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SURVEILLANCE OF DEPRESSION SYMPTOMS AND RELATED FACTORS AMONG WOMEN WITH INFERTILITY ATTENDING TO INFERTILITY CLINIC OF MOTHER AND CHILD HOSPITAL (GHADIR), IN SHIRAZ, 2016

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ABSTRACT

Depression is one of the most common psychiatric disorders in the general population that the prevalence in Iran is estimated from 2.4% to 37%. Infertility is a common problem among couples around the world. Infertile women are at risk for personality disorders, especially depression. In various studies there was no significant association between infertility and depression. This study has been done to find the association between depression and the risk factors in infertile women referred to mother and child hospital (Ghadeer) in shiraz.

In this cross-sectional study that was done in 2015, women referring to infertility clinic at the Mother and Child Hospital (Ghadeer) Shiraz with sampling inclusion criteria were selected after filling informed consent. The instrument used in this study standardized tests Beck (Beck depression scale), respectively. Data analyzed by SPSS software and T-test, Chi-square test was used and the significance level was set at 0.05.

Of the 250 patients studied, 127 patients were normal (50.8%), 68 patients suffering from mild depression (27.2%), 27 patients with moderate depression (10.8%), 24 patients moderately severe depression (9.6%) and 4 patients with depression severe (1.6%). In this study, no significant association between patient education, spouse's education level, employment status patient and the prevalence of depression was found.

In the present study 8.66 percent of people have some degree of depression. According to the study, lack of awareness of different aspects of infertility, poor deal with the by relatives can lead to increase the psychosocial aspects of infertility.

Keywords: Depression - Infertility - Beck Depression - Psychological disorders - Symptoms of depression

INTRODUCTION

Depression is one of the most common psychiatric disorders that is not limited to particular person, time and place, it is consisted of all classes of society such as poor, rich, illiterate, educated, workers, farmers, students, master, the prevalence of depression is different according to gender and age in places. The prevalence of depressive symptoms is estimated to be from 2.4% to 37% in the general population in Iran [1, 2, 3]. It is believed that 10-20% of the general public experiencing mild to severe depression, the disorder is common condition that 15% of people encounter at least once in a lifetime. The number of people with depression has increased due to the pressures of social change, environment and enhancement of some physical ailments so depression is known as a mental illness in adulthood. The increasing number of patients with this disorder at different ages in clinics is a sign of the high prevalence of depression [4, 5].

Infertility means not being fertile after one year of regular sexual contact without using preventing methods of pregnancy. Infertility is a common problem among couples around the world. [6] Approximately 15% of couples suffer from infertility. [7] Causes of infertility is related to female factors in 40% of cases, 40% of men and 20% due to common factors. Of 20% common causes, 5 to 10% is idiopathic [8]. The most common causes of infertility include endometriosis, defects in spermatogenesis; damage the fallopian tubes and anovulation [9, 10, 11]. Infertility can cause different psychological reactions, such as feelings of helplessness, self-image disorder, depression, decreased sexual desire, anger, guilt and isolation [12]. Infertile women, including the members of community who are exposed to psychological and personality disorder. A feeling of inability in fertility and social responses in a society towards this category of people, underlie many mental pressure for the group. The main points in the evaluation of an infertile couple are sexuality issue and its

disorders. A good sexual relationship increased likely fertility, psychosexual disorders in infertile couples is higher than other couples [13].

Emotional factors may cause infertility due to sexual dysfunction [9]. In a study, unconscious emotions about the sexual feelings in these people have been reported [14]. Some sexual problems causing infertility in these people is a kind of ambivalence to feel about motherhood and unresolved Oedipus issue [15] [16]. On the other hand, gender identity conflicts are implicated in these disorders [10]. On the other hand, their infertility could also be due to sexual relations. Depression is common in people with sad face, constant fatigue; sleep disorders, anxiety and restlessness [17]. In studies conducted in Japan and Nigeria levels of anxiety and depression in infertile women was higher than fertile women but a number of studies have also significant differences between the level of depression and anxiety in fertile and infertile women [18]. Abedi Nia et al studied on infertile women referred to infertility treatment clinics of Vali Asr hospital (as) Tehran, their results showed 40% of women were depressed and 86% were anxious. The duration of infertility and depression and education had a significant relationship while not significantly associated with the job. Anxiety and depression has most frequent over 4 to 6 years of infertility, particularly severe depression during 7 to 9 years of infertility [19].

In a study Sargolzaee et al showed that in infertile women referring to infertility treatment clinics in Mashhad 23% mild depression, 53 percent had moderate depression, 20% had severe depression and only one had natural creations and sexual dysfunction in couples. The rate of moderate and severe depression was not associated with the couple's age difference, but the term was closely related infertility [20]. According to the importance of depression as one of the major causes of incapacity and disability in women and the increasing prevalence of infertility and its consequences on society, this study aimed to assess the prevalence of depressive symptoms and related factors in infertile women who referred to infertility clinic of mother and child hospital (Ghadir) in Shiraz have been done.

MATERIALS AND METHODS

This cross-sectional study was conducted in 2015 and infertile women referred to infertility clinics located in maternal and child hospitals (Ghadir) in

Shiraz were selected with informed consent. The sample size were considered 250 by considering the prevalence of 20%, 5% α and 5% accuracy.

Inclusion criteria: being infertile, with at least 18 years old, with no history of major depression prior to marriage {Such as non-use of antidepressant medication, no history of psychiatric hospitalization due to depression, absence of dysfunction in personal - interpersonal and social matters and not filled with major depressive disorder according to DSM- IV criteria :

A)At least 5 following case in a period of 2 weeks and the sign changes in previous work that at least one of which must be depressed mood or loss of interest or pleasure.

1 Depressed mood most of the day in most days, whether the patient according to his subjective feeling and observation of others. 2 The marked reduction in interest or pleasure in all or almost all activities most days and almost all days 3 significant weight loss without the implementation of a specific program or weight gain. 4 insomnia or oversleeping almost all days. 5 confusion or mental - motion almost all days. 6 Fatigue or loss of energy nearly every day. 7 Feelings of worthlessness or excessive or inappropriate guilt nearly every day. 8 Decreased ability to think or concentrate, or indecisiveness, nearly every day 9 Recurrent thoughts of death, recurrent suicidal thinking without any particular map, or a map specific to suicide.

B) It has no symptoms, diagnostic criteria for mixed episode C) clinically significant symptoms is disrupted for the patient or her functions in the social - occupational sphere or other important areas of life. D) Symptoms directly related to the physical effects of a substance (drug or substance that is abused), or a medical condition (eg, hypothyroidism).

E- Bereavement, there is no better justification for symptoms. Following loss of the beloved person, symptoms persist for more than two months. Or obvious disruption in performance, extreme preoccupation with worthlessness, suicidal thoughts, psychiatric symptoms, mental - motion slow has a certain way }, ability to complete Beck's questionnaire, satisfaction to participate in the study, no history of previous physical or mental illness and women who treat infertility problem by themselves to mother and children clinic (Ghadir) in Shiraz had referred. Women who were eligible for the study were selected and before

distributing the questionnaire to people about the project and its objectives were explained to the complete satisfaction of its own. The instrument used in this study was standardized tests Beck (Beck depression scale). This scale is one of the most common and most prestigious psychological tests that are applicable in all classes and social environment and are not related to culture. It has 21 questions and each question, the intensity of depressive symptoms is graded from zero to 3, this means that zero is the lowest and 3 the highest rate of depressive symptoms. Total score of all 21 questions, is calculated based on the Beck grading system. Total score of zero to nine in the normal range and the scores of 10 and more are depressed. In addition, the degree of depression to mild depression 10-19, moderate depression symptoms 20-29, depression symptoms are relatively severe 30-39 and 40 and above is considered severe depression. Usually the score of 20 and above is considered as depression. Data analyzed by SPSS software and T-test, Chi-square test was used and the significance level was set at 0.05.

FINDINGS

Of the 250 patients studied, 127 subjects were normal (50.8%), 68 patients suffering from mild depression (27.2%), 27 patients with moderate depression (10.8%), 24 patients moderately severe depression (9.6%) and 4 patients with depression severe (1.6%) with the age group separation is given in table 1.

Of the samples studied couple's age two patients was under 20 years of age (0.8%), 67 patients 20 to 30 years (26.8%), 127 patients 30 to 40 years (50.8%) and 54 patients over 40 years (21.6%) and the level of depression for these women according to age of the spouses is specified in Table 2.

There is statistically significant relationship between the prevalence of depression in infertile women and husbands' age were observed.

The mean duration of infertility patients, 10.42 years with standard deviation is 4.64. The majority of patients, housekeeper (72.8 percent) were experts with high school diploma.

As 31.2 percent less that diploma, 44.4% of diploma to bachelor and 24.4 percent have MA to PhD. Table 3

Of the 250 women studied, 83 patients (33.2 percent) had no evidence that the incidence of depressive symptoms (Beck Depression Inventory score between zero to nine).

Moreover, the remaining 167 patients (66.8 percent) in some way, with symptoms of depression have different degrees.

Table 1: Depression age category

Age category	Depression					
	Normal	Slight	Average	Relatively severe	Severe	Total
Less than 20 years	4	2	3	6	0	15
20-30 years	54	33	9	12	4	112
30-40 years	59	26	11	4	0	100
More than 40 Years	10	10	4	2	0	23
Total	127	68	27	24	4	250

Table 2: The wives of depression in women according to age group

Couples age category	The wives of depression in women according to age group					
	Normal	Slight	Average	Relatively severe	Severe	Total
Less than 20 years	1	1	0	0	0	2
20-30 years	33	15	8	9	2	67
30-40 years	66	35	13	11	2	127
More than 40 years	27	17	20	4	0	54
Total	127	68	27	24	4	250

Table 3: Variables

Variable		Frequency	Relative frequency (percent)
Job	Housewife	182	72.8
	Employed	68	27.2
Patient Education	Below Diploma	78	31.2
	Diploma to bachelor	111	44.4
	Bachelor to Ph.D	61	24.4
Wife Education	Below Diploma	67	26.4
	Diploma to bachelor	123	49.2
	BA to Ph.D	60	24

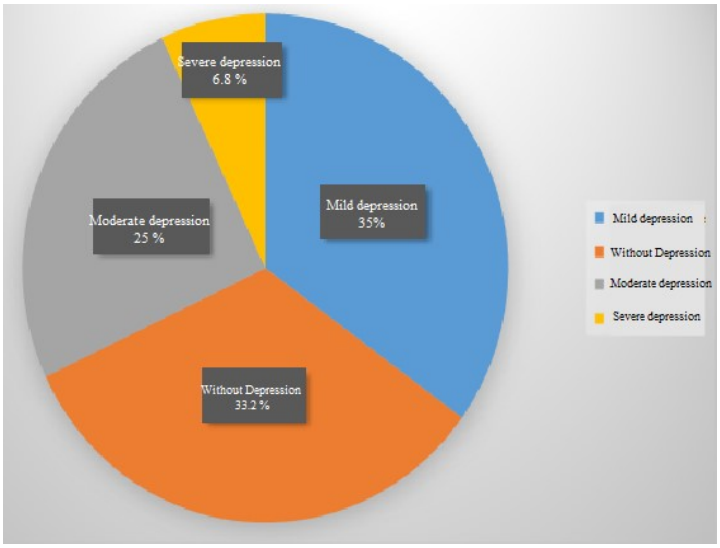

Figure 1: Depression Degrees

The prevalence of depressive symptoms in patients (infertile females) was evaluated based on their education. The prevalence of depression in patients under diploma (25.7% of this group) is far more than with high school diploma

to degree (11% of this group) as well as MA to PHD education (8.2% of this group). Based on statistical significant relationship between education level and incidence of depressive symptoms were particularly severe. So that the less educated, the prevalence of depression is more common (Pv = 0.008) (Table 4).

There is statistically significant relationship between the prevalence of depressive symptoms and levels of spouse's education. As educational levels lower than diploma wife, severe depression in women was higher than diploma levels (Pv = 0.03) (Table 5).

There is statistically a significant relationship between job status and the prevalence of depression. Prevalence of depression in employed women than in unemployed women were more (Pv = 0.024) (Table 6).

There is statistically significant relationship between the prevalence of depression in infertile women and their husband's job. (Pvalue = 0.08) (Table 7)

There is no statistically significant relationship between duration of infertility and the incidence of depressive symptoms (Pvalue = 0.24) (Table 8).

There is no statistically significant relationship between the number of children and incidence of depressive symptoms in infertile women. (Pvalue = 0.58) (Table 9)

Table 4: Severity of depression symptoms , patient education

Patient Education / Severity of Depression symptoms	Below Diploma		Diploma to bachelor		Bachelor to PhD	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	18	23	42	37/8	23	37/7
Mild depression	30	38/5	38	34/2	21	34/5
Moderate depression	10	12/8	19	17	12	19/6
Severe depression	20	25/7	12	11	5	8/2

Table 5: Severity of depression wife Education

Wife Education / Severity of depression	Below Diploma		Diploma to bachelor		Bachelor to Ph.D	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	12	17/9	46	37/4	25	41
Mild depression	38	56/7	40	32/5	19	32
Moderate depression	5	7/5	27	22	13	22
Severe depression	12	17/9	10	8/1	3	5

Table 6: Severity of depression patient's job

Patient's job / Severity of depression	Housewife		Employed	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	50	27/5	33	48/5
Mild depression	72	39/5	20	29/4
Moderate depression	28	15/4	11	16/2
Severe depression	32	17/6	4	5/9

Table 7 Severity of depression status of wife's job

Status of wife's job / Severity of Depression	Unemployed		Employee		Self-employed	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	20	23	31	38	32	39
Mild depression	24	6/27	32	7/36	31	7/35
Moderate depression	20	7/31	23	6/36	20	7/31
Severe depression	4	6/23	7	1/41	6	3/35

Table 8 Severity of depression duration of Infertility

Duration of Infertility / The severity of Depression	Below 1 years		One to five years		More than five years	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	28	33/7	25	30/2	30	36/1
Mild depression	30	34/5	30	34/5	27	31
Moderate depression	22	34/9	20	31/8	21	33/3
Severe depression	6	35/3	6	35/3	5	29/4

Table 9 Severity of depression the number of children

The number of Children / The severity of Depression	no child		One child		Two or more children	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	25	30/2	30	36/1	28	33/7
Mild depression	31	35/6	31	35/6	25	28/8
Moderate depression	23	36/6	20	31/7	20	31/7
Severe depression	6	35/3	7	41/1	4	23/6

According to Pvalue = 0.19, there is no statistically significant relationship

between location and incidence of depressive symptoms at the time of infertility (Table 10)

There is no statistically and according to P value = 1.23 significant association between duration of marriage and incidence of depressive symptoms in infertile women. Table 11.

There is no statistically significant correlation between the average monthly income and prevalence of depressive symptoms in infertile women (P value = 0.37) (Table 12).

There is no statistically significant association between the prevalence of symptoms of depression and stress in infertile women for childbearing families (Pvalue = 1.78) (Table 13).

There is no statistically significant association between the prevalence of depression in infertile women and unwilling to accept a rented womb or egg donation (Pvalue = 0.9) (Table 14)

There is no statistically significant association between the prevalence of depression in infertile women and daily recreation (Pvalue = 1.58) (Table 15)

Table 10 Severity of depression location

Location / severity of depression symptoms	City		Village		Other	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	30	36/1	28	33/7	25	30/2
Mild depression	30	34/5	30	34/5	27	31
Moderate depression	20	31/7	20	31/7	23	36/6
Severe depression	6	35/3	5	29/4	29/4	35/3

Table 11 Severity of depression duration of marriage

Duration of Marriage / Severity of Depression symptoms	Under five years		Between five and ten years		More than ten years	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	25	30/2	28	33/7	30	36/1
Mild depression	31	35/6	25	28/8	31	35/6
Moderate depression	20	31/7	23	36/6	20	31/7
Severe depression	7	41/1	4	23/6	6	35/3

Table 12 Severity of depression monthly income

Monthly Income / Severity of Depression symptoms	Less than five hundred thousand		Five hundred to a million		One to two million		More than two million	
		Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	20	24/1	20	24/1		21	25/3	22	26/5
Mild depression	23	26/4	21	24/2		22	25/2	21	24/2
Moderate depression	17	26/9	15	23/8		23	36/5	8	12/8
Severe depression	4	23/6	4	23/6		4	23/6	5	29/2

Table 13 Severity of depression psychological pressure from families

Psychological Pressure from families Severity of Depression symptoms	Yes		No	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	41	49/3	42	50/7
Mild depression	43	49/4	44	50/6
Moderate depression	31	49/2	32	50/8
Severe depression	5	29/4	12	70/6

Table 14 Severity of depression rental willingness to accept the womb or egg donation

Rental willingness to accept the womb or egg donation Severity of Depression symptoms	Yes		No	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	41	49/4	42	50/6
Mild depression	43	49/4	44	50/6
Moderate depression	33	52/4	30	47/6
Severe depression	8	47	9	53

Table 15 Severity of depression daily entertainment

Daily entertainment Severity of depressive symptoms	Yes		No	
	Frequency	Relative frequency (percent)	Frequency	Relative frequency (percent)
Without Depression	40	48/2	43	51/8
Mild depression	47	54	40	46
Moderate depression	34	53/9	29	46/1
Severe depression	9	52/9	8	47/1

DISCUSSION AND CONCLUSION:

Infertility is a personal crisis, a lot of stress on infertile couples can threaten their mental health in various ways. Infertility can cause a disruption in marital quality , reduce intimacy, fear of termination of marriage, separation, divorce, loss of self-esteem, feelings of isolation, frustration and lead to depression. Several studies have shown that the prevalence of depression in infertile women is higher than the general female population. In Demror study in 1992 on infertile women, prevalence of depression in infertile women has been reported twice of fertile women [5].

In a study that was conducted in 2011 by Hamidan in Saudi Arabia, announced that there is more severe depression in infertile women [21]. In 1383 a study was conducted in Mashhad by Behdani and showed that 57.1 percent of infertile women have depression. This study was conducted on 200 infertile women in Mashhad. He also said that according to aging, patient education, father's education and occupation, there was a significant relationship between the prevalence of depressive symptoms [22]. In this study, 66.8% of people have some degree of depression. Infertility in women who had higher social functioning due to financial independence, a professional identity and lack of isolation or better skills in response to stress, have experienced less depression. In this study, the higher education level of women and their husbands with lower intensity and the prevalence of depression in infertile women correlation seem losses at higher couple's education levels. Because of greater awareness of the issue of infertility, a good deal of support from his wife and more appropriate coping mechanisms against stress acts as a protective factor against depression in women.

In this study, the relationship between duration and cause of infertility prevalence of depressive symptoms was observed. However, in a study on 338 infertile women in Boston, 3-2-year-old female with a history of infertility, depression substantially compared to infertile women. With a history of infertility, less than a year and more than 8 years and the prevalence of depressive symptoms considerably was higher in women who were identified infertile with reason compared with those who had idiopathic infertility,. In a study in Kuwait, age, duration of infertility was associated with a reduction in severity of depressive symptoms that may increase a person's age and the persistence of

fertility would accept and cope with infertility problems [5]. According to the study, lack of awareness of different aspects of infertility, inappropriate treatment of the spouse or relatives of a person with infertility problems by psychosocial aspects of infertility can be exacerbated. The correlation between having children and number of children, the prevalence of depressive symptoms in infertile women was observed. The study also location (urban or rural), duration of marriage, monthly income had no effect on the prevalence of depression in infertile women. The study also feeling pressure from family or relatives and others had no effect on the incidence of depressive symptoms in infertile women. As well as the prevalence of depressive symptoms in women with infertility to their liking or not depends to a rented womb or egg donation. Therefore, educating and raising awareness of the different aspects of infertility and clinical psychology and psychiatric services for diagnosis and treatment of infertility to help infertile couples to cope better with stress, teach problem-solving skills, help decision making about treating and dealing with marital conflicts and family and subsequent infertility is proposed to reduce this problem in the community.

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