

Study Level of Anxiety among infertile Egyptian and Sudanese women

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Abstract: According to WHO data about 60–80 million people around the world suffer from infertility. This problem causes huge negative impact on family life. Forty percent of women with infertility experience various mental disorders. **Methods:** A total of 100 infertile women who met the selection criteria and had agreed to participate in the study were interviewed using two questionnaire sheets from July 2014 to September 2014. Data concerning socio-demographic characteristics such as age, monthly income, duration of infertility, educational level, previous marriage, number of previous conception as well as level of anxiety. **Results:** Present study results revealed that anxiety level very from mild to moderate level in both Egyptian and Sudanese women. **Conclusions:** Anxiety affects infertile women with the same degree regardless nationality, as pain of infertility is the same among infertile women. So that adequate attention to these patients psychologically and treating them properly, is of great importance for their mental health and will improve quality of their lives.

Key word: Anxiety, infertile women

1. Introduction

Infertility primarily refers to the biological inability of a person to contribute to conception. There are many biological causes of infertility, some which may be by passed with medical intervention. [1] Couples with **primary infertility** have never been able to conceive. While, on the other hand, **secondary infertility** is difficulty conceiving after already having conceived (and either carried the pregnancy to term or had a miscarriage). The following factors that can cause male as well as female infertility are: Genetic, general (diabetes mellitus, thyroid disorders, adrenal disease, hypothalamic-pituitary, hyperprolactinemia, hypopituitarism), and environmental factors (such as smoking) [1,3].

Combined infertility includes some cases, both the couple may be infertile and the couple's infertility arises from the combination of these conditions. Up to 20% of infertile couples have **unexplained infertility**. In these cases abnormalities are likely to be present but not detected by current methods. [1] The inability to conceive is experienced by individuals and couples as a stressful and often heartbreaking situation. As a medical issue, impaired fertility affects approximately 80 million people in all parts of the world.[1] It is estimated that approximately one in ten couples have either primary or secondary infertility.[2]

The impact of infertility can have deleterious, social and psychological consequences on the individual, leading to isolation and mental distress.[2,3] In some cultures, motherhood is the only way for women to enhance status in their family and community.[3]

In United States, specialists who study infertility have noted that infertile couples are one of the most neglected and silent minorities.[4] Perhaps, one of the most difficult emotional consequences of infertility is the loss of control over one's life.[5] For many couples, their infertility becomes the focal point of daily discourse and tasks, often to the exclusion of other important aspects of life.

Need to have child is an inherent needs in all humans. Infertile couples are experiencing whit serious psychological problems such as depression, due to common social reactions. This has a significant influence on all aspects of their lives.[2]

There is no doubt that infertility is a stressful experience and has a high impact on couples' psychological status. The problems of infertile couples are complicated and they are influenced by different factors such as sexual differences and the cause and length of infertility. Infertility and its treatment creates a major and prolonged crisis for the couples and it is a (stressful condition) that creates a heavy psychological trauma for the couples. Moreover, since having a baby has a socio- cultural significance, the infertile couples try hard to find a diagnosis and treatment for their infertility and it is obvious that because of physical, psychological and economic impacts of the treatments, they face double tension.[3]

Ramazanzadeh states that during the first three years of married life, infertility is accompanied by the symptoms such as depression, anxiety, lack of self-esteem, sexual impotency and marriage maladjustment.

The study of **Sibel** and **Teimor** suggest that the infertile couples believe external events have more effect on the creation of psychological forces than the issue of infertility itself and couples face financial problems and upheaval in life and occupation majorly. The previous studies in submission have emphasized the fact that submissiveness is not the destructive element which put the health of behavior in danger itself, whereas the mode of personal evaluation and the ways to come over it threatens the behavior. In other words, confrontation is reckoned as an important moderator in the relationship between tension and marital conflict [5&6]

In general, infertility and the whole treatment period with the stress caused by leave less time and energy for the couples to have fun and pleasure from togetherness and this in turn, increases the mutual stresses and influences marriage satisfaction. It is clear that the couple can try to sustain their relations by asking for couple therapies so can be trained for how they could spend more time together, and experience togetherness heedless of their infertility problem and once again they will be able to find and experience the highest moments of pleasure. [7]

The relationship between infertility and anxiety in women remains multifaceted and somewhat complicated to define. Despite the fact that the majority of infertile women do not develop depression, understanding the sources of vulnerability and strength in these patients may ultimately be the key to improving the overall experience, and specifically the mental health, of women with infertility.

Significance of the study:

Infertility affects approximately 10-16% of the couples in the reproductive age group which makes it an important component of gynecological practice. The prevalence varies depending on the following factors: The type of population studied, the usual age of marriage, and prevalence of reproductive tract infection. The concern about infertility varies indifferent cultures. In our culture, infertility considers as a reason for a divorce and second marriage Infertile individual in Upper Egypt is described as functionless person.

The aim of the study

Aim of the present study was to compare anxiety level among infertile women in two different countries.

2. Subject and Methods

A descriptive study had been conducted on sample of (50) infertile women was derived from patients of In-Vitro Fertilization Clinic at Zagazig university hospital -Egypt questionnaires were distributed among visitors between July 2014 –to September 2014, in the same time another sample of (50) infertile women was derived from academy teaching hospital, Khartoum, Sudan. Participants were selected by systematic random sampling from the patient list by nurse receptionist in each clinic and participants who fit in the inclusion criteria of age between 20-40 years, infertility duration of > 1 year and diagnosed with primary or secondary infertility.

Information about certain variables including age, duration of marriage, educational level, occupation, primary cause of infertility, duration of infertility, number of miscarriages, previous ART procedure, pressure from family members to conceive, support from husband was also collected.

Scoring System:

The Personal stress subscale (13 items), from 0-13 were considered not used, 13-26 were considered used somewhat and from 26-39 were considered used with great deal. Then scores of the items were summed up and the total divided by the number of the questions giving a mean score, then a mean score converted to a number without decimal, these score were converted into a percent score.

Statistical analysis

Statistical analysis was performed using the (Statistical Package for Social Sciences Software Version 18) (SPSS). Descriptive analysis was carried out, estimating mean, standard deviation (SD). Frequencies and percentages were calculated for the categorical variables. A pilot study on 14 patients was conducted before the main study and necessary changes were done for timing and to minimize any possible ambiguities of the items in the questionnaire.

Ethical consideration the agreement for participation of the subjects was taken after the researchers explained the aim of the study. They were given an opportunity to refuse the participation or withdrawal at any stage of the research. They were assured that the information would be confidential and used for the research purpose only.

3. Results

Table (1) Shows the distribution of the studied women according to their socio-demographic characteristics. As regard age, the table shows that the 86% of Egyptian women were in the age group (30-40) years old compared to 60% of Sudanese women were less than 30 years old and 50 % were in the age group (30-40) years old. In relation to educational level, the same table shows that a half of Egyptian women 58% had secondary and university education compared to 40% of Saudane women. Regarding family income more than half of women in both group have enough and can save from their monthly income.

Table (2): shows the impact of infertility on women's life style . This table shows that there were variation of sleeping pattern from less and more than before in both groups. As regard nutrition there were 47.1% of Egyptian women and 48 of Sudanese women reported that they loss of appetite during years of infertility and this result in weight loss of 44% of Saudane women and 45.1 of Egyptian women.

Table (3): Shows comparison between studied women regarding infertility history. This table shows there was 56% of Egyptian women's age at marriage less than 30 years compared to 40 % of Sudanese women , as regard duration of infertility there were 60% of Egyptian women mentioned that their duration less than 10 years compared to 34% of Sudanese women. Regarding previous marriage only 20% of Egyptian women have been married before compared to 52% of Sudanese women.

Table (4): Show number and percent distribution according to history of infertility. As regard cause of infertility male cause take 68% in Egyptian women compared to 68% to unknown cause in Sudanese group.

Also there were 66% of Egyptian women perform ART procedure compared to 44% of Sudanese varies from IUI and IVF. Regarding cause of non performing ART 68% and 32% of women in both group report that social causes were the main cause of non performing ART in Egyptian and Sudanese respectively followed by mixed causes in 46% of Egyptian and 84% of Sudanese women.

Figure (1):- Shows level of anxiety among Sudanese women 78% of Sudanese women complain of moderate level of anxiety

Figure (2):- Shows level of anxiety among Egyptian women majority of Egyptian women 94% complain of moderate level of anxiety .

Table (1) Number and percent distribution according to their general characteristics of wife

Items	Egyptian		Sudanese	
	N (50)	% 100	N (50)	% 100
General characteristics				
Age of wife				
• <30	7	14	20	40
• 30-34	20	40	10	20
• 35-40	23	46	20	40
Mean ± SD	39.24±7.647			
Level of education				
Illiterate	4	8	8	17.7
Read & write	7	14	4	7.8
Primary & Preparatory education	10	20	18	35.3
Secondary school	5	10	10	20
University	24	48	10	20
Mean ± SD	3.24 ±1.847			
Residence				
Rural	11	22	18	35.3
Urban	39	78	32	64.7
Mean ± SD	.78±.418			
Family income				
Not enough	19	38	25	50
Enough	19	38	12	22
Enough and can save	12	24	13	23
Mean ± SD	2800.00 ±2633.381			

Table (2) Distribution of the study sample according to life style

Items	Egyptian		Sudanese	
	N (50)	% 100	N (50)	% 100
Life style				
Sleeping pattern at night				
As previously	5	10	14	27.5
Less	22	44	28	54.9
More	23	46	8	17.6
Mean ± SD	.96±.402			
Nutrition				
As previously	16	32	14	27.5
Less	24	48	24	47.1
More	10	20	12	25.4
Mean ± SD	.88± .718			
Weight				
As previously	5	10	11	21.5
Less	22	44	23	45.1
More	23	46	16	33.4
Mean ± SD	1.36± .663			

Table (3) Number and Percent Distribution according to history of infertility

History of infertility	Egyptian		Sudanese	
	N (50)	% 100	N (50)	% 100
Age of current marriage				
• <25	26	50	15	30
• 25- <29	7	16	5	10
• 30 - <34	12	24	18	36
• 35+	5	10	12	24
Mean ± SD	25.88±5.185			
Duration of current marriage				
• <5	23	46	17	34
• 5-10	11	22	20	40
• 10-15	12	24	12	24
• 15+	4	8	1	2
Mean ± SD	15.22 ±10.387			
Duration of current infertility				
1. <5	30	60	17	34
2. 5-10	11	22	20	40
3. 10-15	5	10	12	24
4. 15+	4	8	1	2
Mean ± SD	10.60 ±10.476			
Did you pregnancy occur from current marriage?				
• No	40	80	35	70
• Yes	10	20	14	30
Mean ± SD	.20±.404			
Have you children from current marriage?				
• No	50	100	44	88
• Yes	0	0	6	2
Mean ± SD	.00± .000			
Did you have previous marriage				
• No	40	80	24	48
• Yes	10	20	26	52
Mean ± SD	.20± .404			

Table (4) Number and Percent Distribution according to history of infertility

History of infertility	Egyptian		Sudanese	
	N(50)	%	N(50)	%
Duration of previous marriage				
1 – 2	5	10	8	16
No	45	90	42	84
Mean ± SD	2.55±.858			
Have you children from previous husband?				
• No	4	44	3	20
• Yes	1	56	5	80
Mean ± SD	.00 ±.000			
Causes of infertility				
Unknown	6	12	34	68
Husband	34	68	3	6
Wife	3	6	7	14
Husband& Wife	7	14	6	12
Mean ± SD	1.22 ±.840			
Did you artificial fertilization?				
• Yes	33	66	22	44
• No	17	34	28	56
Mean ± SD	1.34±.479			
If answer yes? What is it?				
• IUI	13	40	10	45
• IVF	10	30	12	55
• Other	10	30	0.00	.000
Mean ± SD	1.64± .489			
If answer no? What is it?				
Family causes	6	12	3	6
Social causes	34	68	16	32
Economic causes	17	34	11	22
Psychological	4	8	12	24
More than one answer	23	46*	42	*84
Mean ± SD	2.85± 1.231			

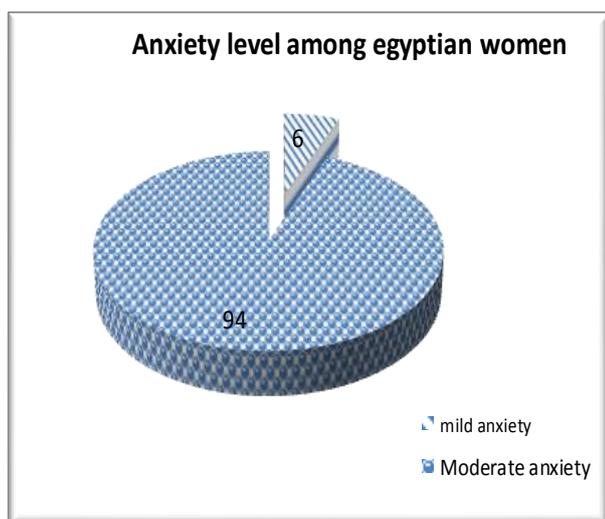


Figure 1. Anxiety level among Egyptian women

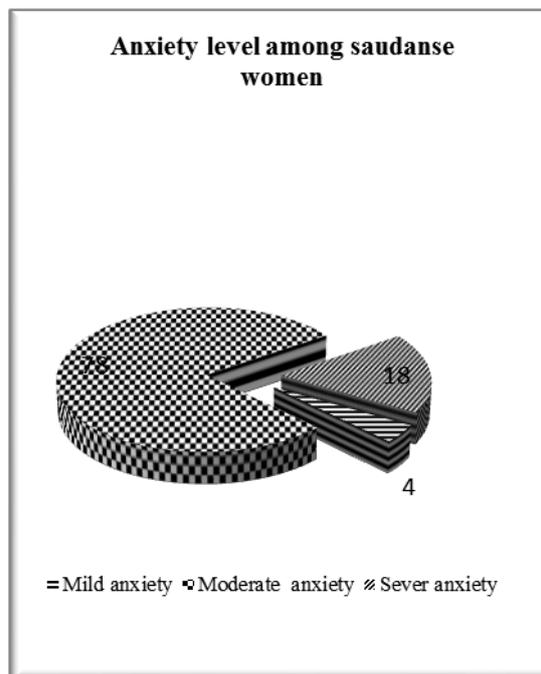


Figure 2. Anxiety level among Sudanese women

4. Discussion

Infertility or involuntary childlessness is a serious disease. It rates being about 15% globally and above 30% in developing countries, it is considered a significant source of emotional trauma for several couples [17]. The purpose of the present study was to compare anxiety level among infertile women in two different countries.

Regarding age of women in the study sample, nearly two-third of Egyptian women were in age group between 30-40 years compared to 50% in Sudanese women less than 35 years with mean±SD 39.24±7.647. In a sampler study Kishanth Olive [10] shows the demographic variables and its percentage. Among 30 samples, 10 (33.3%) women were in age group of below 25 years and 4 (13.3%) women were in age group of below 26-30 years.

Also Amani-Vamarzani, S., Dusti, Y [12] reported that .A total of 35 fertile women 20-56 years old (mean =34.2± 8.4) and 35 infertile women (age range 23-42 years, mean=34.5 years; SD=5.0) were enrolled in this study. Duration of marriage was 2-31 years (mean=9.8 years, SD=4.2) in fertile women and 1-23 years (mean=8.7.2 years, SD=4.6) in infertile women.

As regards wives' education, the current study revealed that 25.7% of both groups were illiterate and the rest of the study sample were educated with different degrees. The current study revealed that increasing educational level, there was a decrease of infertility stressors. The result of the present study was in agreement with Eid, [13] who stated that, educated couples perceived less stressor than uneducated couples and couples stressors decrease as the level of

education increases. This gives high coping mechanism for highly educated levels.

Yassini M, Khalili M, Hashemian Z [16] reported that severe depression and severe anxiety were observed in 27% and 22% of illiterate women, respectively. These levels were reduced to 4.5% and 0% in women with university educations, respectively.

On other side, Pottinger et al [7], and Beutel M. et al [8] contradicted this result and reported that sociodemographic factors are not related to the infertility stress.

Concerning family income the present study results revealed that nearly one quarter of both Egyptian and Sudanese women have enough monthly income and can save from it, this can be source of anxiety and may be the cause to inability to seek medical service. In the same line Ramezanzadeh, F. et al [4] reported that anxiety and/or depression were observed more in housewives (vs. outside employees). It seems being at work outside home decreases psychological signs of anxiety and depression.

Regarding changes in life style of infertile women nearly half of women in both group reported decrease in sleeping and nutrition less than normal, but Egyptian women reported weight gain more than Sudanese women.

Takamatsu K, Satoh T, Horikawa N [9] there was no direct association between infertility duration and anxiety or depression indications. This suggests that depression is more likely to occur in participants with a history of infertility treatment.

Takamatsu K, Satoh T, Horikawa N [9] reported that anxiety levels are the highest in the second and third year of infertility and that these levels decrease after six years. However, this was not observed in our study.

Concerning history of infertility there were 68% of Egyptian women reported male cause of infertility compared to 68% of Sudanese women reported unknown cause of infertility. This finding in agreement with Yassini M, Khalili M, Hashemian Z [16] reported that wives with a female infertility experienced higher rate of self-esteem distress and guilty feeling than their husbands. However, wives with male or mixed infertility factors, and with unexplained infertility reported to have no differences with their spouses in distress, guilty feeling, or even sexuality behavior. Also Ramezanzadeh, F. et al [4] mention that depression is more common in "unexplained cause" group comparing to other causes.

Regarding causes of non performing IVF procedure, social causes were the main causes of non performing IVF procedure reported by Egyptian and Sudanese women also more than half of women reported mixed causes between social, economic, family and psychological causes in both Egyptian and Sudanese group. This can be explained as IVF procedure were more expensive specially that nearly two-third of women in both group had monthly income from not enough and enough monthly income.

In the same line Ramezanzadeh, F. et al [4] reported that Having a job may reduce stress from In Vitro fertilization (IVF). In our study, anxiety and/or depression were observed more in housewives (vs. outside employees).

The present study result reported that nearly the same level of anxiety reported by Egyptian and Sudanese women as majority of women in both group reported moderate level of anxiety, on the other hand Kishanth Olive [10] reported that the study result revealed that 20% women were having mild level of anxiety, 34% women were having moderate level of anxiety and 57% women were having severe level of anxiety.

Also Hassani ,F.[11] says that a study shows (N=200) that all infertile women suffer from infertility stress (in different degrees) and nearly half of them (46%) have marriage maladjustments and the two variables have strong correlation.

5. Conclusion

In conclusion, the results of this study demonstrated that the level of anxiety was higher in infertile women. This can provide useful information and guidance for health professionals who work with infertile patients. However, considering the small sample size in this study, future works on the psychological reactions of infertile couples should be replicated by enlarging the sample size and including the other psychological complications such as distress, marital relationship, also coping style among infertile couples entering an ART program. Adequate attention to these patients psychologically and treating them properly, is of great importance for their mental health and will improve quality of their lives

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