

Understanding Fertility for Infertile Women

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Abstract:

Objective of study: The study focuses on the understanding that infertile women possess about fertility.

Methodology: Infertile women who have been diagnosed as such and visit the infertility facility in Al Nasiriya City comprise the non-probability purposive sample for this descriptive analytical study. A direct, organized interview with every patient involved in the study was used to collect the data. The researcher presents the study plan, outlining its goals and significance. The study samples gave their verbal agreement, and the information was collected only for research purposes (per ethical requirement). Participation was voluntary and confidential. Interviews took place in the designated location and took between thirty and forty-five minutes to complete the questionnaire format.

Results: Once the study's goals and methodology were explained, the researcher obtained verbal consent. The information is exclusively used for research purposes, and confidentiality was taken into mind. The study's findings indicated that the majority of infertile women had little awareness of infertility. The majority of the study sample, who made up the largest percentage, were adults. The study also revealed a substantial correlation between the prolactin hormone rise and the study participants' positive histories of visiting infertility centers and their desire for fertilization.

Recommendation: The following recommendations are informed by the study's results and conclusions: Raising the knowledge and awareness of infertile women regarding infertility and fertilization; emphasizing to mothers the importance of visiting infertile centers for early diagnosis and treatment of some potential causes of infertility through collaboration with nongovernmental organizations; visiting infertile centers for follow-up care and treatment; lowering the number of infertile women, particularly those with high risk through family planning and quality neonatal intensive care facilities; expanding infertile centers; and supporting reproductive facilities with cutting edge equipment and good support

Keywords: Wisdom, Fertility and Infertile Women

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Introduction

Historically, the term "infertility" has meant either the inability to conceive after 12 months of regular, unprotected sexual activity or the impairment of the ability to reproduce on one's own or with a partner. (Ekelin et al., 2012; Maeda et al., 2015). Couples facing infertility have a heavy psychological cost, particularly women. By enabling couples to avoid specific risk factors, increased awareness of the variables affecting fertility may assist to reduce the prevalence of infertility. Many couples aspire to become parents, but they might not plan a pregnancy with advanced age and infertility-related concerns in mind. Unplanned pregnancies and infertility are both frequent occurrences. (Alison, 2015). Knowledge of female anatomy and physiology and how it relates to family planning was traditionally thought to be a prerequisite for fertility awareness (Arthur et al., 2016.) However, the scourge of infertility looms large as the average age at first conception rises internationally. Delays in finding a compatible spouse, pursuing higher education and career ambitions, and wanting a steady employment are the main reasons for the global trend of postponing motherhood. Approximately half of all live births (51%) were to women aged 30 or older, with the average age of mothers in the UK in 2013 being 28.3 years, compared to 26.6 years in 2001 (Ash Monga, 2016). Maeda et al. (2015) have noted that while couples are aware of the basic elements influencing fertility, they are not aware of the effect that aging has on a woman's ability to conceive. It is often known that after the age of 30, and especially after the age of 35, female fecundity starts to diminish. Many couples have been able to fulfill their ambition of becoming parents because to the development of assisted reproductive technology (ART) and its broad availability (Blaževičienė et al., 2018). Lack of knowledge about one's own reproductive potential is a key contributing factor to both the growing frequency of subfertility and delayed childbearing. Individuals or couples should have the freedom to choose if, when, and how to procreate. However, for informed fertility decisions, a thorough knowledge of reproductive facts is necessary. The demand for infertility testing and treatment has undoubtedly risen significantly over the past 40 years, despite the belief that the prevalence of infertility has remained relatively consistent. It is widely accepted that every couple who is unable to conceive after a year should have their infertility evaluated. There are several clinical circumstances, though. (John, among others, 2018).

Women often have worse knowledge. With its help, women may become more self-aware, monitor their reproductive health, become pregnant or avoid it, and properly pinpoint menstruation events like ovulation. The majority of women are unaware of fertility and lack the ability to notice basic bodily cues that correspond to the menstrual cycle's phases. Many women are unaware of the physical indicators of fertility as well as the significance of any physiological symptoms their bodies may create (DeNora, 2000). Generally speaking, women's child-bearing desires outweigh their own desires for physical attractiveness and personality, and they may even outweigh professional assertions. are typically less acute in guys. For a married woman, having a kid can be a tragedy and can lead to marital problems, psychological misery, and ill health. Since children and marriage are related, it may deter men and women from seceding if their children's future well-being is in jeopardy, which happens in many marriages at some time, if not always. (Narendra and Pratap, 2018). It is essential to be aware of infertility and to have information about the variables that put both men and women at risk in order to preserve fertility through lifestyle changes. (Sabarre and others, 2015). A common problem with reproductive health that affects many individuals and couples is childlessness. One of the major issues facing the global society, including Iraq, is infertility. The news of an infertile diagnosis may be quite upsetting for sufferers. The study of infertility supports the infertile individual and advances treatment techniques, all of which contribute to a decreased likelihood of infertility in the future.

Methodology:

Design of the Study:

From November 12, 2022, to March 10, 2023, a descriptive and analytical study design was used to ascertain the information on fertility held by infertile women at the Infertility Center located in AL Nasiriya City.

Settings of the Study:

The present study is conducted in Thi-Qar Governorate; infertility center at Al Nasiriya city

3.4. Sample of the study: which include:

To take part in this study, a purposeful sample of 100 infertile women who attend the infertility facility in Al Nasiriya City and have been diagnosed as infertile were chosen as "Non-probability" participants. The study sample satisfied the requirements for inclusion, indicating that respondents were selected based on particular standards: Fertile ladies who visited the infertility facility in Al Nasiriya City are not included in the research.

Instrument that Used for Data Collection:

The questionnaire was approved following a thorough analysis of relevant research and existing literature. The research tool is divided into five sections. The participants' age, educational attainment, and other sociodemographic details are included in the first section. The reproductive features of age at marriage, age at first pregnancy, menstruation, etc. are covered in the second section.

Information about past surgeries and medical conditions, including illnesses of the central or peripheral nervous systems and respiratory conditions, is included in the third section. The information about behavior, such as current weight, daily bathing, and genital region cleansing, is included in the fourth section. The information regarding the five causes of infertility is covered in the sections that follow, including understanding of the effects of hormonal imbalance and inflammation on fertility, among other things.

Data collection

Every patient in the research participated in a direct, organized interview that yielded the results. The period of data collecting was from November 12, 2022, to March 10, 2023. The researcher presents the plan, including the goals of the investigation and its significance. Each study sample gave verbal consent, and participation was completely voluntary and confidential. The information was exclusively used for research, per ethical requirements. Each interview took between thirty and forty-five minutes to conduct, including the location and the questionnaire style.

Ethical Considerations

After outlining the purpose of the study and its goals, the researcher obtained verbal consent. Consideration was paid to maintaining confidentiality, and the data is solely utilized for study.

Results:

Table 1: Sociodemographic Details of the Participants (N = 100)

List	Variables	Frequency	Percent
1.	Age (Years): Mean (SD) = 25.01 ± 6.2		
	15-19	16	16.0
	20-24	40	40.0
	25-29	21	21.0
	30-34	14	14.0
	35-39	6	6.0
	40-45	3	3.0
2	Wife's Occupation		
	Governmental Employee	2	2.0
	Housewife	95	85.0
	Retired	1	1.0
	Free Lancer	1	1.0
	Student	1	1.0
3	Residency		
	Urban	79	79.0
	Rural	21	21.0
4.	Family Income		
	Sufficient	19	19.0
	Somewhat sufficient	39	39.0
	Insufficient	42	42.0
5.	Family Type		
	Nuclear	17	17.0

	Extended	83	83.0
6.	Socioeconomic Status		
	Low	75	75.0
	Moderate	21	21.0
	High	4	4.0
7	Is there a blood relationship between the wife and husband?		
	Yes	60	60.0
	No	40	40.0
8	Wife's Age on marriage (Years)		
	< 15	11	11.0
	15-19	51	51.0
	20-24	26	26.0
	25-29	6	6.0
	> 30	6	6.0

Based on Table 1, the average age of the participants is 25.01 ± 6.2 . Of them, two fifths ($n = 40$; 40.0%) are in the 20–24 year old age group, followed by those in the 25–29 year old ($n = 21$; 21.0%), those in the 15–19 year old ($n = 16$; 16.0%), those in the 30–34 year old ($n = 14$; 14.0%), those in the 35–39 year old ($n = 6$; 6.0%), and those in the 40–45 year old ($n = 3$; 3.0%).

The vast majority of women ($n = 95$; 95.0%) work as housewives. Government employees ($n = 2$; 2.0%), retirees, independent contractors, and students ($n = 1$; 1.0%) round out the list of occupations for spouses. In terms of residency, 79 people (79.0%) dwell in urban regions, while 21 people (21.0%) reside in rural areas. More than two-fifths of respondents said their family's monthly income was insufficient ($n = 42$; 42.0%); these respondents were followed by those who said it was fairly sufficient ($n = 39$; 39.0%) and those who said it was sufficient ($n = 19$; 19.0%).

Table 2: Clinical and Reproductive Indicators of the Participants

Variables	Frequency	Percent
Do you have menstrual cycle?		
Yes	99	99.0
No	1	1.0
Regularity of menstrual cycle		
Regular	39	39.0
Irregular	61	61.0
Dysmenorrhea		
Yes	84	85.0
No	15	15.0
Missing Value	1	1.0
Do you use any medication for alleviating dysmenorrhea?		
Yes	42	50.0
No	42	50.0
On case of irregular menstrual cycle, is there any in-between menorrhagia?		
Yes	11	11.0
No	89	89.0
Do you use contraceptives?		
Yes	11	11.0
No	89	89.0
Duration of using contraceptives (years)		
< 1	8	72.7
1-2	2	18.2
> 3	1	9.1
Do you have previous pelvic inflammation?		
Yes	75	75.0
No	25	25.0
Site of Pelvic inflammation		

Vagina	47	62.7
Vagina plus urinary tract infection	12	16.0
Urinary bladder	5	6.7
Cervix	2	2.7
Uterovaginal	8	10.7
Pelvic infection	1	1.3
Type of pelvic inflammation		
Bacterial	50	66.7
Fungal	25	33.3
Type of medications		
Antibiotic	27	36.0
Antifungal	21	28.0
Both	25	33.3
Other	2	2.7
Do you have a history of hormonal imbalance (HI)?		
Yes	47	47.0
No	53	53.0
Do you use medications for treating HI?		
Yes	47	47.0
No	53	53.0
Type of medications (<i>n</i> = 47)		
Prolactin regulating	44	93.6
Testosterone regulating	2	4.3
Both	1	2.1
Do you have a previous history of abnormal hair growth?		
Yes	36	36.0
No	64	64.0
In which part of the body? (<i>n</i> = 36)		
Face	10	27.8
Face and other sites	24	66.7
Another site	2	5.5
Describe of ovulation time(<i>n</i> = 49)		
12 days after menstrual cycle	3	6.1
13 days after menstrual cycle	41	83.7
14 days after menstrual cycle	5	10.2
Do you use thermal gathering table?		
Yes	6	6.0
No	94	94.0
Duration of using thermal gathering table? (<i>n</i> = 6)		
Currently		
2-6 months	4	66.6
> 12 months	1	16.7
	1	16.7

The data presented in Table (2) indicates that a significant proportion of women (*n* = 99; 99.0%) reported having a menstrual cycle. The average age at menarche was 12.9 ± 2.2 . The majority of these women were between the ages of 12 and 13 (*n* = 62; 62.0%), followed by those between the ages of 14 and 15 (*n* = 21; 21.0%), 10 and 11 (*n* = 10; 10.0%), and 16 years of age or older (*n* = 6; 6.0%).

The majority of respondents (*n* = 84; 84.0%) said that they suffer from dysmenorrhea. Over 50% of the participants said that they suffer from severe dysmenorrhea (*n* = 54; 54.0%), with moderate dysmenorrhea (*n* = 18; 18.0%) and mild dysmenorrhea (*n* = 12; 12.0%) following. Of the people who reported having dysmenorrhea, over half said they experienced it during their menstruation (*n* = 44; 52.4%). Those who reported experiencing it prior to their menstruation (*n* = 39; 46.4%) and those who reported experiencing it postmenstrually (*n* = 1; 1.2%) were next in line. Regarding the usage of contraceptives, the majority stated that they do not use them (*n* = 89; 89.0%), that oral contraceptives are the only kind used (*n* = 11; 100.0%), and that the majority of women use these methods for a period

of time less than a year (n = 8; 72.7%). Regarding PID, the majority of women (n = 75; 75.0%) reported having PID; the most common site of PID reported was the vagina (n = 47; 62.7%); this was followed by the vagina plus UTI (n = 12; 16.0%) and uterovaginal (n = 8; 10.7%); the majority of such inflammation is caused by bacteria (n = 50; 66.7%); the majority of women (n = 75; 75.0%) receive medication for treating PID; more than a third of such medications is an antibiotic (n = 27; 36.0%), followed by both antibiotic and antifungal (n = 25; 33.3%); the majority of women have been treating PID for less than a year (n = 61; 81.3%); most women have made investigations to detect PID (n = 74; 74.0%); and the majority of these investigations are clinical (n = 46; 61.3%).

In terms of hormonal balance (HI), fewer than half of the women (n = 47; 47.0%) reported having HI, and the same percentage (n = 47; 47.0%) reported using medications to treat HI; most of these medications included prolactin regulation (n = 44; 93.6%). The majority of women (n = 33; 70.2%) had been taking medication for HI for less than a year, and roughly a quarter had been taking it for more than three years (n = 12; 25.5%). Furthermore, a majority of respondents (n = 36; 36.0%) stated that they had previously experienced abnormal hair growth. The majority (n = 24; 66.7%) said they had hair growth in the face and other areas, whereas the second-highest percentage (n = 10; 27.8%) said they only have hair growth in the face.

Table 3: Relationship between Participants' Fertility Knowledge Level and Their Sociodemographic and Reproductive Characteristics

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Age	.063	.075	.278	.837	.464
Socioeconomic Status	.045	.023	.657	1.945	.147
Number time of pregnancy for any period	.658	.414	.465	1.590	.210
Intervals between Pregnancies	-.019	.021	-.263	-.912	.429
Number of surgeries	.394	.817	.142	.482	.663

Table (3) shows that participants' knowledge level about fertility and their sociodemographic and reproductive factors do not statistically significantly correlate.

Table 4: Variations in Fertility Awareness Among Menstrual Cycle Groups

	Ranks				Mann-Whitney U	Asymp. Sig.
	Menstrual cycle	N	Mean Rank	Sum of Ranks		
Fertility Knowledge	Yes	99	50.33	4983.00	33.000	.547
	No	1	67.00	67.00		
	Total	100				

Compared to women with menstrual cycles, those without menstruation have more understanding about fertility. The menstrual cycle groups' levels of knowledge on fertility, however, do not vary statistically significantly (Mann-Whitney U = 33.000, p-value = .547).

Table 5 shows the variations in fertility knowledge levels between the groups that use contraceptives.

	Ranks				Mann-Whitney U	Asymp. Sig.
	Using contraceptives	N	Mean Rank	Sum of Ranks		
Fertility Knowledge	Yes	11	53.91	593.00	452.000	.664
	No	89	50.08	4457.00		
	Total	100				

Compared to women who said they do not take contraceptives, those who said they do have greater understanding about fertility. Nonetheless, there isn't a statistically significant difference in the understanding of fertility linked to contraception between the groups that use them (Mann-Whitney U = 452.000, p-value = .664)

Discussion:

In terms of fertility-related information, fewer than 50% of women are poorly informed. Additional cross-tabulation analysis showed that the majority of women with little awareness about fertility are illiterate. Put another way, knowledge about fertility is lowest at lower educational levels. This is in line with the findings of a research by Maria Ekelin et al., which shown that young Swedish individuals lacked information about conception, fertility, the effectiveness of IVF, and variables that affect fertility. Students who wanted further instruction on the topic of reproduction acknowledged their ignorance of it. Additionally, Judith C. Daniluk et al.'s 2015 study revealed that males knew even less about ART and fertility than childless women did. A subsequent study strengthened the link between reproductive awareness and a favorable impact on fecundity, as Linzi According to E. A. Williamson's 2014 study, knowledge about fertility influences people's plans to have children and increases their level of reproductive knowledge. Regarding the relationship between the participants' degree of knowledge about infertility and fertility and their sociodemographic and reproductive factors, the participants' age and socioeconomic status had no impact on either kind of knowledge. This might be explained by the fact that women lack knowledge about fertility regardless of their age or socioeconomic status.

Regarding the relationship between menstruation status and knowledge about infertility, women who reported having a menstrual cycle knew more about the topic than those who said they did not. Subsequent cross-tabulation analysis revealed that women who reported having a menstrual cycle had a greater degree of education than those who reported not having one.

The study's findings on the relationship between menstrual cycle regularity and awareness of infertility showed that women who claimed having a regular cycle knew more about infertility than those who reported having an irregular cycle. Additional cross-tabulation analysis revealed that 25% of women with a high school diploma and 50% of women with a bachelor's degreesaid that they had a normal menstrual cycle. Thus, awareness of infertility improves with educational attainment.

Regarding the relationship between the presence of secondary amenorrhea and knowledge about infertility, the study's conclusions showed that women who said they did not have secondary amenorrhea knew more about the topic than those who said they had dysmenorrhea. This might be explained by the possibility that women who do not have secondary amenorrhea may be more likely to research infertility than those who do. Regarding the relationship between prior para and knowledge about infertility, the study's findings showed that women with prior para had greater knowledge about infertility than those without prior para. Subsequent cross-tabulation analysis showed that women who reported having no prior paralysis had a higher degree of education than women who reported having prior paralysis.

Recommendation:

The study findings and conclusions are contributed to the following recommendations:

launching community-based health education initiatives with the goal of improving women's understanding of fertility and infertility across age and socioeconomic categories. In order to raise the educational attainment of women, coordinate and work with the Ministries of Education, Higher Education and Scientific Research, and Labor and Social Affairs. Work together and coordinate with the various mass media outlets to raise public awareness of issues related to infertility and fertility.

References:

1. against infertile women: a scale development, on line available : journal of Reproductive Health 2014, 11:18
2. Alison Taylor, ABC of Subfertility, spian : GraphyCems , 2015, on line available ,
3. Arthur C. Guyton, John E. Hall, text book of Medical Physiology 11th ed, mosby elsevier : Philadelphia, 2016.
4. Ash Monga , Gynaecology by ten teachers , 18th ed , edward Arnold: united state , 2016 , p:257_41
5. Blaževičienė et al , journal Reproductive Health , 2018 Blaževičienė et al, Attitudes of fertile and infertile woman towards new reproductive technologies: a case study of Lithuania , on line available : journal of Reproductive Health 2014, 11:26
6. Dan Horton -sazar , gyne and obsertric book \ Crash Course Obstetrics and Gynaecology , elseiver 3E , 2016 , P (117).
7. dan Horton _sazar , crash course obstetrics and gynecology , 3rd edition, mosby elsverier : china , 2014 .
8. Dewhurst's Textbook of Obstetrics and Gynaecology 7th, USA: blackwell Publishing, 2017 , p.476_732.
9. Ekelin et al , Swedish high school students' knowledge and
10. Elley A. et al, A qualitative study of Ottawa university students' awareness, knowledge and perceptions of infertility, infertility risk factors and assisted reproductive technologies (ART), 2013, [online],
11. Eri Maeda et al , A cross sectional study on fertility knowledge in Japan, measured with the Japanese version of Cardiff Fertility Knowledge Scale (CFKS-J), on line available : Reproductive Health 2015, 12:10
12. Eugene C . Toy et al , case files obstetrics and gynaecology , Mc Graw _hill companies : USA, 2003 .
13. Fortner, Kimberly B, Johns Hopkins Manual of Gynecology and Obstetrics, , 3rd Edition, Lippincott Williams & Wilkins: USA, 2007.
14. Frances D. Monahan, review for the nclex- rn examination , mc grow _hill companies: New York, 2008
15. James R. Scott and Ronald S. Gibbs et al , Danforth's Obstetrics and Gynecology, 9th Ed, lippincott Williams & Wilkins Publishers: USA, 2003
16. Janesh K. Gupta, Gary Mires and Khalid S. Khan , Core Clinical Cases in Obstetrics and Gynaecology , 2nd edition , Arnold publishers: UK, 2006.
17. Japan, measured with the Japanese version of Cardiff Fertility Knowledge Scale (CFKS-J), Reproductive Health 2015, 12:10
18. John O. Schorge et al , Williams' Gynecology, China: McGraw-Hill Companies, 2008
19. John O. Schorge et al , Williams Gynecology (23 edition), by The McGraw-Hill Companies: USA, 2008
20. Judith C et al, Childless women's knowledge of fertility and assisted human reproduction: identifying the gaps, 2011, [online],
21. Keith Edmonds et al . Dewhurst's Textbook of Obstetrics and Gynaecology 7th Edition, usa : Blackwell, 2007
22. KEITH EDMONDS, Dewhurst's Textbook of Obstetrics and Gynaecology 7th, USA: blackwell Publishing, 2007 , p.476_732.
23. Kevin P Hanretty . obstetrics illustrated , 6th ed , mosby elsevier : China , 2004
24. Kimberly B. Fortner et al , johns Hopkins Manual of Gynecology and Obstetrics, The, 3rd Edition , philadelphia : Lippincott Williams & Wilkins, 2007 .

25. Laura B. et al ,Fertility knowledge and beliefs about fertility treatment: findings from the International Fertility Decision-making Study,2011, [online]
26. Martin L. Pernoll, M.D,Benson & Pernoll's Handbook of Obstetrics & Gynecology 10thed, united state :McGraw-Hill Companies,2001,p.769_931.
27. Martin L. Pernoll, M.D,Benson & Pernoll's Handbook of Obstetrics & Gynecology 10th ed, united state :McGraw-Hill Companies,2001,p.770_931)
28. Martin L. Pernoll, M.D,Benson & Pernoll's Handbook of Obstetrics & Gynecology 10th ed, united state :McGraw-Hill Companies,2001,p.770_900)
29. neville F. Hacker, Joseph c. Gambone and calvin J. Hobel, Hacker & Moores Essentials of Obstetrics and Gynecology 5th ,Saunders, an imprint of Elsevier Inc: china , 2010, p:494 _371