somewhat low. Overall environmental awareness of govt. and private school students did not differ significantly leading to conclusion that both govt. and private school students have the same level of environmental awareness as far as various components of environment under study. Mishra (2006) revealed in his study that environmental education has not yet become successful in secondary school. The problems may be enormously diverse and the magnitude of the problems may be stupendous. There cannot be a single and one stroke solution to the problems. A comprehensive approach is necessary encompassing all areas of our activities.

Kaur and Kaur (2009) revealed in their study that students of private schools have more environmental awareness than government school students. The main reason for higher environmental awareness among students of private schools (96.22) than government school students (78.78) may be the family background and educational qualification of parents. Ekambaram and Nagaraja (2010) revealed in their study that the level of awareness differs in Science and Non- science teachers. Science teachers were found with higher level of environmental awareness compared to Non-Science teachers. Gender difference also was found in the level of awareness .The result of the analysis shows that level of environmental awareness was higher among female teachers as compared to male teachers. The social status -wise analysis of the level of awareness revealed that the teachers belonging to other classes had higher level of awareness compared to SC and ST teachers.

Review of Literature

Joshi (1981) revealed in his study that Environment education at the upper primary level was essential and vital to develop insight and awareness among children. He also found that the syllabus was not environmentally oriented and lacked in field studies .It

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did not contain information about ecology balances, protection of fauna and flora. It did not include topics like conservation of resources, pollution of air, water and preservation of wild life. The syllabus of upper primary level was not interesting, motivating and did not have relevance to real life.

Gupta(1986) revealed in his study that all groups of teachers showed favourable attitude towards environment education and main attitude scores of teachers at primary level was higher than secondary level.

Gakhar and Kalra (1993) revealed in their study that there was a significant difference between urban and rural people regarding environment pollution. There were significant positive differences between urban and rural population across intelligence levels.

Shahnawaj (1990) revealed in his study that a very high level of awareness existed on the part of teachers and students and found more awareness in urban groups than in the rural.

Sharma (2000) revealed in his study that Both rural and urban students lacked in knowledge of the concept of environment .Urban students were aware about the importance of forests in keeping the environment pure and healthy. Urban students were much aware about environment components, population, protection and improvement of environment than rural school students. Yet, rural students were not aware of noise pollution.

Bhandari (2004) revealed in his study that Nepal has also realized the environmental problems and has given high priority for Environmental Education from school level to higher studies.

Mishra (2006) revealed in his study that environmental education has not yet become successful in secondary school. The problems may be enormously diverse and the magnitude of the problems may be stupendous. There cannot be a single and one stroke solution to the problems. A comprehensive approach is necessary encompassing all areas of our activities.

Shoobeiri, and Prahallada,(2006)revealed in their study that there is a significant difference in the level of students' environmental awareness between two countries. The study revealed that the number of students with average level of environment awareness (44%) is more than their counterparts in Iran (14.9%). Further, study revealed that the number of Iranian students with high level of environmental awareness (85.10%) is more than the Indian students (56%).

Nagra (2007) revealed in his study that the secondary school teachers showed significant variation in environmental education awareness than elementary school teachers. This indicates the differences of awareness on environment causes among teachers at difference level The urban and rural school teachers showed significant variation in environmental education awareness highlighting that residential background affects the environmental education awareness of the school teachers.

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than government school students (78.78) may be the family background and educational qualification of parents.

Dixit and Agerwal (2009) revealed in their study that the environmental awareness of prospective elementary teachers is in a positive direction and there is no effect of gender and caste on the environmental awareness of prospective elementary teachers. He also reported that rural and urban prospective elementary teachers have a favourable awareness towards environment.

Muthumanickam and Sarla (2009) revealed in their study that the higher secondary students have high environmental ethics .The girls have higher environmental ethics than the boys from rural areas; the higher secondary students from the private schools have higher environmental ethics than the students from government schools. The higher secondary students residing in rented houses have higher environmental ethics than the students residing in their own houses.

Ekambaram and Nagaraja (2010) revealed in their study that the level of awareness differs in Science and Non- science teachers. Science teachers were found with higher level of environmental awareness compared to Non-Science teachers .Gender difference also was found in the level of awareness .The result of the analysis shows that level of environmental awareness was higher among female teachers compared to male teachers. The social status -wise analysis of the level of awareness revealed that the teachers belonging to other classes had higher level of awareness compared to SC and ST teachers.

Objectives

The following are the objectives of the study:

1. To study the overall environmental awareness among high and higher secondary school students.
2. To study the environmental awareness among high and higher secondary school students in relation to their gender.
3. To study interactional effect of sex and secondary stage on environmental awareness among secondary school students.

Hypotheses

The following are the hypotheses of the study

1. The high and the higher secondary school students do not differ in environmental awareness.
2. There exists no significant difference in environmental awareness of secondary school students in relation to their gender.
3. There exists no significant interactional effect of sex and secondary schools on environmental awareness of secondary school students.

Methodology

Sample

In the present study, random sampling technique was employed. The factors taken in the present study were sex, type of school. The researcher selected 150 students from high school and 150 from higher secondary school.

Further the sample was sub divided on the basis of sex- male and female. For this, the investigator randomly picked up 150 male students and 150 female students from high and higher secondary schools.

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Tools

In the present study a questionnaire was used to measure the environmental awareness among the secondary school students. The present study, the following scale was used: "Environmental Awareness Ability Test" (EAAT) developed by Dr. Praveen Kumar Jha was used to measure the extent and degree of awareness of students about environment. The test contains 51 items.

Development of the Test

For the development of EAAT, following environmental aspects were considered as basis:

1. Pollution
2. Conservation of resources
3. Conservation of energy
4. Conservation of human health
5. Public cooperation

On above five aspects, 71 items were prepared, specialists examined the reliability of test and depending upon their comments and advise, 10 items were re arranged and 20 items were rejected. In the final draft, 51 items (43 positive and 8 negative) were retained. The preliminary draft consisting of 71 items were administrated to 300 male and 300 female students of schools and universities of KOSI division Bihar. The items an analysis was done on the basis of responses of 27% high scoring and 27% low scoring individuals of the sample. 51 items showing significant t-values were retained in the final draft.

Table -1

The Items Wise Details are Given in the Table

Sr. No.	Environmental Aspects	Number of items		
		Positive	Negative	Total
1.	Pollution	13	02	15
2.	Conservation of natural resources	10	02	12
3.	Conservation of energy	04	04	08
4.	Conservation of human health	08	-	08
5.	Public cooperation	08	-	08
Total items		43	08	51

Statistical Techniques Applied

Statistical measures such as MEAN and F-test (one way) were to be used to interpret the obtained data.

Analysis and Interpretation

Section (A) Overall Environmental Awareness of Secondary School Students

Table-2: Total Environmental Awareness

Scores	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21 - 35	38	12.7	12.7	12.7
36+	262	87.3	87.3	100.0
Total	300	100.0	100.0	

From above Table it can be observed that:

1. The 87% students were found with average degree of awareness about environment.
2. And 13% students were found with average degree of awareness about environment.
3. No student was found with low degree of awareness about environment.

Section B – Type of School (High and Higher Secondary)

Table-3

Mean Score and Standard Deviation of High and Higher Secondary School Students on the Basis of Environmental Awareness

scores	N	Mean	Std. Deviation
High School	150	41.19	5.174
Higher Secondary	150	42.29	4.444
Total	300	41.74	4.847

From above Table it can be seen that:

1. Mean scores of higher secondary school was little higher than the mean scores of high school.
2. The awareness about environment of higher secondary school student was higher than high school.

Table-4

Analysis of Variance Showing Difference Between High and Higher Secondary Schools Regarding Awareness About Environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	91.853	1	91.853	3.949	.048
Within Groups	6931.867	298	23.261		
Total	7023.720	299			

This Table depicts that f-ratio on the data of High School and Higher Secondary was found with significant difference regarding awareness about environment at .05 levels.

Section C – Gender (male and female)

Table-5

Mean Score and Standard Deviation of Male and Female Students on the Basis of Environmental Awareness

Scores	N	Mean	Std. Deviation
Female	150	43.20	4.291
Male	150	40.28	4.943
Total	300	41.74	4.847

From above table (7) it can be seen that:

1. Mean scores of female was little higher than the mean scores of male.
2. The awareness about environment of female student was higher than male.

Table-6

Analysis of Variance Showing Difference Between Male And Female Regarding Awareness About Environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	639.480	1	639.480	29.849	.000
Within Groups	6384.240	298	21.424		
Total	7023.720	299			

Table- (6) shows that f-ratio on the data was found statistically significant differences between boys and girls regarding awareness about environment at .01 level.

Section- D Interaction Effects of Sex and Secondary Stage on Environment Awareness among Secondary School Students.

1. F-ratio revealed that statistically significant differences between interactional effect of sex and secondary stage on environment awareness among secondary school students.
2. Girls were more environmentally aware than boys at secondary stage.

Major Findings

From the analysis of data obtain with the help of "Environment Awareness Test" the findings of the study and the conclusion were drawn as under:-

1. It has been found that the total mean score is 41.74 which are greater than the criteria of awareness i.e. 35.70. Thus from the above finding; it is evident that the secondary school students of Kangra District were well aware about the environment.
2. The study reveals that F-ratio for the main effect of sex came out to be 29.849 which were significant at 0.01 level of confidence with df (2.58). It means table 4.6 shows that F-test on the data were statistically significant differences between boys and girls regarding awareness about environment at .01 level.
3. The study reflects that the mean scores in environmental awareness of male secondary school students came out 40.28 and that of female secondary school students came out to be 43.20.
4. The study depicts that F-ratio on the data of high school and higher secondary was found significant difference regarding awareness about environment at point .05 levels. It means that environmental awareness of male secondary school students with different school differs significantly.
5. The study shows that the mean scores in environmental awareness of secondary school students with high school came out to be 41.19 and that of secondary school students in higher secondary school came out to be 42.29.
6. The study reflects that F-ratio was found to be with significant differences between interactional effect of sex and secondary stage on environment awareness among secondary school students.

Comparison

Comparison on Environment Awareness among Male and Female of Secondary School Students

From the above finding, it is evident that the secondary school students of Kangra District were well aware about the environment. Thus the conclusion can be drawn that the environmental awareness of female secondary school students was more than in the male secondary school students.

Comparison on Environment Awareness among High and Higher Secondary School Students

From the above finding, it is evident that the secondary school students of Kangra District were well aware about the environment. Thus the conclusion can be drawn that the environmental awareness of higher

secondary school students was more than the high school students.

Discussion and Results

As far as the results of sex on environmental awareness of secondary school students of Kangra District is concerned, it was inferred in the present investigation that the female secondary school students, showed better performance as compared to male students.

This may be attributed to the reasons such as in our culture, the females are supposed to take care of house hold activities such as cleanliness hygiene etc. Thus are also told about the conservation of resources such as water, electricity etc. Male are considered to be the bread earners of the society, so such things are not told to them exactly as in case of female. Also boys almost indulge in sports activities, most of the time they generally have ignorant attitude towards conservation and cleanliness..

From the main effect of the type of school of secondary school students, it may be concluded that the students in higher secondary schools showed more awareness towards environment as compare to the students in high schools, because of the reason that the higher secondary schools greatly indulge in many type of environmental activities like field trips, tracking, quiz competitions, debates etc. Higher secondary school teachers initiate and motivate students to participate in environmental activities as compare to High school teachers.

The present study bears some prominent educational implications. Environment should be included as a separate subject in the curriculum so that students take more and more interest in knowing about immediate environment. Teachers should take keen interest in organising seminars, skits, debates discussions and quiz competitions in the schools. Refresher courses should be organized about environmental awareness at both district as well as state levels for the students. Society including parents should be made aware of different components of environment through door to door campaign, films and social drama. Experts must motivate people to be ready for various awareness programs regarding environment. States government must provide funds to various agencies and N.G.O's for starting various programs on the awareness of environment at both district and state level. This study can be useful for specialists and policy planners to develop various awareness programmes for school education and include them in the school syllabus. The study can play an important role in awareness of secondary school students about the pollution that spreads more and more in the surroundings and becomes a concern in the social life.

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