Psychosocial Impact of Infertility on Women Attending Um Al-Baneen Infertility Center in Baghdad City and Their Coping Strategies

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ABSTRACT

Background: Infertility is a worldwide public health problem and is a low control stressor often leading to increased level of anxiety and depression.

Objectives: To identify the psychosocial impact of infertility among infertile women, and to determine the association of various factors like age, educational status, employment status with depression and anxiety, and how they cope with their distress.

Methods: A descriptive cross-sectional study was conducted among 100 infertile women attending Um Al-Baneen infertility and in vitro fertilization center at Al-khademain teaching hospital in Baghdad city, from 1st of March to 31st of August 2020. Data were collected by using direct interviewing questionnaire.

Results: Two-thirds (61%) of the participants showed severe generalized anxiety disorder and 21% showed moderate anxiety and 14% had mild anxiety, and only 4% had no anxiety. Thirty nine per cent of the participants had no depression, there is a low percentage (28%) of participants showed mild depression, 24% of moderate depression and 9% had severe depression. Fifty eight per cent of the participants had poor coping strategies and 42.0% of them had fair coping strategies and no good coping strategies.

Conclusion: There is an association between participant's age, type of infertility, cause of infertility and level of education with generalized anxiety disorder, while depression was founded to be associated with type of infertility, patient's education, duration of treatment. There may be a need for infertile patients to receive ongoing psychological interventions and support.

Keywords: Infertility, Psychosocial impact, Coping strategies.

Iraqi Medical Journal Vol. 70, No. 1&2, 2024; p. 17-23.

Infertility is defined as failure of a couple to conceive after 12 months of unprotected sexual intercourse[1]. Infertility is a complex medical disorder that requires the evaluation and treatment of a couple rather than an individual[1]. There are two types of Infertility: Primary infertility is the term used to describe a couple that have never conceived a pregnancy in at least one year of regular intercourse without contraception[2]. Secondary infertility, which describes couples who have previously conceived successfully but who have difficulty achieving a subsequent conception[2].

Infertility is a rising problem all over the world and it affects an estimated 9-15% of couples of childbearing age, it is generally believed that in the whole world 70 million couples are infertile[3]. The prevalence of infertility is highest in South/Central Asia, Sub- Saharan Africa, North Africa, Middle East, and Central/Eastern Europe, in Sub-Saharan Africa the prevalence of infertility was up to 30% mainly due to sexually transmitted diseases, poor health care and female genital mutilation while the prevalence of infertility among young women was estimated to be 10% in the United States[4]. Prevalence in Canada 15.7%, 12.6% in India, 1.72% in China, and in Pakistan was 21.9%[5].

The Iraqi, women have a total fertility rate of about 4.5 children per woman, the maternal fertility has been declining in Iraq

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after 2003, and the war conditions have stimulated this decline[6]. In Baghdad, a research by Saeed RH et al[7] in 2020-2021, showed that the primary infertility was 61% and secondary infertility was 39%. While in Duhok 2002 the primary infertility was 77.2% and 22.8% had secondary infertility by Razzak AH[8].

Infertility is a societal stigma and taboo with a wide range of socio-cultural, emotional, physical and fiscal problems. It not only affects women's health but it also has a great effect on mental health of man that leads to disharmony in marital life[9]. Couples who failed to conceive have feeling of being defective and not feel themselves fit in the community, it can lead to many psychosocial consequences like depression, anxiety, guiltiness, social seclusion, feeling of worthlessness, loss of self-esteem and even suicidal thoughts[9].

In Iraq the prevalence of depression was very high among infertile women, in Kerbala, Najaf and Babylon about 93.5% were depressed[10].

Infertility is a critical major life problem that has deleterious effects on the psychological well-being of infertile women. Infertile women experience greater stress in their life compared to fertile women and have a lower quality of life[11].

The aim of this study is to highlight the psychosocial impact of infertility among infertile women and determine association of various factors like age, educational status, employment status with depression and anxiety and how they cope with their distress.

Methods

A descriptive cross-sectional study was performed in Um Al-Baneen infertility and in-vitro fertilization (IVF) center at Al-khademain teaching hospital in Baghdad city, over a period of six months from 1st of March to 31st of August 2020 . A convenient sample of 100 infertile women were interviewed. Data collection was done by using questionnaire form, The questionnaire was divided into sections as follow:

First section: involved questionnaire for socio-demographic characteristics and type of infertility.

Second section: involved questionnaire for psychosocial impact of infertility including (social impact, anxiety and depression).

Third section: questionnaire about coping strategies with distress.

Inclusion criteria: Female 18 years and older suffering from infertility.

Exclusion criteria: Were incomplete responds to the questionnaires and patients' unwillingness to participate in the study.

Verbal consent was approved for each woman explaining that this information will be used for research purpose only.

The generalized anxiety disorder and depressive episodes were diagnosed according to the Interactional Classification of Diseases-Version 10 (ICD-10) criteria[12], which are reliable diagnostic criteria and internationally recognized as the gold standard. For a diagnosis of depression, at least five out of 10 depressive symptoms required to be present; three of these are key symptoms that include persistent sadness or low mood, and/or loss of interests or pleasures, and fatigue or low energy. The other seven symptoms are disturbed sleep, poor concentration or indecisiveness, low self-confidence, poor or increased appetite, suicidal thoughts or acts, agitation or slowing of movements, and guilt or self-blame. Symptoms should have been persistent for at least two weeks. Mild depression was considered if four symptoms are present, at least two of them being key symptoms. Moderate depression was considered if five to six symptoms are present, two of them being key symptoms, while depression was considered severe if seven or more symptoms are present, including all three key symptoms.

Coping Scale was used to assess strategies coping with infertility stress. This scale consists of 15 items and include

active-avoidance strategies (e.g. avoiding being with pregnant women or children), active-confronting strategies (e.g. showing feelings, asking others for advice), passive-avoidance strategies (e.g. hoping for a miracle) and meaning-based coping strategies (e.g. tried to make myself feel better, finding other goals in life). The scale based on coping questionnaire. The responses to this scale are rated based on Likert scale, total coping score ranged from 0 to 32, poor coping was defined as ≤15, fair coping defined as 16-24, while good coping scored above or equal to 25[13].

Analysis of data was carried out using the available statistical package of SPSS-26 (Statistical Packages for Social Sciences- version 26). Data were presented in simple measures of frequency, percentage, mean, standard deviation, and range (minimum-maximum values). The significance of different means (quantitative data) were tested using Students-t- test for difference between two independent means or Paired-t-test for difference of paired observations (or two dependent means), or ANOVA test for difference among more than two independent means. The significance of difference of different percentages (qualitative data) were tested using Pearson Chi-square test (χ^2 -test) with application of Yate's correction or Fisher Exact test whenever applicable. Statistical significance was considered whenever the P value was equal or less than 0.05[4].

Results

One third of the participants were in the age group 25-29 years old in a percentage of 34.0%.

Slightly higher than half of women 54.0% were below 20 years old of age at marriage. About 49.0% of the participants were infertile for 1-4 years and only 7.0% had a duration of infertility of ≥10 years. There were 93 participants from urban area. About 41 of the participants had primary education, the participants who can read and write only 4. Housewives were 94, while the employed women were 6, (Table 1).

About two-third 61% of the participants showed severe anxiety and 21% showed moderate anxiety and 14% had mild anxiety, and only 4% had no anxiety, (Table 2).

Table 1: Distribution of the study group according to the socio-demographic characteristics.

		No.	%
Age (years)	20-24	30	30.0
	25-29	34	34.0
	30-34	21	21.0
	≥ 35 years	15	15.0
Age at marriage (years)	< 20 years	54	54.0
	20-24	42	42.0
	≥ 25 years	4	4.0
Duration of infertility (years)	1-4	49	49.0
	5-9	44	44.0
	≥10 years	7	7.0
Place of residence	Urban	93	93.0
	Rural	7	7.0
Wife level of education	Illiterate	-	-
	Read and write	4	4.0
	Primary	41	41.0
	Intermediate	39	39.0
	Secondary	15	15.0
	College and higher	1	1.0
Wife occupation	Housewife	94	94.0
	Employed	6	6.0

Table 2: The relation between generalized anxiety disorder and socio-demographic factors.

		Generalized Anxiety Disorder								P value
		No		Mild		Moderate		Severe		
		No.	%	No.	%	No.	%	No.	%	
Age (years)	20-24	-	-	3	10.0	4	13.3	23	76.7	0.002*
	25-29	3	8.8	2	5.9	4	11.8	25	73.5	
	30-34	1	4.8	4	19.0	5	23.8	11	52.4	
	≥35 years	-	-	5	33.3	8	53.3	2	13.3	
Age at marriage (years)	<20 years	4	7.4	9	16.7	11	20.4	30	55.6	0.501
	20-24	-	-	5	11.9	9	21.4	28	66.7	
	≥25 years	-	-	-	-	1	25.0	3	75.0	
Duration of infertility (years)	1-4	2	4.1	5	10.2	13	26.5	29	59.2	0.285
	5-9	2	4.5	9	20.5	6	13.6	27	61.4	
	≥10 years	-	-	-	-	2	28.6	5	71.4	
Place of residence	Urban	4	4.3	12	12.9	20	21.5	57	61.3	0.724
	Rural	-	-	2	28.6	1	14.3	4	57.1	
Wife level of education	Read and write	-	-	2	50.0	-	-	2	50.0	0.203
	Primary	2	4.9	5	12.2	11	26.8	23	56.1	
	Intermediate	2	5.1	2	5.1	6	15.4	29	74.4	
	Secondary	-	-	5	33.3	4	26.7	6	40.0	
	College and higher	-	-	-	-	-	-	1	100	
Wife occupation	Housewife	4	4.3	13	13.8	19	20.2	58	61.7	0.743
	Employed	-	-	1	16.7	2	33.3	3	50.0	

The participants with no depression were 39%, and participants who had mild depression were 28%, of moderate depression were 24% and 9% had severe depression, (Table 3).

The most commonly used strategies by the participants were: sought medical advice 76%, and try to keep feelings to themselves 83%, and wished the infertility would somehow go away 84%. While the least used strategies were took out feelings on others 2%, and avoid being with pregnant women or families with young children, (Table 4).

Table 3: The relation between depressive episode and socio-demographic factors.

		Depressive episode								P value
		No		Mild		Moderate		Severe		
		No.	%	No.	%	No.	%	No.	%	
Age (years)	20-24	10	33.3	7	23.3	10	33.3	3	10.0	0.749
	25-29	13	38.2	11	32.4	8	23.5	2	5.9	
	30-34	8	38.1	5	23.8	5	23.8	3	14.3	
	≥35 years	8	53.3	5	33.3	1	6.7	1	6.7	
Age at marriage (years)	<20 years	26	48.1	12	22.2	13	24.1	3	5.6	0.137
	20-24	13	31.0	13	31.0	10	23.8	6	14.3	
	≥25 years	-	-	3	75.0	1	25.0	-	-	
Duration of infertility (years)	1-4	21	42.9	14	28.6	10	20.4	4	8.2	0.577
	5-9	16	36.4	13	29.5	12	27.3	3	6.8	
	≥10 years	2	28.6	1	14.3	2	28.6	2	28.6	
Place of residence	Urban	36	38.7	26	28.0	22	23.7	9	9.7	0.856
	Rural	3	42.9	2	28.6	2	28.6	-	-	
Wife level of education	Read and write	2	50.0	-	-	2	50.0	-	-	0.040*
	Primary	17	41.5	14	34.1	8	19.5	2	4.9	
	Intermediate	9	23.1	12	30.8	11	28.2	7	17.9	
	Secondary	11	73.3	2	13.3	2	13.3	-	-	
	College and higher	-	-	-	-	1	100	-	-	
Wife occupation	Housewife	37	39.4	25	26.6	23	24.5	9	9.6	0.599
	Employed	2	33.3	3	50.0	1	16.7	-	-	

*Significant difference between proportions using Pearson Chi-square test at 0.05 level

Table 4: Distribution of the study group according to their coping strategies.

The coping strategies	Not used		Used a little		Used sometimes		Used a great deal	
	No.	%	No.	%	No.	%	No.	%
Sought medical advice	-	-	11	11.0	76	76.0	13	13.0
Hoped a miracle would happen	3	3.0	57	57.0	40	40.0	-	-
Had fantasies about how things might turn out	19	19.0	66	66.0	15	15.0	-	-
Tried to keep my feelings to myself	2	2.0	14	14.0	83	83.0	1	1.0
Wished the infertility would somehow go away	-	-	10	10.0	84	84.0	6	6.0
Talked to someone to find out more about infertility	9	9.0	21	21.0	70	70.0	-	-
Kept others from knowing my pain	4	4.0	18	18.0	74	74.0	4	4.0
Sought information from the internet	-	-	40	40.0	60	60.0	-	-
Talked to someone about how I was feeling	11	11.0	68	68.0	21	21.0	-	-
Went over in my mind about what I did wrong	3	3.0	49	49.0	48	48.0	-	-
Accepted sympathy and understanding from someone	8	8.0	67	67.0	25	25.0	-	-
Tried alternative medicine	17	17.0	72	72.0	11	11.0	-	-
Took out my feelings on others	55	55.0	43	43.0	2	2.0	-	-
Tried to make myself feel better by eating, drinking, smoking, using drugs or medication etc.	6	6.0	4	4.0	90	90.0	-	-
Avoided being with pregnant women or families with young children	71	71.0	25	25.0	4	4.0	-	-

Good coping strategy was 0; 0.0%, Fair; 42; 42.0%, Poor; 58; 58.0%

Discussion

Most of the studied women had anxiety 96% , which is higher from the results of a study done by Saman Maroufizadeh in Tehran in which the level of anxiety was 49.6%[5] and higher than the result of study done by Olarinoye in Nigeria in which the percentage of anxiety was 37.5% [14].

While percentage of depression in infertile women was 61% in this study, which is lower than that of Ali MM in which the prevalence of depression was 93.5% among infertile women in Kerbala, Najaf and Babylon/Iraq [10]. But the result was higher than that of Saman Maroufizadeh in Tahran in which percentage of depression was 33%[5], and that of Olarinoye in Nigeria its percentage of depression was 42.9%[14]. Also, higher than the results of Omu et al in Kuwait in which the level of depression was 5.2% [15]. This may be due to some difference in conditions like socio-economic status, insecurity, and social class and problems.

There is significant association between anxiety and respondent's age between 20-24 years the percentage was 76%, and between anxiety and the cause of infertility if (infertility cause in both of partners) 87.5% these results disagree with that of Saman Maroufi zadeh in Tehran in which there were no associations[5] the percentage were 49.9%,43.1%, respectively.

No significant association between increase infertility duration and anxiety which is different from Saman Maroufizadeh in Tehran in which there was a significant association between anxiety and duration of infertility more than five years the percentage was 54.8% [5].

A significant association was founded between the level of anxiety and increase level of education , which is agree with the results of Khanzadi study in Turkey[16].

In this study, anxiety level are found more in housewives 61.7% compared with employed woman, with no significant association p value=0.743,which is similar to a study by Ramezan zadeh et al in Tehran in which anxiety observed more in housewives also with no significant association[17]. There is no significant association between depression and respondent's age this result come with Al-Asadi J N et al[18] p value=0.293.

No significant association between depression and cause of infertility 45% of women show mild depression when the cause of infertility in both husband and wife, this come in similar to that of Saman Maroufizadeh in Tehran[5] in which 34.4% of women show mild depression when the cause in both husband and wife.

The study show 27.3% of patients with ≥ 5 years infertility duration had depression, reveals that no significant association between depression and duration of infertility which is unlike to Al-Asadi J N et al[18] reveals a significant association between depression and Infertility duration (>5 y) 92% of patients , p = 0.011, and that of Saman Maroufizadeh in Tehran which showed a significant association between them[5], 63.9% of patients with ≥ 5 years infertility duration had depression.

Half of the participants with higher educational level show moderate depression with significant association, which is disagree with the result of Al-Asadi J N et al[18] p = 0.937, and that of Imran SS[19] study in which no significant association was noted between depression and educational level 29% of the participants with higher educational.

No association was established with working status and depression, which is similar to that of Al-Asadi J N et al [18] p=0.703 , and with Imran SS[19] p value=0.665.

In this study 60% of the primary infertile women showed more depression than the women with secondary infertility 40% of them show depression this is similar to Al-Asadi J N et al[18], primary infertility was also found to be significantly associated with depression p = 0.013. The reason might be that secondary infertile women are more hopeful than primary infertile women

because of previous conception and they also faced less social pressure, including pressure from husband and in-laws.

In conclusions; Infertility have serious effects on both psychological well-being and social status of women specially anxiety and depressive disorder. The extent of psychological consequences presented as depression and anxiety were comparable to that reported by others in Iraq and some neighboring countries, but they were more than that reported for Western countries. Many socio-demographic and infertility related factors such as, age, education, income, type of infertility and treatment were found to be related to such psychological impact of infertility.

Recommendations: There may be a need for infertile patients to receive ongoing psychological interventions and support that matches their background in order to reduce level of anxiety and depression. Establishing a community based intervention strategy to educate couples about infertility treatment procedures and cost might be helpful as well.

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IMJ 2024; 70 (1&2): 17- 23.