

Epidemiologic survey on the Major causes of Primary infertility in women's referred to infertility center in Al-Imam Al-Hussein Teaching Hospital in Thi-Qar Governorate

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ABSTRACT

Background: Infertility is seen as a serious health-care issue in some societies. The widespread nature of this problem amplified its significance. Environmental and acquired risk factors have been linked to a large percentage of infertility cases. Different environmental factors underscored the importance of researching the various causes of infertility in each place.

Objectives: This study was aimed to identify the major causes of primary infertility in infertile women and to find out relationship between causes of infertility and some sociodemographic variables.

Methodology: 200 infertile women who were sent to the infertility center at Al-Imam Al-Hussein teaching hospital between 2020 and 2021 were evaluated in this cross-sectional descriptive study. The only government-run infertility center in Thi-Qar is this center. Census-based sampling was used. Medical evaluations and test results were used to learn more about the women. The mean, standard deviation, and descriptive statistics like frequencies and percentages were utilized to analyze the data.

Result: Primary infertility was prevalent among women who went to the infertility center at Imam Hussein Teaching Hospital in Dhi Qar Governorate, and the reasons were as follows (polycystic ovarian syndrome, uterine or cervical causes, unknown causes, premature ovarian deficiency, hypothalamic disorders, endometriosis, elevated prolactin level, damage to the fallopian tube). There is a significant relationship between polycystic ovarian syndrome with age and weight.

Conclusion: In our study, the etiology pattern of female primary infertility was similar to many other patterns described presented by the (WHO). However, ovulation abnormalities are significantly more common than in another research, which calls for further analysis.

Keywords: Epidemiologic survey, Causes, Primary infertility, Thi-Qar Governorate

INTRODUCTION

Infertility is defined as the inability to have kids after a year of regular intercourse without the use of family planning to prevent pregnancy¹. In the past, illnesses like gonorrhoea and sexually transmitted diseases were the leading causes of infertility; however, these have now been supplanted by anxiety, With other elements, and in spite of our arsenals, a sizable chunk of infertility is still unknown. Additionally, it has been discovered that the issue of infertility is exacerbated by the increased prevalence of lifestyle diseases like obesity and addictions as well as chronic illnesses like diabetes, hypertension, and hypothyroidism among young people². Infertility can be caused by a variety of causes, including physical, physiological, and genetic variables. Fertility is influenced by a variety of environmental and acquired variables, which can lead to infertility. The most prevalent reasons of infertility include menstrual and ovulation disorders, as well as uterine problems.

The etiology of infertility, The frequency and patterns of infertility reasons vary depending on the region. This imbalance is brought on by variations in environmental factors linked to reproductive behaviors, such as age at marriage, pollution, smoking, and alcohol misuse, as well as modifications in diet and way of life³.

MATERIAL AND METHODOLOGY

1.Design of the Study: Conducted a cross-sectional descriptive research to evaluate major causes of infertility in women was conducted for a purposive non probability sample of two hundred infertile women who attending Al-Imam Al-Hussein teaching hospital infertility center.

2.Settings of Study: Infertility center in Al-Imam Al-hussein teaching hospital which is located at center of Dhi_qar province and it is only center for infertility in Dhi_qar province.

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3. Sample of Study: Out of 200 women, a non-probability (purposive) sample was chosen. The distribution of the study samples was as follows: Inclusion requirements are Women Who have been , have infertility for over a year infertility for more than year after having first child, women in reproductive age, inpatient. Exclusion Criteria: unmarried Women, women who were irresponsible, discourteous, and refused to cooperate, women with psychiatric disease and women who have children. The study was carried out in the infertility center at Al-Imam Al-Huseein teaching hospital between 2020 and 2021.

4. Construction of Study Instrument: The instrument Design and constructed by investigators it it's based on literature clinical background and previous study.

The study instrument consist of three part and these parts relate to the following:

Part I: Socio- Demographic Data: This section was intended to have five items that indicated the general information on women, including age, weight, smoking, place of residence, and sexual history (communicable illness).

Part II: Causes of Infertility in Women: This part include (5) items which related to major causes of infertility in women as ovulatory dysfunction, Damage to the fallopian tube, endometriosis, Uterine or cervical causes and unknown infertility.

5. Conducting Pilot Study: A pilot study on fifteen (15) women who agreed to participate in the study was done before data collecting began.

- Find out if the questionnaire is reliable.
- Calculate the length of time needed to acquire the data.
- Check the questionnaire and observation to see if the information is adequate and clear.
- Identify any obstacles that can arise during the data collection process.

6. Reliability of the Instrument: Through the application of the coefficient alpha (cronbach's alpha) approach, the validity of the questionnaire was assessed, it measured (0.75) which considered positive and significant.

The normal range of values is between (.00 and 1.00) for perfect positive relationship (Polit, Hungler, 1999) this result reflect that the internal consistency of study scale is within this range.

The results of the pilot study showed that the questionnaire used for the study was a valid and reliable measurement.

7. Data Collection: Data gathered through in-person interviews. It began on February 1 and ran through May 1 of 2021. The questionnaire for each interview takes 15 to 20 minutes to complete. Each sample from the study who took part in the study is interviewed.

8. Ethical Consideration: Before conducting interviews with any of the women, the researchers explained the study's objectives to them. Verbal consent was gained from each study sample before any data were gathered. Women were assured that the study was anonymous, voluntary, and confidential and the data was for research purposes.

9. Statistical Analysis: The data was examined using the SPSS version 25 program. The study used both quantitative and qualitative data, and charts, tables, and pie diagrams were used to display the findings⁴⁻¹⁰.

RESULTS

Table 1: Distribution of sociodemographic variables of the sample (n=200)

Variables	Groups	Frequency	Percent	P- Value (Pearson)
Age	Under 20 years	13	6.5	.282
	From 21-25 years	32	16.0	
	From 26-30 years	61	30.5	
	From 31-35 years	42	21.0	
	From 36-40 years	20	10.0	
	Over 40 years	32	16.0	
Weight	Under 80 kg	126	63.0	.300
	From 80-100 kg	74	37.0	
Smoking	Yes	35	17.5	.161
	No	165	82.5	
Participate more than one partner	Yes	31	15.5	.107
	No	169	84.5	
Residence	Urban	153	76.5	.131
	Rural	47	23.5	
	Total	200	100.0	

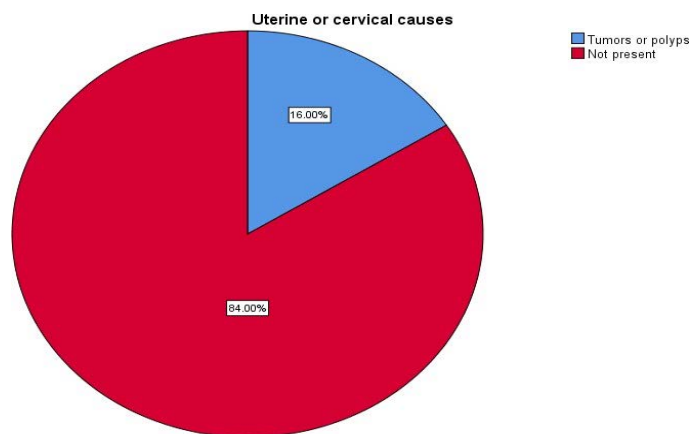


Figure 1: Show the Uterine or cervical causes

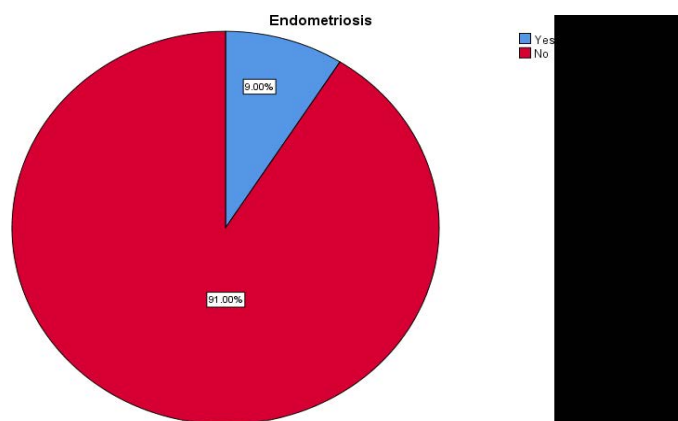


Figure 2: Show the Damage to fallopian

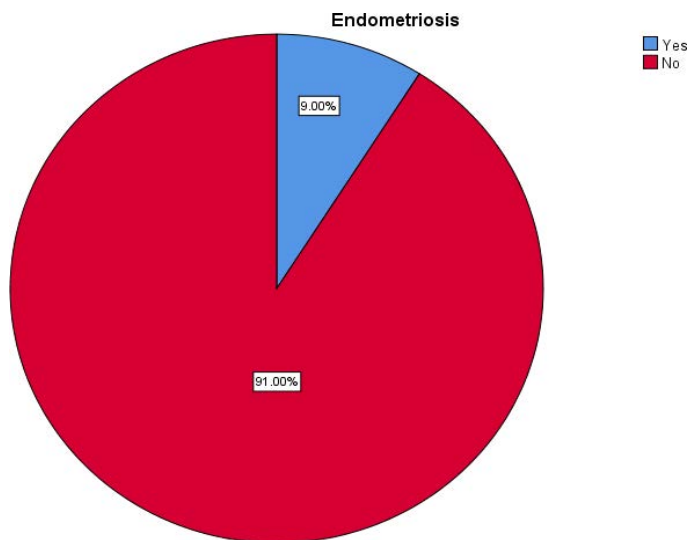


Figure 3: Show the Endometriosis

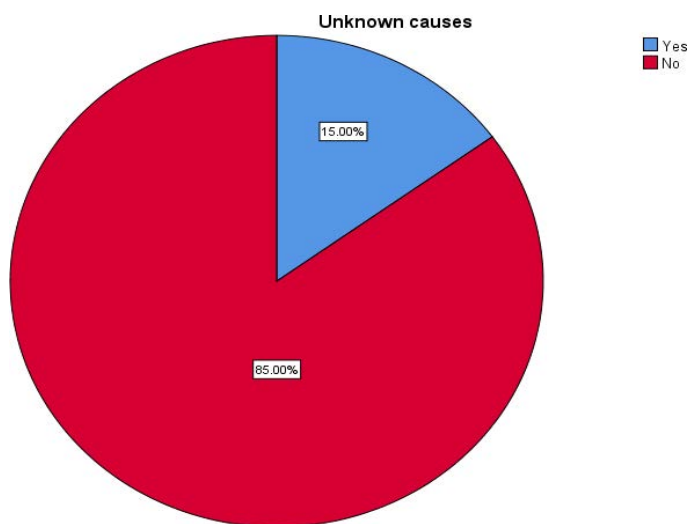


Figure 4: Show the Unknown causes

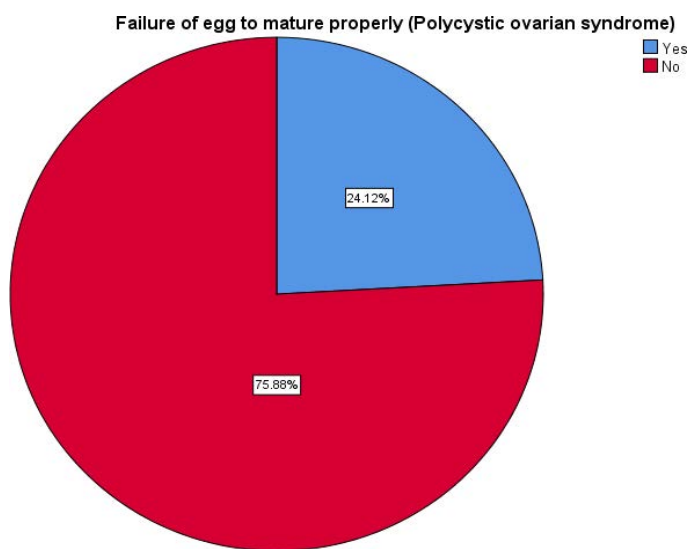


Figure 5: Show the failure of egg to mature properly

Table 2: Relationship between major causes of infertility with sociodemographic variables

Model	Age	Weight	Smoking	Participate more Than one partner	Residence
(Constant)					.000
Ovulation Disorder	.000	.000	.602	.657	.092
Damage to fallopian tube	.099	.167	.219	.298	.675
Uterine or cervical causes	.813	.200	.504	.097	.011
Endometriosis	.762	.554	.033	.027	.420
Unknown causes	.114	.004	.198	.882	.503
Failure of egg to mature properly (Polycystic ovarian syndrome)	.701	.080	.495	.275	.275

Table (2) shows statistically significant relationship between (Ovulation Disorders) and both of (Age) and (Weight). Other variables presented no statistically significant relationship between them.

DISCUSSION

The current study revealed primary infertility was common in married women and these results agree with study conducted in Iran^{11,12} and Contrary to certain studies from other countries^{6,7} that demonstrate the majority of research participants (30.5%) are between the ages of (26-30), see table (4.1) This data agree with study conducted by¹³ ages 20 to 30 made up the bulk of women (57.2%) (n=1200). According to the current study, the majority of women's weight is under 80 kg (63%) and between 80 and 100 kg (37%). according to table (4.1). According to Table (4.1), the majority of study participants (82.5%) are nonsmokers, whereas only 17.5% smoke. The study's findings showed that the biggest proportion of women (84.5%) did not participate with more than one partner. while (15 As shown in table (4.1), while (15.5%) participated more than one partner. The finding of study revealed that the highest percentage of woman live in urban (76.5%), while (23.5) in rural area. As show in table (4.1). Figure (A) shows that the highest percentage (70 %) from sample does not present with Ovulation Disorder, (7%) found with elevated prolactin level, (14%) premature ovarian deficiency, and (9%) Hypothalamic disorders. As show in figure (B) the highest percentage is (95%) from women not present Damage to fallopian tube and (5%) present with pelvic inflammatory diseases. Figure(C) shows that the highest percentage (84%) not present with Uterine or cervical causes and (16%) suffer from with tumors or polyps. Figure (I) shows that the highest percentage of endometriosis is no (91%) and (9%) yes. Figure (E) shows that the highest percentage of unknown causes is (85%) no and (15%) yes. Figure (F) shows that the highest percentage is (75.88%) no and (24.12%) yes. Depending on statistically finding explain polycystic Ovarian syndrome is major cause of infertility. As show in result of table (4.3) there are strong statistically relationship among ovulation disorder with age and weight, while there is not statistically association among other. The majority of women (57.2%) in this study¹⁴, were in the 20–30 age range (n=1200). This data contradicts¹⁵, who claimed that ovulation dysfunction, diseases (such as obesity, thyroid issues, and diabetes), menstrual disorders, uterine factor, fallopian tubes, and cervical factor had the highest prevalences of infertility¹³. Finding of present study different about study conducted in Sari, Iran in common causes in primary infertility in women¹¹, The

comparatively large discrepancy may be connected to many ailments that could contribute to infertility. In our investigation, female factors for infertility have been identified as uterine reasons. A study indicated that uterine anomalies occur in 2–3 percent of fertile women, 3 percent of infertile women, and 5–10 percent of women who experience repeated losses, despite the fact that the uterus plays a role in recurrent pregnancy loss and preterm delivery¹⁶. Ovulation disorder accounted for 26% of the causes of infertility in a Babol, Iran, research¹⁷. In our research, ovulation abnormalities were significantly impacted by hormonal issues. Hormonal issues reduced ovarian reserve and even lowered egg cell quality. Low gonadotropin levels cause infertility in 5 to 10% of women, while decreased hypothalamic GNRH secretion causes secondary estradiol¹⁸. A research in Sari, Iran, found that the tubal factor was the second most common reason for female infertility¹⁹. According to our research, tubal blockage contributes significantly to infertility caused by the tubal factor. Nearly 20% of female infertility is caused by tubal illness, of which 10% to 25% are caused by obstruction of the initial section of the tube¹¹. Asthenospermia is defined by the World Health Organization as having less than 50% of the total sperm move freely. Testicular temperature can rise as a result of varicocele, and the left kidney may experience toxic adrenal vein metabolite reflux. Reduced sperm count is referred to as oligospermia and is a male infertility cause²⁰. Cervical stenosis was another reason for infertility brought on by the cervical component in our study. The uncommon causes of infertility are stenosis and cervix closures.

CONCLUSION

The etiology of female primary infertility in our study was consistent with several other patterns identified by the World Health Organization. However, ovulation abnormalities are significantly more common than in other research, which calls for further analysis.

RECOMMENDATION

Infertility can have a significant impact on women's lives, thus it's critical to improve their reproductive health. The problem of infertility has now grown widespread, and recognizing the causes is the first step toward resolving it. They should be well-versed in reproductive anatomy and physiology, as well as having prior experience working with such a clientele. They can employ a variety of assessment techniques, including the application of nursing theory to care. They must be able to support the couple in exploring their concerns, anxiety, sadness, isolation, and spiritual and psychological anguish as a result of their sexual problems, as well as creating coping methods to help them maintain a healthy reproductive life.

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Competing Interest: None

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