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Original Article

Emotional dimension of quality of life and related factors for a sample of Egyptian infertile females attending the international islamic center

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ABSTRACT

Background: Infertility in most cultures across the world is considered as a stain and shame which leads to the infertile women suffering. It also affects all features of their quality of life (QOL). Measuring the QOL is a benchmark in today's world of medicine.

Objective: to determine emotional aspect of QOL and related factors among Egyptian infertile females attending IICPSR, Al-Azhar University.

Methodology: this is an analytical cross-sectional study, conducted on 320 infertile women attending the International Islamic Center for population Studies and Research (IICPSR)- Al-Azhar University. Data were collected via the QOL Questionnaire of Infertile females. Socio-demographic data also were inquired and the collected data was analyzed using descriptive and analytical statistics (SPSS 19 program).

Results: data analysis revealed that the mean age of the participants was 28.99 ± 3.9, mean duration of marriage was 4.7 ± 2.7, of all the studied women 167 (52.2%) were employed, 245 (76.55%) obese or overweight, and 194 (60.6%) were living in rural area. Positive, neutral, and negative scores of QOL of infertile females were discovered among (44.1%), (43.1%), (12.8%) individuals respectively.

Conclusion: Infertility has a major effect on the emotional status of the infertile women. Age of infertile females, body mass index, frequency of treatment and level of education, are found to be the most important factors affecting the QOL.

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INTRODUCTION

Pregnancy and childbearing are valued roles for females in several industrialized and developing countries [1]. Infertility is well-defined as the failure to conceive although regularity in the intercourse for 12 months [2]. It has been described that infertility influence 10–15% of couples in commercial nations in the age between 18–45 years, many of whom are under extreme stress [3-4]. Infertile females report worse married adjustment and QOL than the fertile [5]. Infertility can cause several social problems and psychological disturbance such as anxiety, depression, sexual dysfunction and social isolation [6]. In general,

infertile women may suffer from diminished QOL [7]. Quality of life is one of the most essential components of health. The conception of QOL is well-defined in different methods.

World Health Organization's structured six domains to assess QOL: physical, emotional, the level of independence, social, environment and spirituality, religion, or personal beliefs [8]. Factors expecting QOL may vary in altered infertile people, genders, traditional, socioeconomic status and other non-medical conditions [9]. Thus, the aim of this work was

to determine Emotional aspect of QOL and related factors among Egyptian infertile females attending IICPSR, Al-Azhar University.

SUBJECTS AND METHODS

Study design and setting:
This is analytical cross-sectional study. The study group consisted of 320 infertile Egyptian women referring to IICPSR, Al-Azhar University during a period of 3 months from 1/11/2018 to 30/1/2019.

Sampling technique:
-Sample type:
The study sample was selected from Egyptian females complaining of infertility attending IICPSR through convenience sampling, taking into consideration the inclusion criteria (females who diagnosed with primary infertility in this center, accepted to participate in the research and completed the questionnaires).

-Sample size:
A sample size of 320 females, was calculated using Epi-Info version 7 program (300 female), based on the average rate of IICPSR attendants' females (2000 / year), using confidence limit of 95% and confidence interval of 5%. This center carries out population and reproductive health studies and research in the Muslim World. It consists of different departments that were established for management of infertility. Its activities for all over Egypt.

Study Tools:
The collection of data was a two-part questionnaire (in one setting).
A. ***The first part***: deal with demographic information (socioeconomic status (high -middle – low - very low), education level, marriage duration, occupation, age of female and residence).
B. ***The second part***: fertility quality of life (FertiQoL) questionnaire, there is two versions of questionnaire (Arabic and English) [10-14]. In this research utilized Arabic version of QOL questionnaire was utilized. Emotional domain only contains 6 items which was used scored (five choice) according to Likert scale, the response scale has a range of 0 to 4. (www.fertiqol.org). the validity and reliability of this questionnaire were confirmed with the Cronbach's alpha of 0.81 and a test-retest reliability coefficient of 0.89 for the whole questionnaire [15]. "Each question had five choices: completely agree, agree, no idea, disagree, and completely disagree. Some questions dealt with positive and some others considered negative features in the study participants. The questions were scored as follows: 0 to 4 points were awarded for answers to questions dealing with positive features, from 'completely agree' to 'completely disagree', respectively. Similarly, 0 to

4 points were awarded for answers to questions dealing with negative features, from 'completely agree' to 'completely disagree', respectively. Then, the summed scores were converted to a percentage of the total score and interpreted in the following manner: 'very negative' QOL received less than 20% of the total score; 'negative' QOL was ≥20% but <40% of the total score; 'neutral' QOL was ≥40% but <60% of the total score; 'positive' QOL was ≥ 60% but <80% the total score; and 'very positive' QOL was ≥80% of the total score. In other words, the scores of QOL questionnaire in each area were between 0 and 100, and a higher score indicated a better QOL in that certain area [16].

C. ***Measurements***: Body Mass Index (BMI) was calculated according to the equation (Weight (kg)/ Height2 (cm) "Underweight (<18.5) - Normal weight (18.5–24.9)- Overweight (25–29.9) - Obese (≥ 30) [17]

The research was approved by the IRB committee of Faculty of Medicine "Girls" Al-Azhar University. All the necessary approvals for carrying out the research were obtained from IICPSR. Before giving questionnaire for the females: It was clearly stated that the study is conducted as a step in the researcher's Doctorate degree. Oral consent from each female was obtained after proper orientation about objectives of the study. Confidentiality of data will be considered in all levels of the study. Collected data will not be used for any other purpose.

Statistical analysis
The collected data were entered to the computer and analyzed by using SPSS program (version 19). Relation between QOL (emotional) and all variables in infertile females were carried out using Pearson Chi square- test and linear regression analysis. The level of significance was taken at 0.05. "So, p value >0.05 was insignificant and p value ≤ 0.05 was significant".

RESULTS
The mean age of the study group was 28.99 ± 3.9 years, mean duration of marriage was 4.7 ±2.7, (52.2%) were employed, and (76.5%) were obese or overweight. Regarding the residence 60.6% were living in rural area (Table 1).

The score evaluating QOL of infertile females demonstrated that the mean total score was 56.7 ± 12.9. Where, QOL was positive in 44.1% of the studied sample, while 43.1% and 12.8% were neutral and positive respectively (Figure 1).

Data of table revealed that 20% of the studied patients were completely able to cope with their fertility problem while 60% were not tolerating with that

problem. Nearly half of the women (52%) always feel jealousy and resentment, experience grief (58%), fluctuate between hope & despair (46%); while 51% their fertility problem make them angry very much (Table 2).

The analysis of this table revealed that there is a significant statistical difference between all the variables of the infertile women and emotional subscale of quality of life scores except, for employment status and social score (Table 3). The linear regression analysis of emotional subscale of quality of life score versus the different variables of infertile women showed that there is a relevant significant statistical relation with BMI and educational status, while the relation not significant with other variables (Table 4).

Table (1): General characteristics of the studied group

Variables	No. (320)	%
Age groups		
< 30 years	205	64.1
≥ 30 years	115	35.9
Age /years		
Mean ± SD	28.99 ± 3.9	
Range	22	
BMI		
Under weight	2	0.6
Normal weight	73	22.8
Overweight	98	30.6
Obese	147	45.9
Duration of marriage (years)		
Less than 5	226	70.6
5-10	84	26.3
More than 10	10	3.1
Duration of marriage		
Mean ± SD	4.7 ± 2.7	
Range	15	
Origin		
Urban	126	39.4
Rural	194	60.6
Social score		
Very low	119	37.2
Low	140	43.8
Middle	61	19.1

Table (2): The response of the studied group to the questionnaire measuring Emotional domain of Fertility quality of life

The response	Completely		Moderately		Not at all	
Emotional questionnaire	No.	%	No.	%	No.	%
Do you feel able to cope with your fertility problems?	64	20%	64	20%	192	60%
The response	**Always**		**Quite often**		**Never**	
Do your fertility problems cause feelings of jealousy and resentment?	168	52%	48	15%	104	33%
Do you experience grief and/or feelings of loss about not being able to have a child (or more children)?	187	58%	51	16%	82	26%
Do you fluctuate between hope and despair because of fertility problems?	148	46%	58	18%	114	36%
The response	**Very much**		**Moderate**		**Not at all**	
Do you feel sad and depressed about your fertility problems?	104	32%	120	38%	96	30%
Do your fertility problems make you angry?	162	51%	56	17%	102	32%

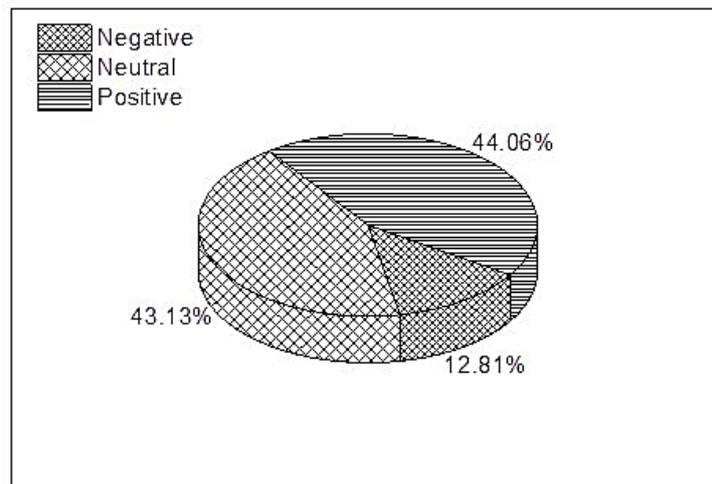**Table (3): The relation between Emotional subscale and some variables of infertile women**

Variables of infertile women	Total No. (320)	Emotional subscale			Test of Significance	
		Negative No. (%)	Neutral No. (%)	Positive No. (%)	chi =χ^2	p
Age groups:						
< 30 years	184	64 (34.8)	53 (28.8)	67 (36.4)	9.6	0.001*
≥ 30 years	136	29 (21.3)	59 (43.4)	48 (35.3)		
BMI						
Normal weight	91	33 (36)	37(40.7)	21 (23.3)	15.5	0.01*
Overweight	115	37 (32.2)	30 (26.1)	48 (41.7)		
Obese	114	23 (20.2)	45 (39.5)	46 (40.4)		
Educational status						
Illiterate	44	9 (20.5)	17(38.6)	18 (40.9)	30	0.001*
Read and write	50	13 (26)	9 (18)	28 (56)		
Primary and preparatory	54	18 (33.3)	16 (29.6)	20 (37)		
Secondary	87	33 (37.9)	24 (27.6)	30 (34.5)		
Higher education	85	20 (23.5)	46 (54.1)	19 (22.4)		
Employment:						
Unemployed	153	47 (30.7)	47 (30.7)	59 (38.6)	2.3	0.30
Employed	167	46 (27.5)	65 (38.9)	56 (33.5)		
Presence of any chronic disease						
Yes	171	42 (24.6)	71(41.5)	58 (33.9)	7.4	0.02*
No	149	51 (34.2)	41(27.5)	57(38.3)		
Previously received any treatment for infertility						
Yes	156	55(35.3)	52(33.3)	49 (31.4)	5.9	0.05*
No	164	38 (23.2)	60(36.6)	66 (40.2)		
Socioeconomic status						
Very low	113	36 (31.9)	37 (32.7)	40 (35.4)	1.2	0.80
Low	128	36 (28.1)	44 (34.4)	48 (37.5)		
Middle	79	21 (26.6)	31 (39.2)	27 (34.2)		
Residence						
Urban	126	37 (29.4)	45 (35.7)	44 (34.9)	0.09	0.9
Rural	194	56 (28.9)	67 (34.5)	71 (36.6)		

*Statistically significant difference p≤ 0.05, the table represents a row percentage

Table (4): Linear regression analysis of emotional subscale of quality of life scores versus the different variables of infertile women

Different variables of infertile women	*B*-Coefficient	P value
BMI	0.13	0.01*
Educational status	-0.07	0.03*
Previously received any treatment for infertility	0.13	0.14
Age	0.01	0.17
Suffering from chronic disease	-0.09	0.32

*significant statistical difference p≤ 0.05

Figure (1): Distribution of the infertile women group according to the emotional quality of life score

DISCUSSION

Quality of life has become one of the most important concerns today and is seen as one of the measurable criteria for assessment of treatment. Assessment of QOL helps establish an effective connection between a patient and her treatment team, different ways of treatments helps infertile persons make informed decisions about treatment devices. Measurement of QOL makes it possible to recognize the needs of the clients and thus improve the quality of provide facilities [14]. Development of infertile females' quality of life can create satisfied families and established society [18]. Therefore, the present study was conducted to evaluate the quality of life among sample of infertile females (320) selected from the attendance of the (IICPSR) at Al-Azhar University. It was found that, the mean FertiQoL score was 56.7± 12.9 which is lower than what was reported in other studies [19-20], but higher than what was reported in the research conducted in Netherlands by Aarts et al. [21].

In the present study, 44.1%, have a positive quality of life score compared to 43.1%, and 12.8% with neutral and negative quality of life, respectively. These findings agree with a descriptive-correlational study conducted in Iran, Zahra et al. [22] which establish that 34.6%, and 63.3%, had neutral and, positive quality of life, respectively. Also, the results are in accordance with results of Indian research [23] which reported that 52.1% of the infertile women had positive quality of life, and 37.8 % had neutral quality of life.

The examination of the existing study displayed that the age of infertile woman had an effect on the emotional domain, as the emotional domain between younger infertile females (< 30 years) was establish to be significantly better than that of the older one (> 30 years). This finding may be explained by a cross-sectional descriptive study reported in Iran. Rezaei et al. [24] which clarified that a young woman has more chances to conceive and obtain altered medical issues, than an older one. Similarly, Khayata et al. [25] in Erbil city (Iraq); found a significant difference in the relation between QOL and age. The QOL of infertile females is reduced over time when they get older, may be because the older females may expose to more trials of treatments and in turn more failures and stress.

The current study indicated that, previously received any treatment for infertility have a significant effect on emotional domain. These findings are in accordance with the study conducted by Rimaz et al. in New York [26] which proved that higher frequency of infertility's treatment imposed more stress and pressure is imposed on females which result in a reduction in emotional domain level.

Regarding the chronic diseases the present study showed that women without chronic disease have a better emotional health scores compared to those suffering of chronic disease. This is in agreement with Rooney et al. [27] "who found that woman without chronic disease had a significant relationship with almost all dimensions of quality of life; if infertility is added, negative affect to those aspects of a woman's quality of life is more likely to present, so managing the mentioned conditions may lead to a relatively better quality of life".

The results of this study revealed that there is a significant difference with emotional subscale of FertiQoL in terms of education level, as the higher the education level, the lower the emotional subscale. Similar finding was detected by the study of Maroufizadeh et al in Iran [28], they found that infertile woman with a relatively low educational level has higher QOL. The woman with low education usually played excessive role as housewife, so she enjoyed a greater social health, and receives more social support

due to good relationships with family. In fact, an excellent social support can develop the mental and physical health; thus, it provides a relatively high social well-being and good QOL [24]. In the other hand, research conducted by Seyedi et al. in Turkey [29] found that no significant difference between socio-demographic characteristics and emotional domain of QOL.

In the current study, no significant difference was found between employment and emotional subscale of FertiQoL. In contrast with our research, the finding of a study conducted in Turkey by Çavdar et al. [30]; revealed that working infertile women had both higher point of self-esteem and QOL.

CONCLUSIONS
FertiQoL is potentially useful measures of infertility related QOL. Infertility had a negative effect on the emotional status of the infertile women. Age of infertile females, body mass index, frequency of treatment and level of education, are found to be the most important factors affecting the QOL.

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الملخص العربي

دراسة الجانب الانفعالي لجودة الحياة والعوامل ذات الصلة لعينه من السيدات المصريات اللاتي يعانين من العقم المترددات على المركز الدولي الإسلامي

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ملخص البحث

الخلفية: العقم هو عدم حدوث الحمل بعد 12 شهرا أو أكثر من الاتصال الجنسي المنتظم. العقم مشكله عالميه يعانى منها كثير من الناس فى جميع المجتمعات. حوالى 60-80 مليون زوج وزوجه على مستوى العالم يعانين من العقم . فى مصر 10 -15 % زوج وزوجه يعانين من العقم. العقم اكبر مشاكل الحياة حيث يؤدى الى اكتئاب وعزله اجتماعيه وخلل فى الوظائف الجنسية .

الهدف: تقييم جودة الحياة خاصة الجانب الانفعالي والتعرف على العوامل التي تؤثر على جودة الحياة للسيدات المصريات اللاتي يعانين من العقم

الطرق: شملت الدراسة 320 سيدة من اللاتي يعانين من العقم المترددات الى المركز الدولي الإسلامي للدراسات والبحوث السكانية خلال 3 شهور وتم ملئ الاستبيان من جميع المشاركات فى الدراسة.

النتائج :أثبتت الدراسة أن التقدم فى السن و إنخفاض مستوى التعليم و الإقامة في الريف والحالة الاجتماعية والاقتصادية المنخفضة من العوامل التي تؤثر سلبيا على الجانب الانفعالي لجودة الحياة.

الاستنتاجات : العقم له اثار سلبيه على الحالة الانفعالية والنفسية للسيدات ويؤثر على جودة الحياة .

الكلمات المفتاحية: السيدات، العقم، جودة الحياة

الباحث الرئيسي

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