Original Paper

The prevalence of Depression among Infertile Women in Iraq

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Abstract

Background: Worldwide about 15% in the childbearing years have infertility problems. Many studies demonstrated that men and women have abnormal emotional responses, such as stress, anxiety and depression. In our community less published researches examined both men's and women's reactions to subfertility. Some treatment options like Assisted Reproductive Technologies (ART) such as Invitro fertilization (IVF) ad more stress, anxiety, and grief to the patients whom already have these symptoms from delay of pregnancy.
Aim: this study was carried out to assess the prevalence of depression for infertile females in Kerbala, Najaf and Babylon.
Methods: Face-to-face interviews were conducted with 498 infertile women all suffering from primary or secondary infertility only 433 of them complete their participation in our study and answered the questionnaire. We made specific form of questionnaire consists of demographic and obstetrical information's mixing with some questions from validating questionnaire used in Patient Health Questionnaires-nine (PHQ-9). The data were analyzed by application of specific model of descriptive analysis includes; frequency, percentage, mean and inferential data (standard deviation, Chi-square, t-test and Pearson correlation coefficient).
Results: The prevalence of depression was very high among infertile women in Kerbala, Najaf and Babylon/Iraq, which is 93.5% were depressed from study sample. The mean score of depression among infertile patients was 12.26 ± 6.57 out of 36.
Conclusion the study concludes that the infertility has large impacts on woman in our community with different forms of psychological symptoms as especially depression that may affects their activity and social performance.
Keywords: Depression, Subfertility, Iraq

Introduction

Experts define infertility as difficulty to get pregnancy for one-year regular sexual life either primary or secondary [(1)]. Only half of all subfertile cases have a physical cause, and the rest is unexplained. But other notice that most cases of subfertility attributed to physiological cause in the male or female. About one-third from those physiological problems is found in the female, one-third in the male, one-tenth of the time in male and female. Recently, special attention was given to the psychological health of infertile wives; and their husbands. Depression is a treatable disorder which is seen by mental health specialists, and primary care clinicians [(2)]. Grief reactions are common among subfertile female, these normal reactions may be developed into pathological one leading to overt depression. [(3)].

The problem is increasing in its prevalence and effects of different societies and cultures. It affects about 10-20% of worldwide community [(1)].

Parenthood is a major transition in adult life for both male and female. The stress of not being have baby put allot of emotional sequel such as depression, anger, marital problems .sexual dysfunction and social isolation problems. In general women show higher level of psychological problem than male. [(1)]

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Females may feel angry if they are not being able get children and have especial opinion towards pregnant females. Other women become unstable around children and isolate themselves from other female having children. This isolation let women without social support helps her to overcome the depression commonly found with infertility [2]. A woman sometime develops inadequacy and feeling that her body not well functioning. The female sense of femininity is largely associated with subfertility which is sometime having a serious effect of female sexual life, feeling less sexually attractive. Women sometime put everything else on hold, giving all their efforts and time into getting a child. They may delay making any changes in their careers and deciding to wait after they become pregnant. Subfertility and, their options of treatment putting the women on an emotional stress [1]. Women also went through a cycle of hopefulness that results in disappointment with the arrival of their period. Drugs and hormones used to treat infertility may cause a variety of psychological side effects. Costs of infertility treatments are significant. Al-Homaidan HT found that Infertility is a social problem for females who are expected to have children early. Women suffering from delay pregnancy feel incomplete resulting in pressure from families and society. No local study found to evaluate the prevalence of depression among infertile women [3]. Noorbala and his colleagues found that 50% of couple's conceder subfertility is the most disappointing experience in their lives. [4]

Subfertility is considering as one of the great problems of community. It places a large psychological burden on male and females. In general one in ten couples having delay in pregnancy which may differs from country to country. By children we can see ourselves in different way. A female who suffering from delay in pregnancy will have problems that may appears either in biological or social or psychological forms [5].

Materials and Methods

Cross-sectional prospective study held in between March 2018 until March 2020 at Kerbala, Najaf and Babylon/Iraq, we get the ethical approval from the ethical committee of each health directorate of each three governorate. We used modified questionnaire prepared by consultant obstetrician. The questionnaire is consisting of three parts (demographic, obstetrics and psychiatrics information's). Depression was assessed using Patient Health Questionnaires-nine (PHQ-9) [2]. The answer for these questions was according to a Likert scale that classify in the followings (not at all, several days, more than half a days, and nearly every day) each of nine question have either (0, 1, 2,3and 4) full score is 36. A pilot study were done, the validity and efficacy of our questionnaire were measure by researcher. The study population is the patients attending to infertility units in public maternity hospitals in Kerbala, Najaf and Babylon governorate. The sample of our study were selected randomized by every other patient attend the infertility out-patient clinic. For purpose of confidentiality we get the consent of each patients participated in our study and we insure to them that their privacy were highly respected so the questionnaire not contain any names we include women who have one year delay in pregnancy either primary or secondary and exclude any women have known history of any psychiatric or neurotic disease . The data collected were analyzed by using SSPS version 21 by using descriptive statistics includes; percentage, frequency, mean and the inferential data analysis way (Pearson correlation coefficient, standard deviation, Chi-square and t-test). depression was classified by score of PHQ-9 cut-of these scores are 0, 1-4, 5-9, 10-19, and more than 20, represented none, minimal, mild, moderate, and severe depression, respectively [2].

Results

The mean age of the patients was 27.21 ±6.84 year. A significant difference ($p<0.001$) was found in the mean age of

patients with primary and secondary infertility 25.69±6.544 year 30.34±6.462 year, respectively)

The prevalence of depression was very high among infertile women in Kerbala, Najaf and Babylon/Iraq, where 93.5% were depressed (n=433) (table 2).

The mean score of depression among infertile patients was 12.26 ± 6.57. Out of 36

A significant negative association was found between depression and educational level (table 3).

While the association between depression and economic level was significantly positive as shown in table 4

No significant association was found with the type of infertility (table 5)

Similarly, no significant association was found with the cause of infertility (table 6).

No significant association was found between depression and the husband being married with second wife with infertility (table 7).

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Discussion

This study aimed to assess the prevalence of depression among female in some Iraqi governorate and correlation to social and demographic characteristics and some subfertility factors.

Table 1. The Age distribution of patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433) patients)

Age group	Frequency	Percentage
15-19 year	51	11.8%
20-29 year	225	52%
30-39 year	133	30.7%
40 year or more	24	5.5%
Total	433	100%

Table 2. The distribution of depression among patients with infertility in Kerbala, Najaf and Babylon /Iraq (n=433 patients)

Distribution of depression	Frequency	Percentage
No depression	28	6.5
minimal symptoms	63	14.5
mild depression	85	19.6
moderate depression	96	22.2
severe depression	161	37.2
Total	433	100

Table 3. The association between depression and educational level (Frequency (Percentage)) among patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433 patients)

Educational level	No depression	minimal symptoms	mild depression	moderate depression	severe depression	Total
Illiterate	7(6.5%)	8(9.8 %)	15(16.3%)	23(25.0%)	39(42.4%)	92(100.0%)
Primary	10(5.1%)	23(11.6%)	46(23.2%)	39(19.7%)	80(40.4%)	198(100.0%)
Secondary	4(5.8%)	10(14.5%)	7(10.1%)	19(27.5%)	29(42.0%)	69(100.0%)
University	7(12.5%)	14(25.0%)	12(21.4%)	13(23.2%)	10(17.9%)	56(100.0%)
Institute	1(5.6%)	7(38.9%)	5(27.8%)	2(11.1%)	3(16.7%)	18(100.0%)
Total	28(6.5%)	63(14.5%)	85(19.6%)	96(22.2%)	161(37.2%)	433(100.0%)

p= 0.003

Table 4. The association between depression and economic level among patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433 patients)

Economic level	No depression	minimal symptoms	mild depression	moderate depression	severe depression	Total
low	11(5.8%)	18(10.4%)	22(16.9%)	29(18.8%)	74(48.1%)	154(100.0%)
moderate	17(6.4%)	42(15.8%)	56(21.1%)	66(24.8%)	85(32.0%)	266(100.0%)
high	2(15.4%)	5(38.5%)	3(23.1%)	1(7.7%)	2(15.4%)	13(100.0%)
Total	28 (6.5%)	63(14.5%)	85(19.6%)	96(22.2%)	161(37.2%)	433(100.0%)

p= 0.007

Table 5. The association between depression and type of infertility among patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433 patients)

Type of infertility	No depression	minimal symptoms	mild depression	moderate depression	severe depression	Total
primary	16(7.0%)	40(14.0%)	50(17.2%)	71(24.9%)	105(36.8%)	285(100.0%)
Secondary	7(5.1%)	22(16.1%)	34(24.8%)	23(16.8%)	51(37.2%)	137(100.0%)
Primary and secondary	1(9.1%)	1(9.1%)	2(18.2%)	2(18.2%)	5(45.5%)	11(100.0%)
Total	28(6.5%)	63(14.5%)	85(19.6%)	96(22.2%)	161(37.2%)	433(100.0%)

p= 0.544

Table 6. The association between depression and cause of infertility (Frequency (Percentage)) among patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433 patients)

cause of infertility	No depression	minimal symptoms	mild depression	moderate depression	severe depression	Total
Only in female	16(6.1%)	43(17.4%)	51(20.6%)	54(21.9%)	84(34.0%)	248(100.0%)
Male cause	2(4.3%)	2(4.3%)	9(19.6%)	16(34.8%)	17(37.0%)	46(100.0%)
Both	6(5.6%)	15(14.0%)	21(19.6%)	21(19.6%)	44(41.1%)	107(100.0%)
Unexplained	5(15.6%)	3 (9.4%)	4(12.5%)	5(15.6%)	15(46.9%)	32(100.0%)
	28(6.5%)	63(14.5%)	85(19.6%)	96(22.2%)	161(37.2%)	433(100.0%)

p= 0.282

Table 7. The association between depression and husband being married with second wife (Frequency (Percentage)) among patients with infertility in Kerbala, Najaf and Babylon/Iraq (n=433 patients)

The husband being married with second wife	No depression	minimal symptoms	mild depression	moderate depression	Severe depression	Total
Yes	5(4.6%)	8(13.8%)	11(18.5%)	13(20 %)	28 (43.1 %)	65(100.0%)
No	25(6.8%)	54(14.7%)	73(19.8%)	83(22.6%)	133(36.1%)	368(100.0%)
Total	28(6.5%)	63(14.5%)	85(19.6%)	96(22.2%)	161(37.2%)	433(100.0%)

P= 0.851

In our study the response rate was 86.94% (498 subfertile women were interviewed 433 of them answered the questionnaire) which is expected in Iraqi studies as the Iraqi population are very cooperative in terms of research.

As reported by the results of the study, only 6.5% of our sample has no depression and the mean score of depression among infertile patients was (12.26 ± 6.57). The prevalence of depression was 93.5%.

A review Article showed that the prevalence estimates of major depression in

infertile couples are in the range of 15%-54%. [1]

Subfertile females in Iraq have higher percentage of depression than other countries. Because in Iraq dominated by people practicing the Islamic religion, childbearing is paramount and necessitous. Having a child is crucial for family stabilization and considered one the most important goals in life. In our culture and society, infertility is stigmatized as infertile women are generally blamed for the infertility particularly from relatives of the husband. Childlessness can cause many marital issues for instance divorce and second marriage which is possible for men in our society to be married to more than one woman and justified in our society and therefore it is a cause of psychological pressure.

A study conducted in Riyadh which compared prevalence of depressive disorders in infertile to fertile women. They found that Depression is more prevalent and severe in infertile women than fertile women as followings (in infertile women 17(9.18%, 14(7.56%) and18 (9.7%) represent mild, moderate and severe depression while in fertile women the results are 19(10.2%), 11(5.9%) and5 (2.7%). [3]

Another study studding the levels of grief and depression in women having delay in pregnancy and the options of treatment found that all females have measurable levels of grief and depression before, during, and after treatment. [5]

Such a high percentage emphasizes the need of raising awareness about the care directed towards the psychological health of infertile women and the need of approaching their suffering with therapeutic counseling and possibly support group very important step would be to lower the pressure on infertile women by de-stigmatizing infertility and prepare women psychologically for a possible negative pregnancy report by helping them cope with infertility.

The table (2) revealed that (19.6%) of subfertile wives have mild depression, (22.2%) have moderate, and (37.2%) have severe depression. These findings are very similar with that found in research was held in AL-Hilla among Couples Attending the Infertility Clinic Center. The figures in that study for mild, moderate, severe depression were (33%), (29%), (38%), consecutively. [6]

In terms of their education, the study had showed a low level of education among subfertile wives. The majority of the infertile women (21.24%) were illiterate and (45.72%) of them had primary school graduate (Table 3). The cause of this is related to the cultural properties in our country as many families are indifferent when it comes to female education. This is consistent with the results of a study that took place in Erbil Kurdistan Region. [7]

Also our study showed that the highest rate of severe depression (42.4%) was found in the illiterate while the highest rate of minimal depression (38.9%) was found in the highest level of education which is Institute. These findings supportive with the findings of a many other researches [8, 9]. These results are expected as a high educational level has a protective benefit against depression [10]

Regarding the economic status, the association between depression and economic level was significantly positive (P=0.007) while a study conducted in Tehran, Iran did not show a statistical significance difference in various economic status groups. [9]

A previous study, conducted In Ghana, reported that women with primary infertility have more psychological signs of depression and are greater risk for divorce. [11] However, this was not observed in our study in which no significant association was found between depression and the type of infertility.

Our study showed that there is no association between depression and cause of infertility, while another study shows that women having clear factor for their not having pregnant yet had significantly higher depression scores than women with unexplained subfertility [12]. Another study carried out in Vietnam found that families with male cause for their infertility and those having causes related to both couples

report high levels of depressive symptoms. [13]

This study the mean score of depression is not statistically significance about if the husband is being married with second wife. A study conducted in Al-Anbar Province found significant association was noticed for second or third marriage of men [14]. This result is similar with Joyce O et al study which stated that women in the infertile group were more likely to be in polygamous marriage settings compared with fertile group Spouses. [15]

Conclusion and Recommendations

In our study we conclude that the any delay in pregnancy have large impacts on life style of couple in community especially on female with different forms of psychological symptoms as (depression and anxiety and loss of confidence) that may affects their activity and social performance. We recommend to make large efforts by media and press to explain this issues and to supports the specific targeted female also we encourage the ministry of health to create specific supporting groups for those female finally we encourage the ministry of health to create specific counseling clinic in hospital for such complains

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