Knowledge and Attitude about Infertility among Infertile Males at Main Assiut University Hospital.

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Abstract

Background: Male infertility is a common and severe health problem. Infertility not only affects one's ability to have children, but also has emotional, psychological, family, and societal effects. **Aim of the study:** to assess knowledge and attitude about infertility among infertile males.**Methods:** Cross-sectional research design was used in the study**. (Setting)** The present study was conducted at outpatient's clinic of dermatology and andrology department at Main Assiut University Hospital. **The sample of this study** consisted of 200 infertile male who had come to outpatient's clinic of dermatology and andrology department **Tools** was utilized for data collection were infertile male knowledge and attitude questionnaire sheet. **The results** show that generally poor level of knowledge (62%) and a negative attitude (65.5%) toward male infertility. There were statistically significant differences between personal characteristics of infertile male and their knowledge and attitudes regarding male infertility. **Conclusion**: The sample study of the infertile male had poor knowledge about male infertility and had a negative attitude toward male infertility. **Recommendations:** Health education for males about infertility. Increase public awareness about infertility through mass media.

Keywords: Male Infertility, Knowledge, Attitude& Assiut University Hospital.

Introduction

Infertility is a global phenomenon that affects between 60 million and 168 million people worldwide. Infertility is defined as the inability to achieve a successful pregnancy after 12 months of unprotected intercourse or therapeutic donor insemination **(Practice Committee of the American Society for Reproductive Medicine, 2013).**

Male Infertility was not just a medical condition to be treated with fertility drugs, surgery or assisted reproductive technology, but it may lead to depression, suicidal tendencies, and other pathologic psychological conditions was often a crisis that profoundly affected nearly all aspects of one's personality and life **(Katwsa, 2013).**

Global male infertility prevalence rates are difficult to determine, due to the presence of both male and female factor **(Gerhard et al,2014).** Worldwide infertility is generally reported as occurring in 8-12% of all couple. An estimated 15 % of the world population including 6 million couples in the USA are affected by infertility. A male factor is responsible in about 50 % of infertility cases; it is the sole reason in about 20 % of the cases and is a contributory factor in 30–40 % of the cases **(Orisakwe, 2014).**

According to a study conducted by the Egyptian Fertility Care Society and sponsored by the World Health Organization (WHO), infertility in Egypt affects 12 percent of Egyptian couples **(Sallam, 2013).**

Male infertility is caused by various factors, such as disorders of the endocrine system, disturbances in ejaculation, bacterial or viral infection, immunologic factors, varicoceles, undescended testis and anabolic steroid use. However, a clear etiology cannot be determined for many cases of male infertility. Excluding patients who have previously had a vasectomy, nearly 10% to 15% of men have azoospermia, a condition in which semen is produced but does not contain sperm **(Lee et al., 2012)**

There are two types of infertility: Primary infertility: inability to get have children after one year of continuous marital relations, in the absence of contraceptive use. Secondary infertility is when a man do not conceive after one year of trying, despite having conceived children in the past without any problems**(Jimoh, 2013).**

The diagnosis of male infertility must focus on a number of prevalent disorders (Semen test, Ultrasonography and Testicular biopsy **(Lee et al., 2012).**

Medical treatment for male infertility generally falls under two categories:-

Specific therapy and empiric therapy and the surgical management of male infertility provides many options to the couple with male factor infertility.

Problems amenable to surgery include varicoceles, obstruction, or sperm retrieval for In vitro fertilization (IVF) with intracytoplasmic sperm extraction **(Jungwirth et al., 2012)**.

Nurse are often the first health care provider to encounter couples with treatment period, Fertility clinic nurse often need to advise, counsel and support couples in their coping with infertility- and treatment-related stress. It is, therefore, important to gain insight into the mechanisms which influence the patients' coping response **(Schmidt, et al, 2014)**.

Significance of the study

Reproductive health in Egypt focused mainly on women health and ignoring the role of men, in spite of the important role that men are playing in reproduction and fertility, which impact his family and environment. **(Leonardo, et al, 2012)**

In the last 50 years, a significant decrease in human fertility has been observed. It has also been stated that 15% of couples have fertility problems. Among infertile couples, man is responsible for 50% from cases of infertility. The studies indicate that 6% of men aged 15-44 years are infertile or their fertility is significantly compromised **(Smith et al., 2009)**.

Reports in recent years have shown that incidence of male infertility has increased as a result of various factors such as environmental pollution, stress, and lifestyle **(Mishra, et al, 2012)**.

Aim of the study

The Aim of Study:

To assess knowledge and attitude about infertility among infertile males at Main Assiut University Hospital.

Research question

- What is the level of knowledge and attitude about infertility among infertile males attending Assiut University Hospital?
- Is there a relationship between knowledge and attitude about infertility among infertile males and the socio - demographic characteristic of infertile males?

Subjects & methods

Research design

Cross-sectional study designs were used in conducting this study.

Technical design

Setting of the study

The present study was conducted in infertile male's dermatology and andrology outpatient's clinics at Main Assiut University Hospital.

Sample

A convenient sample of infertile males who attended the dermatology and andrology outpatients' clinic at Main Assiut University Hospital. The total number of the study sample was 200 adults infertile male suffering from infertility was chosen for conducting the study.

They were selected from the above mentioned setting, according to the following criteria; all males suffering from infertility both types primary and secondary.

Tools of data collection

Tool (1): structured interview questionnaire sheet: After reviewing the literature and researchs which were relevant to the present study, data were collected through using an interview questionnaire sheet to assess infertile male's knowledge regarding male infertility. It included the following parts:-

Part (1): This part was concerned with personal characteristics of infertile males it included: - age, residence, occupation, education, duration of the marriage, number of marriages, number of his children.

Part (2): included questions related to knowledge about infertility among infertile male, such as definition of male infertility, risk factor about male infertility, causes of male infertility, signs and symptoms of male infertility, diagnosis, and treatment of male infertility.

- The scoring system, for each item, a correct response was scored one grade and the incorrect scored zero.The score of items was summed-up and then converted into percent score. Knowledge was considered poor if less than 50%, fair if the percent score was (50%-65%) and good more than 65% **(Elshafy et al., 2013)**.

Tool (2): Attitude rating scale:- Likert scale adapted from **(Elshafy et al., 2013)** was used to assess infertile male attitude regarding infertility.

- It consisted of 23 statement about male infertility. The responses were on a three-point Likert scale ranging from agree, uncertain and disagree.
- The scoring system the responses (agree, uncertain and disagree).were respectively scored 2, 1 and zero. The scoring was reversed for the negative statement. The scores of items were summed up by the number of items, giving a mean score of part these scores were converted into a percent score. The attitude was considered positive if the present score was 60% or more and negative if less than 60% **(Elshafy et al., 2013)**.

Operational design

Data collection procedure was carried out in two phases

Phase 1: preparatory phase

It includes reviewing of current literature and international related literature in the various aspects of the problems using textbooks, articles, and Journals in order to develop the study tools for data collection

The pilot study

A pilot study was conducted on first twenty infertile male of the sample. The purpose of the pilot study was to detect any particular problem in the statements clarity, to estimate the time required to fill the questionnaire and applicability of the tool. No modification was done in the assessment sheet, so the infertile male selected for the pilot study were included in the main study.

Phase 2: Field work

Data was collected from the dermatology and andrology outpatient clinic of Main Assiut University Hospital during the period (from beginning February /2015 to begin August /2015). The researchers attended in the study setting three days per week, a number of patients range from 1 to 3 every day, all tools were filled through interviewing each patients individually. The purpose of the study was explained to every person prior to answering the question. The average time taken for completing each interview was around 30 minutes or more depending on the person response to a question.

Administrative design

An official approval letter was obtained from the Dean of Faculty of Nursing, Assiut University to the director of dermatology and anderology outpatients clinics at Main Assuit University Hospital. This letter was included a brief explanation for purpose of the study.

Ethical considerations

The research proposal was be approved from Ethical Review committee in the Faculty of Nursing. There was no risk for study subjects during application of research also the study followed common ethical principles in clinical research, oral consent was obtained from participant or guidance that were willing to participate in the study after explaining the nature and purpose of the study, study subjects had the right to refuse participation and or withdraw from the study without any rational at any time and study subject privacy will be considered during collection of data.

Statistical analysis

The collected data were reviewed, prepared for computer entry, coded categorized, analyzed and tabulated. Descriptive statistics as mean, standard deviation, number, and percentage. Were done using SPSS version 21. Statistical significance was considered at

P value were less than $0.05 (p < 0.05)$. The t-test is used to determine significance for the numeric variable. The chi-square test is used to determine significance for the non-parametric variable, also correlation by Pearson Correlation.

Results

Table (1): Distribution of infertile males attending Main Assiut University Hospital according to their Personal characteristics, 2015.

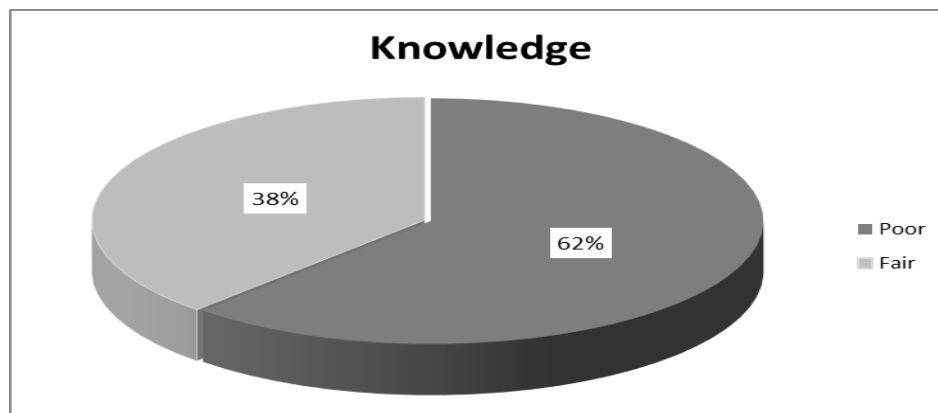| Items	Frequency No. (200)	Percentage %
Age by years		
<30	66	33.0
30 – <45	108	54.0
>45	26	13.0
Mean±SD	34.9+8.9	
Level of education		
Illiterate	38	19.0
Read & write	27	13.5
Basic education	32	16.0
Secondary	78	39.0
University &High	25	12.5
Occupation		
Government employee	70	35.0
Private work	40	20.0
Free works	90	45.0
Residence		
Urban	35	17.5
Rural	165	82.5
Duration of marriage		
<3	94	47.0
3 - <6	42	21.0
6 - <9	34	17.0
>9	30	15.0
Mean±SD	4.9+2.2	
Number of marriage		
One	187	93.5
Two	13	6.5
Number of children		
None	169	84.5
0ne	31	15.5

Figure (1): Total score of knowledge of infertile males attending Main Assiut University Hospital about male's infertility, 2015.

Table (2): Total score of attitude of infertile males attending Main Assiut University Hospital about male's infertility, 2015.

Attitude	No.	%
Negative	131	65.5
Positive	69	34.5

Table (3): Distribution of infertile males who attending Main Assiut University Hospital, according to their knowledge about male infertility, 2015.

Items	Infertile male	
	No.	%
What is the source of your information about infertility?		
Physicians	120	60
Parents	22	11
Friends	18	9
Newspaper	4	2
Television	10	5
Internet	25	12.5
Radio	1	0.5

❖ *More than one answers were selected*

Table (4): Relation between personal characteristic of infertile males Attending Main Assiut University Hospital and their total score of knowledge about male infertility, 2015.

Characteristics	Poor (n=124)		Fair (n=76)		X^2	P. value
	No.	%	No.	%		
Age in years						
<30	25	20.2	41	53.9		
30 – <45	86	69.4	22	28.9	32.1	0.000*
≥45	13	10.5	13	17.1		
Level of education						
Illiterate	34	27.4	4	5.3		
Read & write	15	12	12	15.8		
Basic education	17	13.7	15	19.7	55.9	0.000*
Secondary	44	35.6	34	44.7		
University and high	14	11.3	11	14.5		
Occupation						
Government employee	36	29.0	30	39.5		
Private work employee	23	18.5	20	26.3	19.1	0.000*
Free work	65	52.5	26	34.2		
Duration of marriage						
<3	57	46.0	37	48.7		
3 - <6	24	19.4	18	23.7	11.3	0.010*
6 - <9	29	23.4	5	6.6		
≥9	14	11.3	16	21.1		
Number of marriage						
One	120	96.8	67	88.2	5.7	0.016*
Two	4	3.2	9	11.8		
Number of child						
None	94	75.8	76	100	22.9	0.000*
One	30	24.2	0	0.0		

Characteristics	Poor (n=124)		Fair (n=76)		X^2	P. value
	No.	%	No.	%		
Residence						
Rural	107	86.3	58	76.3	3.2	0.072^{ns}
Urban	17	13.7	18	23.7		

^{ns} *No statistically significant difference (p>0.05)*   ** *Statistically significant difference (p<0.05)*

Table (5): Relation between personal characteristics of infertile males attending Main Assiut University Hospital and their total score of attitude about male infertility, 2015.

Item	Attitude				X^2	P. value
	Negative (n=131)		Positive (69)			
	No.	%	No.	%		
Age						
<30	43	32.8	23	33.3	16.8	0.000**
30 – <45	62	47.3	46	66.7		
≥45	26	19.8	0	0.0		
Level of education						
Illiterate	34	26.0	4	5.8	87.2	0.000**
Read & write	4	3.1	6	8.6		
Primary & Preparatory	29	22.1	6	8.6		
Secondary	60	45.8	28	40.6		
University & High	4	3.0	25	36.3		
Occupation						
Government employ	40	30.5	27	39.1	29.6	0.000**
Private work employ	33	25.2	13	18.8		
Free work	58	44.3	29	42.0		
Duration of married						
<3	77	58.8	17	24.6	86.2	0.000**
3 - <6	26	19.8	16	23.2		
6 - <9	0	0.0	34	49.3		
>9	28	21.4	2	2.9		
Number of marriage						
One	118	90.1	69	100.0	7.3	0.007**
Two	13	9.9	0	0.0		
No of childrens						
None	129	98.5	40	58.0	60.6	0.000**
One	2	1.6	29	42.0		
Residence						
Rural	99	75.6	66	95.7	12.6	0.000**
Urban	32	24.4	3	4.3		

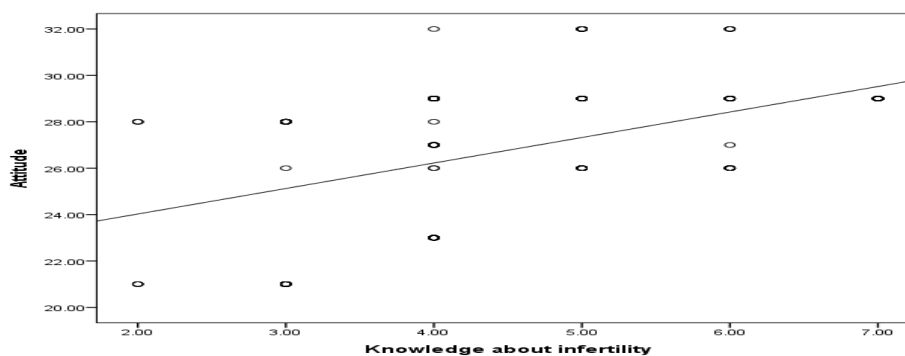** *statistically significant difference (p<0.01)*

Fig (2): Correlation between total score of knowledge and total score of attitude towards male infertility among infertile males attending Main Assiut University Hospital, 2015.

Table (1): Showed that slightly more than half (54%) of infertile males aged 30 - <45 years. About two fifth (39%) of the study infertile males had secondary school education, and 19% of them were illiterate. Also, this table show that more than two-fifths (45%) of them had free work. The majority of them (82.5%) lived in rural areas. Regarding to duration of marriage, this table reveals that 47% of them had <3 years duration of marriage. Also, majority of them (84.5%) had no children,

Figure (1): Shows the total knowledge score of the infertile males about male infertility, it was observed that 62% of infertile males had poor knowledge, while more than one-third 38% of them had fair knowledge regarding male infertility.

Table (2): Shows the total attitude score of the infertile males about male infertility, it was observed that about two-thirds 65.5% of infertile males had negative attitude, 34.5% had positive attitude regarding male infertility.

Table (3): shows source of knowledge among of infertile males regarding male infertility it was observed that (60%) of infertile males mentioned that physicians are main source of information about male infertility.

Table (4): Shows that there were statistically significant differences found between infertile male's age, level of education, occupation, duration of marriage, number of marriage, No of children and residence and their total score of knowledge about male infertility.

Table (5): Show it was cleared that there was statistically significant differences were found between infertile males' age, level of education, occupation, duration of marriage, number of marriage, number of children and residence and their total score of attitude about male infertility.

Figures (2): Illustrates that there was positive weak correlation (r = 0.058) between total knowledge of infertile males and their attitude. With no statistically significant correlation p.value = 0.412.

Discussion

Infertility, defined as not being able to conceive after one year of unprotected sexual intercourse, is a global public health problem that affects more than 10% of the world's population **(Rouchou & Forde, 2015)**.

The findings of the present study showed that as regards to a personal characteristic of the infertile males of the present study the mean age of infertile males was (34.9+8.9).These findings agree with the findings of **Abdualfotouh et al., (2013)** who describe knowledge, attitude, and practices of infertility among Saudi couple and reported the same age which

ranges 25-40 years with the mean age of couples were (35.05+10.05).

As regard to the place of residence, the majority of infertile males were from rural areas. This might explain as the rural members used pesticides during their work, also, then have low knowledge about treatment male infertility and the culture of the male infertility is a stigma. Our finding is in line with **Mazeed et al., (2014)** who carried out study about the infertile couple's knowledge and attitude about assisted reproductive technology. and found that infertile males were higher in rural than urban.

Regarding education level, the present study showed that about more than half of infertile males has secondary education. This is consistent with **Gerhard et al., (2014)** who describe the knowledge and attitudes towards infertility and its treatment. and who found that the majority (81%) of studied sample finished secondary education.

As regard to number of marriage of infertile males, the findings of the present study presented that the majority of infertile males were in the first marriage, these findings are consistent with **Mazeed et al., (2014)** who carried out study about the infertile couple's knowledge and attitude about assisted reproductive technology, reported that the majority of couples were in the first marriage.

Knowledge about Infertility is inadequate in many parts of the world. A global survey of almost 17,500 women (mostly of childbearing age) from ten countries revealed that the knowledge regarding fertility and the biology of reproduction was poor **Ali et al., (2011).** This findings is in agreement with the findings of present study in which the level of knowledge was generally poor, as indicated by the low mean percentage score for knowledge among infertile males also supported by **Diana,(2012)** who describe male involvement in the management of infertile couples at Kenyatta National Hospital, who found that Male participants knowledge of infertility, causes of infertility and treatment options was generally poor.

Regarding sources of information about male infertility in the present study, it was observed that more than half of studied sample mentioned that physicians are the main source of information about male infertility because infertile man holds modesty and shame therefore to idea with information about infertility or infertility discuss the subject with relatives or friends to take them information so it takes the information from the physician also decrease health program about male infertility in mass media. this finding is supported by **Bennett, et al, (2012)** who describe reproductive knowledge and patient education needs among Indonesian women infertility patients attending three fertility clinics,

who found that the most popular sources of information about infertility were obstetrician/gynecologist (OB-GYN) visit.

Regarding the relation between infertile male's total score knowledge about male infertility and personal characteristic, in the present study explored that the majority of the infertile male had poor knowledge, with a high statistically significant association found between level of knowledge and a personal characteristic such as age, education, occupation and number of children. This result agrees with **Sohrabvand & Jafarabadi, (2005),** who conducted his study to assess knowledge and attitudes of infertile couples about assisted reproductive technology and who found in the session of attitude evaluation, there was an overall negative attitude about infertility and view to genetic material donation.

Also, in the present study, there was a statistically significant association found between level of attitude and a personal characteristic such as age, education, occupation and number of children. This result agrees with **Gerhard et al., (2014)** who conducted his study to assess awareness of and attitudes towards infertility and its treatment.in this study there was a statistically significant association found between level of attitude and a personal characteristic.

Conclusion

Based on the present study findings, it concluded that,the sample study of the infertile male had poor knowledge about male infertility and had negative attitude toward male infertility.

Recommendations

Based on the results of this study it was recommended that:-
- Health education for males about infertility.
- Provide public awareness about infertility through mass media.
- improve public awareness about the importance of premarital examination.
- Presence of a pamphlet containing information about male infertility in dermatology and anderology clinics.

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