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ORIGINAL PAPER

Knowledge regarding assisted reproductive technology among infertile couples

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ABSTRACT

Introduction*: Infertility is defined as a failure to conceive within one or more years of regular unprotected coitus. Most of the infertile couples are not having adequate knowledge regarding recent advancements in infertility management which is leading to the reduced acceptance of this treatment.* ***Aims****: The study is attempted to evaluate the effectiveness of structured teaching programme on knowledge regarding Assisted Reproductive Technology among the infertile couples in selected hospitals of Guwahati, Assam.* ***Methods****: Sixty infertile participants from the selected hospitals of Guwahati, Assam were selected. A structured questionnaire was developed to assess the pre-test and post-test knowledge of infertile couples. Structured teaching programme was conducted after administering the pre-test. And post test was administered after one week.* ***Results****: The findings of the study revealed that out of 60 infertile participants 50% belonged to age group 35 and above years and 60% of the infertile participants had an education level of graduate and above. The mean post test score (28.85) was higher than the mean pre test score (18.96). The't' value was found highly significant ('t_{59}'= 16.74). So it is evident that post test knowledge scores were higher than the pre test knowledge scores. There was significant association between the knowledge of the infertile participants with educational level.* ***Conclusion****: This study shows that structured teaching programme is very effective in improving the knowledge of infertile couples regarding assisted reproductive technology, but there is a need for conducting such programme frequently.*

Keywords*: Infertility, Infertile Participants, Structured teaching programme, Assisted Reproductive Technology*

INTRODUCTION

A child is a dream of every couple as it brings meaning to their life and immense pleasure of having blessed phase parenthood.[1] Parenthood is a rudimentary human need. Every human being has a desire to become a parent and look after his or her children.[2] The stress of the non-fulfilment of a wish for a offspring has been associated with emotional squeal such as anger, depression, anxiety, marital problems and feelings of worthlessness. Partners may become more anxious to conceive, ironically increasing sexual dysfunction and social isolation and many other psychological problems.[3] Infertility is commonly defined as a failure to conceive within one or more years of regular unprotected coitus.[4] The 12-month timeframe is arbitrary and some couples are able to conceive on their own beyond the one-year threshold.[5] In Latin America, strong social stigma attached to infertility and machismo cause women to blame themselves for infertility[6] while in Mozambique, infertile women are excluded from certain social activities and traditional ceremonies.[7] Majority of the infertile couple are unaware of the reasons for infertility and the remedies available to overcome the problem.[8] Knowledge of infertile couples about **assisted reproductive technology (ART)** is a fundamental parameter to optimize the infertility treatment and conduct it co-operatively.[9] A descriptive study was conducted by Sowjanya G to assess the knowledge and attitude of 50 infertile women regarding ART at Gunasheela IVF centre, Bangalore. Out of 50 subjects' assessment of knowledge regarding ART revealed that majority 64% of them had moderately adequate knowledge, 20% had inadequate knowledge and remaining 16% had adequate knowledge regarding ART.[10] Daniluk JC etal conducted a study to determine the knowledge about fertility and Assisted Human Reproduction (AHR) treatments on 3345 childless women. On analysis the majority of participants rated themselves as having some knowledge or being fairly knowledgeable about fertility and AHR.[11] Different techniques of ART play important roles in

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infertility treatment. The more they know about treatments and their process, the self-consciousness and mental relaxation of patients will be better. Hence, as a first step towards this, investigator have planned to conduct a study to assess the effectiveness of structured teaching programme on knowledge regarding ART among the infertile couples of selected hospitals of Guwahati, Assam.

Objectives: (i) To evaluate the effectiveness of structured teaching programme on knowledge regarding Assisted Reproductive Technology among infertile couples in selected hospitals of Guwahati. (ii) To determine the association between the pre-test knowledge of infertile couples in relation to selected socio-demographic variables viz. age, sex, education, occupation and clinical variables viz. duration of treatment, source of information.

METHODS

It was an experimental study. This study was conducted at Pratiksha hospital, Guwahati, Assam. Sample size of the present study was 60 infertile participants after informed consent. Convenient sampling technique was employed to select sample. Self administered structured questionnaire was used for the study which includes three sections as follows—**Section I** - Consists of socio-demographic and clinical variables of the participants such as age, sex, education, occupation, duration of treatment, source of information. **Section II** - It includes 10 multiple choice questions which assessed the level of knowledge regarding fertilization. **Section III -** It includes 30 multiple choice questions which assessed the level of knowledge regarding infertility and Assisted Reproductive Technology. The reliability was found as r = 0.94 which was considered to be reliable and adequate. The data was analyzed using SPSS software. The data was collected from 9th January, 2017 to 4th February, 2017.

RESULTS

The results and observations of the present study is tabulated and graphed as follows:

Table 1 Pre-test and Post-test level score of knowledge of subjects regarding ART

	Mean	Mean difference	't' value	Median	SD	Standard error
Pre test	18.96	9.89	16.74	20	5.95	0.77
Post test	28.85			29	3.91	0.51

The mean post test score 28.85 was higher than the mean pre test score 18.96. The median post test knowledge score 29 also showed higher than the median pre test knowledge score 20 and the post test score SD=3.91 seemed to be less dispersed than the pre test score SD=5.95. So it is evident that post test knowledge scores were higher than the pre test knowledge scores. The df (59) 't'=2. Since tabulated't' value is less then calculated't' value, we reject the null hypothesis and accept the research hypothesis. (**Table 1**)

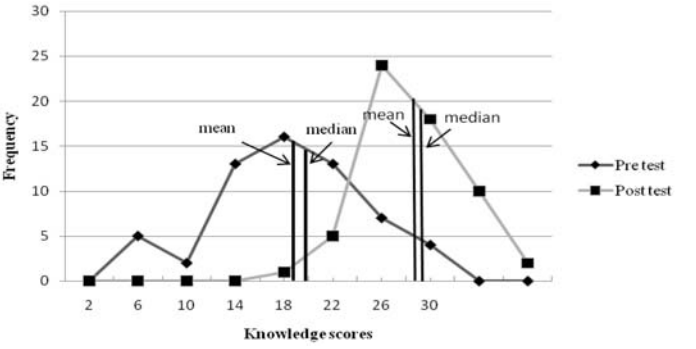

Figure 1 Frequency polygon showing pre-test and post-test knowledge scores

The pre-test and post-test knowledge score of infertile participants regarding Assisted Reproductive Technology was depicted in fig 18 in the form of frequency polygon. In both the pre test and post test frequency polygon mean and median lies close to each other and mean lies to the left of the median which indicates that the scores were negatively scewed. The skewness of pre-test and post-test frequency polygon were (-0.52) and (-0.12). So it was evident that post test knowledge scores of the subjects fall beyond the pre test knowledge scores which indicate that there was a considerable gain in knowledge scores after administration of structured teaching programme.(**Figure 1**)

Association between pre-test levels of knowledge with selected socio-demographic variables

There is significant association of pre-test knowledge of

Table 2 Pre-test level of knowledge with selected socio-demographic variables

Age	**Chi square ($\div^2$)Value**	**Df**	**Tabulated value**	**Significance**
20— 24 years	4.46	6	12.59	**NS**
25— 29 years				
30— 34 years				
35 years and above				
Gender				
Male	5.45	2	5.99	**NS**
Female				
Education				
Primary school	13.65	6	12.59	**S***
High school				
Higher secondary				
Graduate and above				
Occupation				
Unemployed	12.74	8	15.51	**NS**
Government service holders				
Private service holders				
Health personnel				
Business				

S* = Significant at 0.05 level of significance,

NS = Not significant

participants regarding ART with education. Thus the research hypothesis "There is significant association between the existing knowledge scores with selected socio-demographic variables of infertile couples" is accepted.

On the other hand there is no significant association of pre-test knowledge of participants regarding ART with age, gender, occupation (**Table 2**).

Table 3 Pre-test level of knowledge with selected clinical variables

Duration of Treatment	**Chi square ($\div^2$)Value**	**Df**	**Tabulated vale**	**Significance**
Below six month	4.21	4	9.49	NS
Six month to one year				
Above one year				
Source of information				
Health Personnel				
Family	8.93	6	12.59	NS
Friends				
Mass media(TV, Newspaper, Internet, books)				

S* = Significant at 0.05 level of significance,
NS = Not significant

DISCUSSION

In the present study, the mean post test score (28.85) was higher than the mean pre test score (18.96). Present study findings are consistent with the study conducted by Devi AM on the effectiveness of planned teaching programme on ART among 55 GNM III year students of selected nursing school at Mangalore. The mean difference between pre-test (15.25) and post-test (30.50) knowledge score of students on assisted reproductive technology was found to be statistically significant.[12] Again, the study findings also supports the study conducted by Lalithapriya M on knowledge of nursing students regarding ART and effectiveness of planned teaching programme in improving the knowledge in the selected college in Tamil Nadu. The mean percentage knowledge score in pre-test was 39.8 and post-test was 74.5 which is consistent with the present study.[13] Another study conducted by Bennett LR et al to investigated the reproductive knowledge among female Indonesian infertility patients found that knowledge about the causes and treatment of infertility was very poor within the samples which is consistent with the present study.[14] In the present study, while assessing the association between the pre-test knowledge and the selected socio demographic variables result of chi square shows that there were significant association between the pre-test knowledge with Education. On the other hand, chi square value between the pre-test knowledge and the selected demographic variables like age, gender, occupation were not significant at 0.05 levels. Above findings are consistent with the study conducted by Pourmasumi S et al about knowledge of infertile couples regarding ART. This study shows that more educated people had more knowledge. There was no significant relation between duration of infertility, age and gender.[15] This finding was supported by the study done by Sowjanya G to assess the knowledge and attitude of infertile women regarding assisted reproductive techniques. The study reveals that there was a statistically significant association found between level of knowledge and education.[10]

CONCLUSION

Though infertility does not claim an individual life, it inflicts devastating emotional trauma on the individual for being unable to fulfil the biological role of parenthood for no fault of his/her own. Though planned teaching programme is very effective in improving the knowledge of infertile couples regarding ART, but there is a need for conducting such programme frequently.

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