

Research article**Knowledge and attitude regarding assisted reproductive technology among infertile women****Sumi Rajan¹, Vahitha.S², Chitra.T³**¹MSc.Nursing Student, College of Nursing, JIPMER, Puducherry, India.²Research Guide and Lecturer, Department of Obstetrics and Gynecological Nursing, College of Nursing, JIPMER, Puducherry, India³Research Co-Guide and Assistant Professor, Department of Obstetrics and Gynecology, JIPMER, Puducherry, India.**Abstract**

Introduction: Parenthood is a fundamental human need. Pregnancy is a profound experience that is unique among couples in which the outcome and their ability to manage pregnancy are often unpredictable. For many women suffering from infertility; ART is often viewed as a viable alternative. The aim of the study was to assess the knowledge and attitude towards ART among infertile women attending infertility clinic and Gynecology OPD at WCH, JIPMER, and Puducherry.

Material and methods: The study was conducted among 180 infertile women attending the infertility clinic/ Gynecology OPD at WCH, JIPMER, Puducherry. The research design used for the present study was cross-sectional descriptive design and samples were selected by convenience sampling. Formal permission was obtained from the Nursing Research Monitoring Committee and Institute Ethical Committee Human studies, JIPMER. The data was collected with the help of Sociodemographic perform a, structured knowledge questionnaire and a standardized attitude scale for a period of 6 weeks. The collected data were analyzed using descriptive and inferential statistics.

Results: The study identified that majority of the infertile women (75.60%) had poor knowledge, (16.7%) had average knowledge and only (7.8%) had good knowledge regarding the Assisted Reproductive Technology. More than half of the infertile women (82.2%) had favorable attitude, whereas (17.80%) of them had unfavorable attitude towards ART. There was a Positive correlation between knowledge and attitude scores among infertile women regarding ART. The level of knowledge and attitude regarding ART among infertile women were significantly associated with selected demographic characteristics such as educational status, spouse's education, previous information about ART from Health professional, neighbors and media.

Conclusions: The study assessed the knowledge and attitude regarding ART among infertile women. It was found that the majority of the infertile women had poor knowledge regarding ART, but most of them had favorable attitude.

Key words: Infertility, Knowledge, Attitude, Assisted Reproductive Technology (ART), Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER).

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1. Introduction

Pregnancy is the most joyful event in woman's life. It provides a bridge to their future and also enhances their creative and nurturing powers. But some less unfortunate couples are unable to fulfill their dream of having the desired baby because of infertility [1]. Infertility is a very distressing type of crisis. It threatens many aspects of a couple's life not only the partner's relationship with each other, but it also affects their individuality and the

relationship with friends and family [2]. Infertility is the inability to pregnant after one or more years of sexual intercourse without contraception [3]. According to the clinical definition by WHO and ICMART, Infertility is the disease in which failed to achieve a clinical pregnancy after 12 or more months of regular unprotected coitus [4].

Widge et al. conducted a study to assess the attitudes towards infertility among infertile couples revealed that

infertility is a major problem that instability and painful experiences in victims of infertility. And also creates frustration, powerlessness and inadequate self-esteem in both partners [5].

Moghadam et al. in 2014 published an article on "The global trend of infertility: an original review and meta-analysis" in International Journal of Epidemiologic Research stated that approximately 10% of the world's population suffers from infertility. The incidence of female infertility is rising and varies from 10 to 20%. The rapid growth in the infertility rate is due to the negative impact of couples on infertility, aspects of life, need for treatment and infertility support programs [6]. The management of infertility includes both physical and emotional care of couples. The quality of infertility care depends upon the awareness of the couple about the administration of adequate material resources and its efficient utilization. Infertility treatment that is focusing on various measures, it may range from simple education to counseling about the use of medicines and highly sophisticated medical procedure like Assisted Reproductive Technology [7].

According to CDC's Report, in the United States during 2012, the utilization of ART is still relatively small as compared to the estimated needs. Many factors like misconception, malpractices and cost effectiveness may inhibit the women from obtaining such treatment [8]. Adenike et al. conducted a study in 2014, among 257 women revealed that majority of them rejected ART because of various aspects such as high cost, misbeliefs, and misconceptions. And also identified that the increased needs for imparting the awareness and developing positive attitude regarding ART among the public [9].

Blazeviciene et al. conducted a case study in Ludhiana on 2014, identified that there were some disparities in the opinion about Reproductive technologies among the fertile and infertile woman [10].

Fabamwo et al. conducted a descriptive study in 2013 among 166 infertile women stated that 137 women would accept ART but 29 would not because of lack of proper awareness regarding ART. Among them, about 42.2% of infertile women had only poor knowledge [11]. Considering the magnitude of the problems related to infertility and lack of awareness on infertility solutions especially regarding Assisted Reproductive Technology, there seems to be huge unmet demand for appropriate management of these problems. And also the knowledge and attitude towards ART are essential for infertile couples before the treatment. Therefore assessing the same will provide the health care providers with data that can be used to identify the need for conducting the awareness program for improving knowledge and positive attitude among infertile women on Assisted Reproductive Technology. And also will help to

motivate them to take appropriate decision for selecting and utilizing the suitable method of ART.

Objectives:

- To evaluate the knowledge regarding Assisted Reproductive Technology among infertile women attending the infertility clinic/Gynecology OPD at WCH, JIPMER.
- To assess the attitude towards Assisted Reproductive Technology among infertile women attending the infertility clinic/Gynecology OPD at WCH, JIPMER.
- To identify the relationship between knowledge and attitude regarding Assisted Reproductive Technology among infertile women.
- To determine the association of knowledge and Attitude regarding Assisted Reproductive Technology with selected Sociodemographic characteristics.

Assumptions:

- **A1:** There is a significant correlation between knowledge and attitude of infertile women regarding ART.
- **A2:** There is a significant association of knowledge regarding ART with selected Sociodemographic characteristics.
- **A3:** There is a significant association of attitude regarding ART with selected Sociodemographic characteristics.

2. Methods and materials

Research approach and research design: A Quantitative descriptive approach and cross-sectional descriptive design was adopted for the study. The structured knowledge questionnaire and a standardized 5 point Likert scale were used to assess the knowledge and attitude of infertile women towards ART.

Setting of the study: The study was conducted at Infertility clinic and Gynecology Outpatient department, JIPMER.

Sample and sampling technique: The samples for the study included 180 infertile women who had attended Infertility clinic and Gynecology Outpatient department, JIPMER by non- probability convenient sampling technique.

Plan for data analysis:

Descriptive statistics

- Frequency and percentage distribution were used to study the demographic variables of the infertile women.

- Mean and standard deviation were used to determine the level of knowledge and attitude of infertile women on ART.

Inferential statistics

- Spearman's co relation was used to correlate the knowledge and attitude of infertile women on ART.
- Chi square test was used to find out the association between demographic variables and level of knowledge and attitude of infertile women on ART.
- Level of significance was fixed at 5% level.

3. Result

The demographic data showed that highest percentages (38.3%) of the women were in the age group of 22-29 years. Majority (88.3%) of the women were Hindus. Highest percentage (33.9%) of the women had secondary education. Highest percentages (67.8%) of the women were house-wives. Highest percentage (33.3%) of the women had spouse with secondary education. More than half (65.5%) of women were in belongs to nuclear family. Highest percentages (69.4%) of the women had obtained previous information regarding ART from Health professional.

Description of knowledge scores among infertile women.

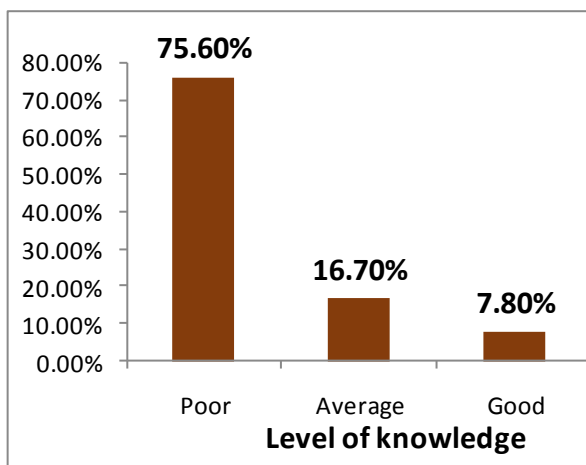


Figure No 1: Bar diagram describes percentage distribution of infertile women according to their knowledge scores.

The data presented in the figure showed that majority of the infertile women (75.60%) had poor knowledge and (16.7%) of them had average knowledge. The remaining only (7.8%) had good knowledge regarding the Assisted Reproductive Technology.

Description of Attitude scores among infertile women.

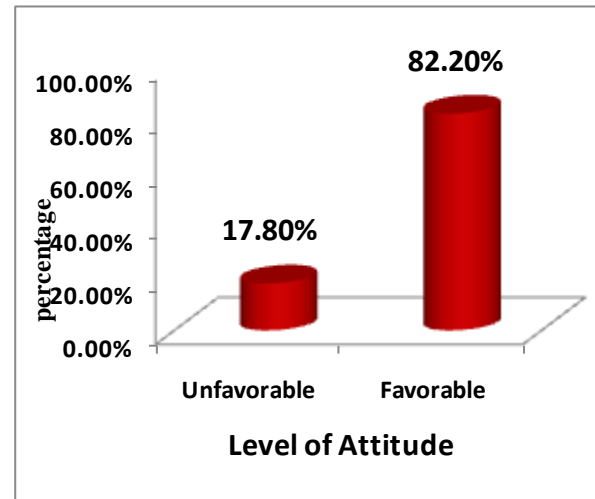


Figure No 2: Diagram representing Level of attitude towards Assisted Reproductive Technology among infertile women.

The data presented in the figure showed that among 180 infertile women, (82.2%) of the infertile women had a favorable attitude towards Assisted Reproductive Technology and remaining (17.8%) of them had an unfavorable attitude.

Correlation between knowledge and attitude regarding ART among infertile women

Knowledge score Median (IQR)	Attitude score Median (IQR)	Spearman's Correlation (Rho)	P value
4 (3 -6)	102 (93 -112)	0.61**	0.001

The above table shows that a positive correlation that found between knowledge and attitude among infertile women regarding ART. (Rho: 0.61**)

Association of knowledge and attitude scores with selected sociodemographic characteristics

Association of knowledge with selected Sociodemographic characteristics revealed that there was a statistically significant association found between knowledge and demographic variables such as education { $X^2 = 125.417$ (2 df)}, spouse education { $X^2 = 102.385$ (10df)}, previous information about ART from health professional { $X^2 = 15.914$ (2 df)} and information from media { $X^2 = 28.422$ (2 df)} at $p < 0.05$ level. Association of demographic variables with attitude of infertile women revealed that there is statistically significant association found between attitude and selected Sociodemographic characteristics such as education { $X^2 = 21.153$ (4 df)}, previous information from health professional { $X^2 = 12.109$ (1 df)} and information from neighbor { $X^2 = 11.512$ (1 df)} at $p < 0.05$ level.

4. Discussion

The present study findings regarding first objective revealed that more than half of the infertile women (75.6%) had only poor knowledge and not much aware about ART. Adesiyun et al. 2011 conducted a study to assess the perception of assisted reproductive practices revealed that majority had inadequate awareness and unfavorable perception therefore public sensitization regarding assisted conception is necessary to overcome the disbeliefs towards the same [12]. This shows that efforts can be undertaken by the maternity health nurse to educate the infertile women regarding ART, which may increase their knowledge and improve positive attitude towards ART.

The findings of second objective highlighted that majority (82.2%) of infertile women possess favorable attitude and the remaining (17.8%) had an unfavorable attitude. Rajinikanthan et al. conducted a study in 2016 revealed that nearly 80% of infertile couples had favorable attitudes towards the embryo donation program and psychological counseling also strongly recommended to the majority of the respondents for both donor and the recipient of the embryos [13].

The results obtained from third objective states that the level of knowledge is positively correlated with the attitude towards ART. The infertile women who have awareness regarding ART possess favorable attitude. Sowjanya et al. conducted a study in 2011 revealed that infertile women with better knowledge about ART show favorable attitude towards the same [14].

The findings of fourth objective revealed that infertile women with graduation or high-level education had some better knowledge regarding ART when compared to infertile women with low-level education. Infertile women who are having spouse with higher secondary and graduation or high-level education also had some knowledge regarding ART. Infertile women who had obtained previous information about ART from Health professional as well as from media shown good and average knowledge regarding ART. Infertile women who have higher secondary and graduation or high-level education also had a favorable attitude towards ART. Deepthi et al. conducted a descriptive cross-sectional study in 2014 revealed that majority of samples 65% had poor knowledge and 91% of them had the favorable attitude on ART. The study also revealed that there was significant association of knowledge scores with wife's age, education status and marital relationship whereas no association with religion, wife's occupation and husband's age and occupation [15].

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Conclusion

The present study revealed that majority of the infertile women had poor knowledge but most of them had a favorable attitude towards ART. Knowledge of infertile groups about ART is the fundamental parameter to optimize the infertility treatment. In the current scenario, though the treatments were available many factors inhibited them from obtaining such treatment. It is important that professional nurses should learn more about infertility treatment and its options, as the public looks to nurses for guidance in all aspects of healthcare. The caring aspect of professional nursing is an essential component in molding a positive attitude among infertile women.

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