

ORIGINAL ARTICLE

Awareness Regarding Causes of Infertility among Out-patients at a Tertiary Care Hospital in Lahore, Pakistan

ZOBIA JAWAD¹, RUBINA MUSTAFA², ANIKAH KANWAL³, SADIA KHAN⁴¹Assistant Professor, Obs/Gynae, Lady Willingdon Hospital, King Edward Medical University, Lahore²Senior Registrar Obs/Gynae, Lady Willingdon Hospital, King Edward Medical University, Lahore³Senior Registrar Obs/Gynae, Lady Willingdon Hospital, King Edward Medical University, Lahore⁴Assistant Professor Obs/ Gynae, CMH MurreeCorrespondence to: Zobia Jawad, Email: zobiajawadnaseem@gmail.com, Cell: 03215175875

ABSTRACT

Objectives: To assess the general awareness regarding infertility and its causes; and identify, key knowledge gaps if any, related to the subject.

Study Design: A cross-sectional study.

Period: January, 2019 to December 2019.

Setting: Lady Willingdon Hospital, Lahore, Pakistan.

Material and Methods: Data collection was done by convenient sampling technique, from the 500 female participants (18 years and above) through an interview-based questionnaire (Cardiff Fertility Knowledge Scale, CFKS) , there was an assessment of the knowledge related to the causes leading to infertility such as lifestyle, smoking, use of contraception, infections of genital tract etc. There was determination of the association between socio-demographic variables and their mean knowledge scores. Data were analyzed using SPSS version 20.

Results: The majority of the participant population (67%, n=340) was married, about more than half of the population was unemployed (n=280) compared to the employed population (n=220). While, nearly half of the participants (n=248, 49.5 %) did not believe that males and females contribute to infertility equally. The mean knowledge score of the study participants was 12.95 ± 2.48 points. The participants (n=165, 32%) believed that the previous usage of the intra-uterine device leads to infertility. Moreover, more than half of the participants (n=278, 55.9%) wrongly believed that a male partner achieving erection is a sign of fertility. Education (p=0.019) and marital status (p=0.03) were the only demographic factors that showed major differences with mean knowledge scores.

Conclusion: It was found out that the awareness in the general population about the infertility and its causes was lacking. It is important that the education regarding the fertility related issues be more common, that can be planned through various awareness programs, workshops and seminars. This in turn can help the couples by directing them to seek timely and more focused medical help.

Keywords: Infertility, knowledge, awareness, developing country.

INTRODUCTION

The term infertility is used, when a couple fails to conceive after one year of regular sexual intercourse without using contraception. Infertility is of two types' i.e primary infertility and secondary infertility. Primary infertility is referred when a couple fails to conceive after one year of unprotected sexual intercourse but without previous history of conceptions/ pregnancies. Secondary infertility is the term used, when couples have failed to conceive but they possess previously conceived offspring¹. Approximately 48.5 million couples are affected by the infertility globally². In developing countries the raised incidence of infertility can be linked with the lack of awareness about this problem, its causes and the management options. In Pakistan the prevalence of problem is around 22%, while primary infertility is found in 4% of children the affected couples^{3,4}. Sub fertility is always disturbing for couples; it can cause anxiety, anger, aggression and depression in the life of the couple, especially in the case of female partner where, there can be self blame and suicidal ideation^{5,6}. A study was conducted (Hakim et al.) in Pakistan in which they evaluated/studied the social and psychological impacts in cases of secondary infertility, it showed that approximately more than two thirds (67.7%) of women, suffering from infertility had to combat marital disharmony⁷. Also, these women were found to receive threats i.e divorce (20%) by their in laws or husbands⁸. In spite of a rise in the cases of infertility, the knowledge about the risk factors of this problem is not adequate especially in the developing or underdeveloped countries of the world. There was another study performed for the evaluation of awareness about the subject of infertility, among the women, attending a tertiary care hospital. It showed that about three-quarters (76%) of the women were found, not to have an adequate information about the fertile period in their monthly cycle also they were deprived of the timely treatment for their fertility related problems and timely infertility management⁹. Another study was performed regarding the alternative strategies

for achieving the pregnancy/conception, showed that, although people are well aware about the options of assisted reproduction i.e invitro fertilization, around 39% of the cases overrated its efficacy¹⁰. However, to the best of our understanding, very few studies have been conducted in our Pakistani population.

Objective: To assess the awareness and general knowledge about infertility and its causes, also to identify the major knowledge gaps about this subject.

MATERIALS AND METHODS

Study Design: A cross-sectional study

Duration: This study was conducted from January 2019 to December 2019.

Setting: An out-patient department of Gynae/obstetrics in a tertiary care hospital in Lahore, Pakistan.

Sample size: Total of 500 females attending an outpatient department of Gynae/Obstetrics, Lady Willingdon Hospital, Lahore.

Inclusion Criteria: Females, 18 years and above, attending various Gynecological outpatient clinics.

Healthcare staff or those who were diagnosed with sub fertility were excluded from this study as there were chances of a biased opinion, as they are well informed about this subject.

Sampling Technique: A technique of convenient sampling was used. There was an interview based questionnaire. Interviewers were trained to ask the questionnaire in Urdu for better understanding and to reduce the bias. Informed consent was taken. The questionnaire was clear, simple and concise.

The designed pro-forma / questionnaire had three parts. The first part/section was related to the demographic characteristics of the females like gender, age, level of education, duration of infertility, number of children and marital status. The second section was about the general perception of the participants. The third part contained questions in order to assess the knowledge related to the fertility like facts, myths and associated risks. These

questions were derived from the Cardiff Fertility Knowledge Scale (CFKS; Bunting et al., 2013)

The rating as 'true', 'false', or 'do not know'

Data Analysis Procedure: The 'do not know' response was coded as incorrect. Analysis of data was performed by using (SPSS), version 20.0.

Frequencies and percentages were used for the categorical variables, while means and standard deviation for the continuous variables. A p-value of $p < 0.05$ was considered significant.

Table 1: The proportion of the participants with correct responses for each knowledge question. (PID, Pelvic inflammatory disease)

Knowledge assessment questions	n (%)
After 36 years of age fertility potential of a woman decreases	335 (65%)
A couple is defined as infertile if they did not achieve pregnancy after 12 months of regular sexual intercourse without contraception	235 (47%)
Smoking has a negative effect on female fertility	320 (64%)
Smoking has a negative effect on male fertility	224 (44.5%)
Infertility affects 10% of the couples	310 (60%)
If a man is considered fertile if he produces sperms	340 (68%)
These days a woman in her 40s has a comparable fertility as a woman in her 30s	250 (50%)
Healthy lifestyle has a positive impact on fertility	355 (70%)
Mumps after puberty can cause fertility problems in men	301 (60%)
A woman shall be fertile even if she does not menstruate	379 (75%)
A woman having a weight of more than 13kg, may not get pregnant	210 (41%)
People having a sexually transmitted disease will likely to have reduced fertility	310 (60%)
Having abnormal menses can causes infertility	300 (60%)
Blocked tubes, in females can lead to infertility	440 (90%)
Genital tract infections in females i.e. PID in can lead to infertility	370 (74%)
History of use of contraceptive pills in females can lead to infertility	135 (27%)
Females, previously using of intrauterine device can be affected by infertility	165 (32%)
Supernatural phenomenon/ Jinns leads to infertility	340 (69%)
Infertility can be due to the regular exercise	350 (70%)
Psychological stress can lead to infertility	300 (60%)
Infertility is not caused by the female and male factors equally	248 (49.5%)

Table 2: Co-relation of mean knowledge scores with social and demographic features/characteristics.

Characteristics	n %	Mean Knowledge Scores	p-value
Age (Years)			0.649
18-25 years	130 (27%)	13.11+ 2.5	
26-40 years	149 (30%)	12.9+ 2.7	
41-60 years	160 (31%)	12.64+ 2.53	
61-80 years	45 (8%)	12.66+ 2.50	
Educational level			0.019
Without having formal education	66 (13%)	12.25+ 2.52	
Primary	82 (15%)	12.62+ 2.48	
Matriculation	96 (19%)	12.16+ 2.76	
Inter	98 (19%)	12.4+ 2.23	
Under grad	85 (17%)	12.43+ 2.22	
Graduate	40 (8%)	13.70+ 2.74	
Others	5 (1%)	12.5+ 3.56	
Employment Status			0.977
Unemployed	280 (56%)	12.79+ 2.52	
Employed	220 (44%)	12.84+ 2.42	
Marital Status			0.03
Married	340 (67%)	12.63+ 2.5	
Single	135 (25%)	12.33+ 2.27	
Children			0.166
Yes	289 (59%)	12.84+ 2.48	
No	211 (42%)	12.05+ 2.49	

* $p < 0.05$

DISCUSSION

This observational study pointed out that the knowledge regarding infertility was lacking in the participants, as the mean knowledge score of the participants was low. But according to the global data, the knowledge related to this topic is limited. A study that included over 17,000 people showed that knowledge about fertility was inadequate amongst the participants¹¹. Also, our results showed that about one third of the selected candidates thought that the females are responsible for the infertility, due to this belief the females have to face physical and mental violence and this is more prevalent in the females of the poor economic class.⁶⁻⁸

Our study, also pointed out that less people had the knowledge about the biological aspects of conception and the decline in fertility potential after the age of 34-35 years¹². Although most of the participants (90%) answered correctly that blocked fallopian tubes cause infertility but 40% of the participants did not formulate that menstrual irregularity can be related to the infertility. Similarly only 60% participants knew the role of STIs in infertility¹³.

Moreover, we found that the awareness about infertility and its risk factors was dependent upon the level of education of the participants¹⁴.

Another notable finding of our study was very few participants (27%) rightly answered about the relationship of oral contraceptive pills with infertility. This belief has resulted inadequate use of the contraceptive methods as they are afraid that they may cause infertility thus resulting in increased parity¹⁵. Also, less than three-fifths of the study group thought that obesity is a cause of infertility. In women, obesity is found to be related to the menstrual cycle regularity, miscarriage, and an ovulation¹⁶.

In our study, one-third of the participants believed that paranormal powers/ Jinns are being responsible for their fertility related problems. Such findings may be due to different cultural beliefs in different groups of people, in Pakistan. We found similar pattern of changes in another study performed by Bunting and Boivin¹². These trends may be due to the different ideas, cultures, races, living conditions etc throughout the world so there is an increased likelihood of different misconceptions about the subject of reproductive health especially in those areas where infertility is considered as a social taboo. In this modern era, the firm beliefs about the super natural powers still exist especially in the cases of infertility thus this group start inclining to the faith healers for their treatments. Hence the medical treatment is hampered leading to further delays in the management of their problem. This was also found in a study showing that about 35- 44% of outpatients in Saudi Arabia considered a faith healer (sheikh) as a management option for their fertility related issues¹⁷.

In our study, the mean infertility knowledge score of those participants who were single was considerably higher than that of the married participants, which is in accordance to the results of another study¹⁷. In Iran a study was performed in order to assess the general health of couples with their fertility related problems, it showed that the participants from a low-socioeconomic class reported poor general health scores as compared to those from a upper socioeconomic background¹⁸. These results showed up that lack of fertility knowledge, unhealthy life style, and untimely treatment for infertility is more prevalent in low-socioeconomic group. Thus, higher educational status and better societal class, foretell improved and better knowledge levels about infertility, as sex education is not included in the syllabus of most of the public educational institutions so majority of the youth is deprived of such an important of knowledge.

Our study has some limitations, like the data was collected from a single place also due to the convenient sampling technique the data may be not a true representative of the population at large. Also more studies should be performed/carried out on a bigger and a more varied population if it is desired to authenticate such findings.

CONCLUSION

The results of our study show that the awareness about the infertility and its causes, amongst the participants were lacking. Although it is very important area and the knowledge related to the infertility should be well spread and the misconceptions related to the topic should be well dealt so that timely treatment can be provided. The knowledge and awareness can be created via television and other social media campaigns. These findings would help in the development of brochures and leaflets for the learning of the visiting patients.

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