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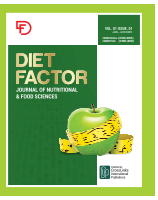

Original Article

Causes of Infertility Among Married Women Visiting Outdoor Hospitals in Lahore, Pakistan

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ABSTRACT

Infertility is defined as the inability to conceive following a reasonable period of unprotected sexual activity without the use of contraception. **Objective:** To find the determinants of infertility among married women visiting public Hospitals, Lahore. **Methods:** A cross sectional study was conducted at Public hospitals in Lahore during 4 months. A questionnaire was used to collect data from 100 married women. The study included all adult married women with infertility. SPSS version 21.0 was used to analyze the data. **Results:** The results revealed that the minimum age of participants was 20 to 30 years and the maximum was 30 to 40 years. The minimum weight of the participants in the study is 40 to 50 kg and maximum value was 50 to 60 kg. Infertility was found in 50% of women who had previously been treated for infertility, and in 52% of women who were experiencing trouble getting pregnant. Endometriosis, the most prevalent cause of infertility, was detected in 45 percent of the subjects. 57% participants has been attempting pregnancy in months and 43% were attempting in years. **Conclusions**: With 60% of the participants in this study developing glucose tolerance, which can result in celeic diseases, women who experience unexplained infertility or recurrent miscarriages are also more likely to experience celeic sickness. In order for medical experts and the government to be able to provide infertility care, further research is urgently required to learn more about the current state of fertility and associated risk factors.

INTRODUCTION

Infertility is a reproductive system condition characterized by the lack of ability of a sexually active, non-contraceptive couple to obtain conception in one year after failing to attain being pregnant for 365 days or greater with frequent unprotected sexual intercourse [1]. The period of sexual exposure, frequency of coitus, and age of the pair all affect the couple's chances of conceiving. Normal, younger couples have a 25% chance of conceiving after 30 days of unprotected intercourse; 70% of couples conceive after 180 days, and 90% of couples conceive after a year. After 12 months and a 1/2 of a year, just 5% of couples will conceive. Infertility prevailing in Pakistan is 22% and of which 4% is primary infertility and 18% is secondary infertility [2]. It is divided into two categories: primary and secondary [3]. Primary infertility refers to a patient's inability to conceive after a previous attempt, whereas secondary infertility refers to a patient's failure to conceive after a previous attempt [4]. Female infertility is a significant concern in today's world for a variety of causes. Many childless couples struggle with mental and emotional issues. Even if the majority of instances are unsolved, female infertility can be blamed for a significant proportion of them [5]. It puts a lot of financial strain on families and societies. When a couple has children, their marriage is considered successful. Failure to do so frequently results in troubled marriages and divorces [2]. Infertility in a couple can be caused by issues with either the woman or the man, but not always both. It was observed that 1/3rd of the time, fertility difficulties are caused by males, 1/3rd by women, and 1/3rd by both men and women [6]. According to local

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demographics, infertility causes fluctuate. Infertility can be caused by a sort of factors, including reproductive system problems, sexually transmitted symptoms illnesses, and hormonal imbalances in both men and women. Obesity, diet, smoking and alcohol intake, mobile, smartphone use, sexual violence, and anxiety have all been identified as pregnancy disruptors [7]. In the past, illnesses like gonorrhoea and sexually transmitted diseases were the leading causes of infertility; however, these have now been supplanted by stress, male factor, and different factors, and regardless our arsenals, a substantial sizeable part of infertility stays unexplained. In addition, the growing occurrence of scientific troubles along with diabetes, hypertension, and hypothyroidism, in addition to way of life ailment like as weight problems and addictions among the young, has been discovered to make contributions to infertility [8]. To begin with, many of the characteristics frequently associated with fertility, such as BMI, antimüllerian hormone, smoking, and alcohol consumption, are not independent predictors of results. Second, the fact that age predicts primary outcomes is expected and can be interpreted as a validation of the study's concept and execution. The third finding, which was rather unexpected, was that income influenced fertility outcomes. After age and treatment type, income is the third most powerful predictor [9]. Hypothyroidism, hyperprolactinemia (high levels of the male hormone), and luteal phase defect (poor progesterone) are only a few of these conditions. Hormonal imbalances are a leading cause of female infertility. Endometriosis is an inflammatory illness caused by ectopic endometrial implants that is caused by oestrogen. Endometriosis affects between ten and fifteen percent of women of childbearing age [10]. Endometriomas treatment is a constant difficulty for gynaecologists, as is determining the optimum treatment. Treatments are typically dependent on the clinical condition of the patient and must be tailored to the patient's specific needs, with the goal of reducing pain, enhancing fertility, or both [11]. Untreated sexually transmitted contamination (STIs) are among the variables that harm men's and women's reproductive systems [12].

METHODS

A cross sectional study was conducted at Public hospitals in Lahore during 4 months, from September to December 2022. Ethical approval was taken from IRB of The University of Lahore, Lahore, Pakistan. A pre-tested questionnaire was used to collect data from 100 married women through convenient sapling technique. The study included all adult married women with infertility. Prior written inform consent were taken from all the participants. SPSS version 21.0 was used to store and analyze the data.

RESULTS

The results revealed that the minimum age of participants was 20 to 30 years, and the maximum was 30 to 40 years. The minimum weight of the participants in the study is 40 to 50kg and maximum value was 50 to 60kg.

Frequency Distribution	Minimum	Maximum
Age	1	3
Weight	1.00	3.00

Table 1: Frequency distribution of patients age and weight

57 participants that has been attempting pregnancy in months and 43 were attempting in years and the previous pregnancies and outcome numbers was 45 in live birth and 55 were miscarriages.

Previous Pregnancies and Outcome	Percentage
Live Birth	45%
Miscarriages	55%

Table 2: Frequency distribution of live birth and miscarriages

The 52 women were having difficulty in pregnancies and 48 were well. 50% women have been previously treated for infertility or 50% not treated. In the study 46% families has the history of infertility and 54 has no history yet. 50 participants think spouse is responsible for infertility and 50 participants are not yet thinking about this. 48 women taking medications regularly on daily basis and 52 were not taking. 30 women had pain with periods and 47 women had no pain or 23 had suffering from severe pain.

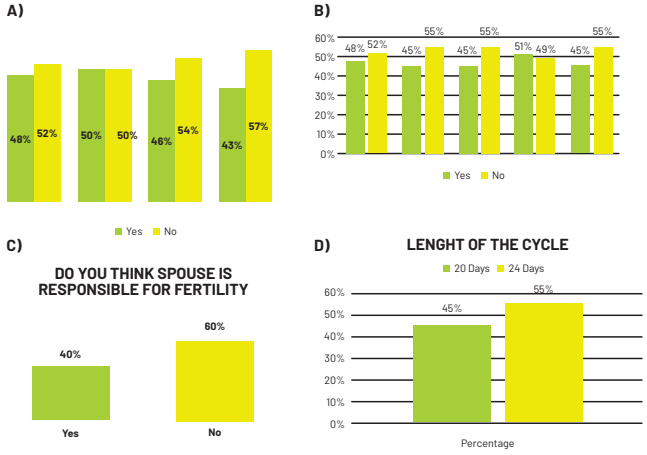

Figure 1: A) Difficulty in Pregnancies B) History of fertility C) Responsibility of spouse for fertility D) Length cycle of periods

55% women were vegetarian and 45% were eating all round food. 45 participants were diagnosed with endometriosis and 55 participants were not diagnosed. 40% participants were taking folic acid supplements and 60% were not taking folic acid supplements. 40% women has lactose intolerance allergy and 60% women has glucose intolerance allergy. Round about 44 women were taking multivitamins and 54 women were not taking multivitamin and 2 women were taking sometimes. In the study, 45 participants were suffering from hypertension for 6 weeks

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and 55 participants were suffering from 6 months. 51 participants has a problem with sense or smell and 49 participants has no problem yet. 40% women were treated for pelvic infection and 60% were not treated yet.

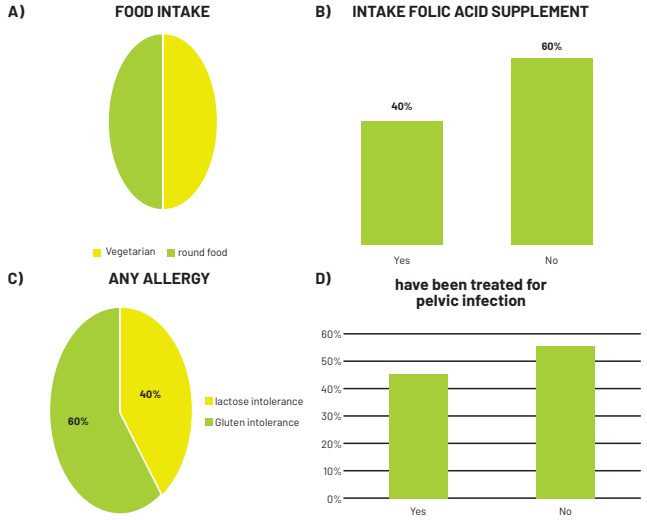

Figure 2: A) Food Intake B) Intake of Folic Acid Supplement C) Lactose vs gluten intolerance D) Pelvic Infection

DISCUSSION

The purpose of this study is to find the determinants of infertility among married women attending public hospitals in Lahore, Pakistan. Data from the married women who full filled the criteria was collected regarding infertility related questions. Our study showed that, 46% of families had a history of infertility, and 50% people believe that assume is to blame for infertility, while the other 50 haven't given it a second thought. Liu *et al.*, claims that between 2009 and 2012, Infertility rates were 13.6 % and 8.5 % after 12 months and 24 months, respectively [13]. According to our study the 52 women were having difficulty in pregnancy and 48 were well. 50% women have been previously treated for infertility or 50% not treated. In the study 46% families has the history of infertility and 54 has no history yet. On the other hand, a study by Akalewold *et al.*, the prevalence of infertility was 27.6% among women attending gynecologic clinics in three public hospitals in Addis Ababa, Ethiopia. Infertility, both primary and secondary, was found to be prevalent in this study, which was higher than the WHO global estimate[14]. According to our study, 52 women were having difficulty in pregnancies and 48 were well. 50% women have been previously treated for infertility or 50% not treated. In the study 46% families has the history of infertility and 54 has no history yet. 50 participants think suppose is responsible for infertility and 50 participants are not yet thinking about this. According to Briceag *et al.*, when the egg is unable to move down the tube due to a blockage, this is known as tubal factor infertility [15]. This can happen on one or both sides, and it can cause up to 30% of female infertility. Results showed that, 46% of families had a history of infertility, and 50 people believe that assume is to blame for infertility, while the other 50 haven't given it a second thought. According to Zhou *et al.*, the overall prevalence of infertility in China was 15.5% among women 'at risk' of pregnancy and 25.0% among women trying to conceive [16]. This is supported by the findings of this study, which show that people with irregular coitus have a higher risk of infertility than people with regular coitus. According to our study, out of 100 married women who are attending public hospitals only 40% of them taking folic acid while 60% said no. A study by Murto *et al.*, in 2015 concluded that unexpected infertility was linked to significantly higher median plasma folate and lower median plasma homocysteine concentrations than fertile women (both p 0.001), but no link between folic acid supplementation or folate status and pregnancy outcome was found [17]. According to the findings of our study, 60% of 100 married women who visited public hospitals for infertility had gluten intolerance, with the remainder having lactose intolerance. According to Pourhoseingholi (2022), gluten-related illnesses (GRDs) are the most common gastrointestinal maladies, with a global prevalence of 1% to 1.4%. Women who have unexplained infertility or recurrent miscarriages are also at a higher risk of getting CD[18]. Half of 100 married women who visited public hospitals for infertility were vegetarians, while the other half ate a variety of meals, according to our data. Grieger *et al.*, published a study in 2018 that looked into the relationship between eating habits and infertility in women. According to studies, women who ate dark green leafy vegetables, fruit, and milk or curd had a lower risk of infertility. Eating a plant-based diet rich in fruits and vegetables has been shown to boost the odds of natural conception and minimize the time it takes to become pregnant [19]. According to our study results the 52 women were having difficulty in pregnancies and 48 were well. 50% women have been previously treated for infertility or 50% not treated. In the study 46% families has the history of infertility and 54 has no history yet. 50 participants think suppose is responsible for infertility and 50 participants are not yet thinking about this. According to AlTaee *et al.*, the prevalence of infertility was 3.3%, and almost half of the couples experiencing primary infertility. Government employment, increased duration of bleeding days and duration of infertility were associated with increased odds ratio for the primary infertility [20]. In our study the 60% women has 24 days of length cycle and 40 women has 20 days of cycle. 48 women taking medications regularly on daily basis and 52 were not taking. 30 women had pain with periods and 47 women had no pain or 23 had suffering from severe pain. According to Javaid et al., out of 2657 patients,

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186 (7%) were infertile. Different reasons of infertility were discovered using ultrasound, laparoscopy, and HSG [21].

CONCLUSIONS

Infertility was found in about half of women who had previously been treated for infertility, and in 52% of women who were experiencing trouble getting pregnant. Endometriosis, the most prevalent cause of infertility, was detected in 45% of the subjects. Almost half of the population's infertile women had not sought medical help. Study also revealed that just a small percentage of women were taking folic acid on a regular basis. Women who have unexplained infertility or recurrent miscarriages were also at a higher risk of having celiac sickness, with 60% of those in this study acquiring glucose tolerance, which can lead to celiac disorders.

Conflicts of Interest

The authors declare no conflict of interest

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