

# Work Pattern and Exercise: The Impact on Infertility in Female Undergoing Fertility Treatments

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### Abstract

Lifestyle factors are the modifiable habits and ways of life that can greatly influence overall health and well-being, including fertility. The study highlights the relationship between exercise and work pattern on infertility in female population undergoing infertility treatment at various fertility centres. Data from 300 females was collected by using the questionnaire including general information and the Rapid Assessment of Physical Activity (RAPA). The results showed that majority of females (86%) undergoing treatment were not involved in any physical activity other than normal household and office work. The rest 14% were either underactive or physically active. It was also seen that maximum (73%) females were home maker i.e., they were not going out of house for paid employment. It can be concluded that exercise and work pattern has impact on infertility and most of the subjects were having sedentary lifestyle. Counselling for lifestyle modification is required.

**Keywords:** Infertility, Work Pattern, Exercise.

### Introduction

For numerous couples, the incapability to bear children is a tragedy. The conflux of personal, interpersonal, spiritual, and social expectations brings a sense of failure, loss, and exclusion to those who are infertile (Rutstein & Shah, 2004). The occurrence of infertility in a population has significant demographic and health implications. High infertility has a dampening effect on overall fertility and the rate of population growth, and it may impede efforts to lower the fertility rate.

### Review of Literature

According to **World Health Organisation (WHO, 2015)** Infertility is "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse (and there is no other reason, such as breastfeeding or postpartum amenorrhoea

Researchers have proved that if trying to conceive, it is very important to maintain a healthy lifestyle. Being physically fit is of utmost importance as it helps in regaining stamina and rejuvenating energy level. Exercise can definitely be beneficial when trying to conceive. Leading a sedentary lifestyle is sometimes linked to lower fertility in both men and women. Exercise improves metabolism and circulation, both of which contribute to better egg production. Regular activity also optimizes on reproductive system by stimulating the endocrine glands, which secrete hormones that help eggs grow.

### Objective of the Study

The overall objective of the study was to observe the impact of lifestyle factors on infertility in female undergoing fertility treatments. The specific objectives are as follows:

1. To find out the impact of work pattern on infertility in female population undergoing fertility treatments
2. To determine the impact of exercise on infertility in female population undergoing fertility treatments

### Hypothesis

#### HO1

It is hypothesized that there is no significant relation between exercise and infertility in female population undergoing fertility treatments.

#### HO2

It is hypothesized that there is no significant relation between work pattern and infertility in female population undergoing fertility treatments.

**Methodology**

A descriptive research was conducted on a total of 300 married women undergoing infertility treatments at the selected infertility centres. The study was conducted in the selected infertility centres and hospitals lying within the municipal limits of city of Jodhpur, Rajasthan. Permission was sought from the Directors of selected infertility centres of Jodhpur. Consent for the conducting the study was granted by three infertility centres. The patients were explained the purpose of the study and consent for the participation in the study was obtained from the subjects. Subjects were assured that anonymity and confidentiality would be maintained and that they can refuse to participate or withdraw from the study at any time. An Informed consent form was signed by the investigator and the subjects willing for participation in the study individually. The subjects were interviewed and information was filled by researcher in the form. Selection of tools to achieve the objectives of the research is an important step in any research. Keeping in mind the purpose of the study and its inherent research variable the investigator used major research tools for data collection. Self structured questionnaire was used for collecting general information which was based on the following components like name, age, caste and number of years married. Rapid Assessment of Physical Activity (RAPA) by University of Washington Health Promotion Research Centre, 2006 to measure physical activity and exercise pattern. To analyze the data, the collected information was scored; coded, categorized and statistical analyses were performed with the statistical package for Social Science (SPSS, 19.0).

**Result and Discussion**

**Demographic profile of Subjects**

**Table 1.1: Distribution of the Sample According to Demographic Characteristics**

		Frequency	Percentage (%)
Age of Subject	below 25 years	74	24.7
	25-30	154	51.3
	31-35	51	17.0
	36 and above	21	7.0
Age of Subject's Husband	below 25 years	12	4.0
	25-30	151	50.3
	31-35	94	31.3
	36 and above	43	14.3
Number of Years The Couple Has Been Married	Less than 5 years	89	29.7
	5-10 years	136	45.3
	More than 10 years	75	25.0

Table 1.1 shows that the study covered information of 300 female undergoing infertility treatments. Regarding their age it was seen that 51% of female where lying in the age group of 25-30 years of age, 17% were in the age between 31 years and 35 years. It was also seen that infertility was also seen in female below 25 years and above 26 years of age as 25% and 7% respectively. On the contrary seeing the age of subject's husband it was noticed that 14% were above 36 years and only 4% were below 25 years. Maximum husbands (50%) were of age group 25-30 years. Looking at the number of years the couple has been married, 30% were married from less than 5 years and 25% were married from more than 10 years and were experiencing infertility.

**Impact of Exercise on Infertility**

**Table1.2: Frequency and Percentage of Status of Exercise**

Physical Exercise	Activity/	Frequency	Percentage (%)	Chi Square Value
	Sedentary	258	86.0	374.46**
	Underactive	21	7.0	
	Active	21	7.0	
	Total	300	100.0	

$\chi^2 = 374.46, p < 0.01$

**Figure 1.1: Percentage of Status of Exercise**

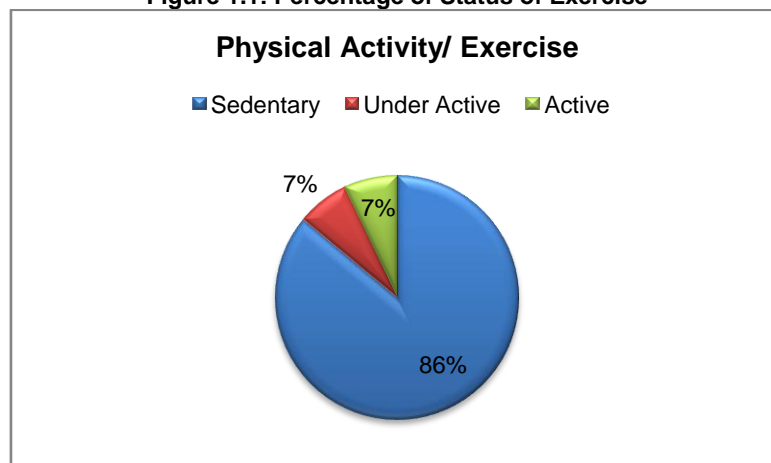


Table 1.2 point out the significant difference of various physical activity ( $\chi^2= 374.46, p<0.01$ ) and very clearly denotes that majority of females (86%) undergoing treatment were not involved in any physical activity other than normal household and office work. The rest 14% were either underactive or physically active. Those who were doing exercise were doing activities like walking, yoga, gym and even farming. The current study concluded that 86% of the total subject of the study were sedentary and were not involved in any exercise or additional physical activity except daily household work. Previous finding indicated that there is a significant impact of exercise on infertility (Gudmundsdottir, Flanders, & Augestad, 2018; Rich-edwards et al., n.d.). Interestingly it was observed that subjects of the present study did not give any weightage to physical activity or exercise. The reason behind this was lack of awareness and none of them were having any information that physical exercise has a positive impact on problem of infertility and health as a whole. Many studies suggested that various weight management interventions, including diet, exercise or pharmacotherapeutic approaches, should be considered for overweight and obese infertile women as weight loss can improve the fertility of obese women through the recovery of spontaneous ovulation (Norman et al., 2004). In contrary, (Esmaeilzadeh, Delavar, Basirat, & Shafi, 2013) in a study mentioned that no significant

**Impact of Work Pattern on Infertility**

**Table 1.3: Frequency and Percentage of Type of Work of Subjects**

Type of Work	Frequency	Percentage (%)	Chi Square Value
Fixed Working Hours	41	13.7	379.38
Shift Duty	4	1.3	
Flexible Working Hours	36	12.0	
Non Working (Home Maker)	219	73.0	
Total	300	100.0	

$\chi^2= 379.38, p<0.01$

**Figure 1.2: Percentage of Type of Work of Subjects**

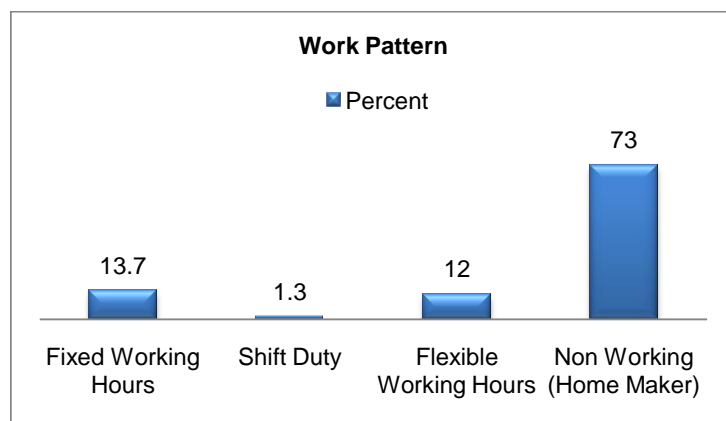


Table 1.3 and Figure 1.2 describes the type of work of selected subjects in the study and also show that type of work is significantly different ( $\chi^2= 379.38, p<0.01$ ). Looking at the working status of the females, it was seen that maximum (73%) females were home maker i.e., they were not going out of house for paid employment. In addition to this the study also found that more than 80% of females were having a sedentary type of work pattern. Those who

difference was found in Met-minutes of sedentary activity, intensity of walking, moderate, vigorous, and total physical activity, exercise and level of physical activity between women with and without experienced infertility. Similarly, vigorous exercise for an average of less than one hour per day was not associated with either primary or secondary infertility (Green, Daling, Weiss, Liff, & Koepsell, 1986). These findings of the studies are in line with the present study.

**Table 1.2: Correlation between Exercise and Type of Fertility Treatment**

		Exercise	Type of Treatment
Exercise	Pearson Correlation	1	0.06
	N	300	300
Type of Treatment	Pearson Correlation	0.06	1
	N	300	300

Correlation is non significant

Correlation between exercise and type of infertility was calculated and it was seen that there was no significant relation between exercise and type of infertility treatments. Hence, the hypothesis HO1 is accepted as there was no significant relationship found between exercise and infertility in female population undergoing fertility treatments.

were working i.e., employed in paid employment were categorized as fixed working hours, flexible working hours and shift duty and their percentages were 14%, 12% and 1% respectively.

**Table 1.4: Correlation between Work Pattern and Type of Infertility Treatments**

		<b>Work Pattern</b>	<b>Type of Treatments</b>
Work Pattern	Pearson Correlation	1	0.04
	N	300	300
Type of Treatment	Pearson Correlation	0.04	1
	N	300	300

Correlation is non significant

Correlation between work pattern and type of infertility was calculated and it was seen that there was no significant relation between work pattern and type of infertility treatments. Hence, the hypothesis HO2 is accepted as there was no significant relationship found between work pattern and infertility in female population undergoing fertility treatments.

**Conclusion**

Based on the study results it can be deduced that majority of subjects were having sedentary lifestyle and not involving in any kind of physical activity like walking, running, yoga, etc. There is a need for counselling for lifestyle modification.

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