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The Relationship Between Depression and the Marital Adjustment of the Women on Infertility Treatment

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ABSTRACT

The aim of this study was to determine the relationship between depression, marital adjustment of the women receiving infertility treatment and the differentiation between depression, marital adjustment according to the sociodemographic variables. The study was run on women receiving infertility treatment in two separate centers who volunteered for the study by using sociodemographic survey form, Beck Depression Scale and Marital Adjustment Scale. The data was collected between April 2015-July 2015. Study group consisted of 228 women who applied for infertility treatment in the study period at two centers and who met the criteria and gave consent to the study. Data analyses were done using SPSS 21.0. In assessment of data, frequencies, percentages, means were used as well as Kruskal-Wallis, Mann-Whitney U, Spearman correlation tests. Results were considered as significant when p value was less than 0,05. Duration of infertility treatment was 3-5 years in 33,3 % of the women while another 13,2% received it for 6-10 years. While 95,6 % of women were informed about infertility treatment, 61,8 % was emotionally depressed because of being unable to bear a child. Depression scores and marital satisfaction scores of women were related significantly and inversely having a correlation coefficient of $r = -0,656$ and a significance level of $p = 0,000$. Depression level was found to be a significant predictor of marital satisfaction ($R = 0,779$, $R^2 = 0,607$, $p < 0,05$). We also detected that marital satisfaction scores of women differed significantly when groups were compared for duration of infertility ($p = 0,007$); women who had infertility treatment for less than 1 year had significantly higher marital adjustment scores when compared to patients who received the treatment for 3-5 years and more than 11 years.

Keywords: Infertility, depression, marital adjustment

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INTRODUCTION

Having a child is one of the important stages of human life, and every married couple is longing for it. The development of the society and the continuation of the generations depend on it [1]. According to the definition of the World Health Organization (WHO) "Infertility is the inability of a sexually active, non-contracepting couple to achieve pregnancy in one year" [2].

Infertility creates biological, psychosocial, economic, ethical and culturally important problems in couples. Individuals' reactions to infertility are reported to have similarities as well as individual differences. The psychological meaning of childlessness in terms of the woman, inability to give birth (functional disorder), lack of psychology (unsatisfaction of motherhood), loss of control (my body does not fit my wishes), feeling outside of the society, worthlessness, loneliness (lack of emotional support for children), lack of social role (mother, pregnant woman, lohusa, mother-in-law) and self-esteem decrease [3].

Fertility is an important part of adult development and growing healthy, successful children is a phenomenon that every married couple craves. Infertility is an important health problem that disrupts the physical, psychological and social balance of not just the spouse but the whole family. In some cultures, especially in wider families infertility is related to divorce [4]. In studies conducted in infertile patients, it is understood that the greatest psychological aspect is the anxiety. Depression is at the forefront in couples who fail in treatment [5]. The more a woman's identity is defined by her being a mother, the greater the amount of her psychological distress and disability. The longer the duration of infertility is, the more helplessness and despair dominate and this can end up with a greater depression [6].

Marriage adaptation, which has an important role in happy and satisfying marriages, is influenced by many individual, situational and relational factors. Examples include; relational perceptions, communication patterns, problem solving skills, loyalty, sexuality, search for excitement and level of education can be given [7]. Married couples who are able to agree on issues related to marriage and family and solve their problems positively are defined as a harmonious marriage [8].

A married couple can not fulfill the role of "being a family" when they can not fulfill the expectation of the society. Infertility is becoming a complex life crisis by affecting the spouses' social lives, psychological situations, marital relations, sexual lives, future plans, self esteem, body images, quality of life negatively [3].

This study was carried out to determine whether the relationship between depression and marital adjustment in infertility treatment, depression and marital adjustment differed according to sociodemographic variables.

MATERIALS AND METHOD

Research was conducted with voluntary women who were receiving infertility treatment. Written and verbal informed consent was obtained from the volunteer women who participated in the survey. Sociodemographic questionnaire, Beck Depression Scale and Marital Adjustment Scale were used in the study.

Following the approval of the ethics committee, the research was carried out in a center and a hospital where in-vitro fertilization was performed in Istanbul. In order to be able to conduct the research, written permission had been obtained from the center and the hospital. The data was collected between April 2015 and July 2015. The sample group of the study consisted of 228 women with the criteria (including definitive infertility diagnosis, pre-embryo transfer before and after embryo transfer of IVT therapy, non-communication disabled) for inclusion in the study and women accepted the study.

Sociodemographic Question Form:

In the sociodemographic question form prepared by the researcher based on the literature and clinical experience; There are 20 questions that include the sociodemographic characteristics of women, their spouse characteristics, the characteristics of the infertile group and their psychological characteristics.

Beck Depression Scale:

The Beck Depression Scale is a self-report scale consisting of 21 items, used to measure the emergence of negative, emotional, cognitive, and motivational areas of depression. In clinical practice, the scale is used to determine the intensity of depression in both psychiatric and outpatient settings. In the study, the scale was adapted by Nesrin Şahin Hisli in 1988 [9] and validity reliability study was used. The scale consisted of clinical observations that were systematically combined under 21 symptoms and the attitudes were graded between 0-3 according to their intensity. The highest score on the scale is 63, and the cut-off point accepted for clinical depression is 17. The subgroups of the scale are: mood, pessimism, feeling of failure, feelings of guilt, feelings of punishment, disgust, self-blame, suicide desire, crying, nervousness, social withdrawal, indecision, change in body image, inability to sleep, loss of appetite, weight loss, somatic complaints, loss of libido.

In the study, Cronbach's alpha coefficient of Beck Depression Scale was 0,91.

Marital Adjustment Scale:

Marital Adjustment Scale is a 15-item scale developed by Locke and Wallace (1959) to measure marital adjustment [10]. The scale was adapted to Turkish by Kışlak (1999) [11]. As a result of the analyzes made, it was calculated that the score of 43, which enables discrimination of compatible and incompatible married persons, by looking at the scores

obtained from the scale. In this case; if married people got 43 and more points were harmonious in their marriage. If married people got below 43 they were unharmonious in their marriage. In the study, Cronbach's alpha coefficient of marital adjustment scale was found as 0,91.

Evaluation of the data:

SPSS 21.0 program was used in analysis of the data. Data were analyzed by frequency, percent, median, Kruskal Wallis test, Mann Whitney U test, Spearman correlation test. The level of significance was accepted as $p < 0,05$.

RESULTS AND DISCUSSION

Of the women participating in the survey, 34,2% were primary school graduates and 28,5% were high school graduates. The average monthly income of 53,9% is over 2000 TL, 30,7% is between 1,500-2,000 TL, 60,1% is in province center, 37,7% is living in district center, 38,6% of them are married for 6-10 years, 30,7% are married for 1-5 years; 50,9% of them were married by acquainted, 49,1% of them were married visibly; 95,6% had first marriage, 82,5% did not have violence in marriage, 87,7% had no relationship with their spouse, 69,3% did not consider adoption, and 19,7% were not sure about adoption.

68,9% were positive changes in the attitude of the spouse as the result of infertility, 6,1% changed in the negative direction, and 25% had no change in the spousal attitude. 33,3% of the women who participated in the research had a high school graduate and 30,7% of their spouses were primary school graduates; 74,6% did not have communication problems with their spouse, 25,4% had problems in communicating with their spouse; 52,6% of them did not get a response from the spouse's family as a result of infertility, 89,9% never had children before, and 85,5% of them were aware of the reason of infertility.

33,3% of the women had infertility treatment for 3-5 years, 13,2% had been treated for 6-10 years; 95,6% had information about infertility treatment; 61,8% were unhappy due to lack of a child.

Table 1 Comparison of Depression and Marital Adjustment According to the Duration of Marriage

| Variables | Depression | | | Marital Adjustment | | |
|--------------------------|------------|-------|-------|--------------------|-------|-------|
| | Mean Rank | Medin | p | Mean Rank | Men | p |
| 1-5 years (n= 78) | 93,41 | 5,00 | 0,002 | 135,66 | 51,00 | 0,002 |
| 6-10 years (n=88) | 125,68 | 8,50 | * | 104,41 | 47,00 | * |
| 11 years and more (n=62) | 125,17 | 10,00 | | 102,20 | 46,00 | |
| Total (n=228) | | | | | | |

* Statistical significance

As seen in Table 1, the depression scores of the women in the study group were significantly different according to the duration of marriage ($p=0,002$). As a result of bilateral comparisons,

depression scores of women have been married for 6-10 years were significantly higher than those of 1-5 years of marriage ($p < 0,05$); The depression scores of those who were married for 11 years and over were found to be significantly higher than those who were married for 1-5 years ($p < 0,05$) (Table 1).

The marital adjustment scores of women differed significantly according to duration of marriage ($p=0,002$). As a result of the bilateral comparisons, it was found that the marital adjustment scores of women who were married for 1-5 years were higher than those married for 6-10 years and married for 11 years and over ($p < 0,05$) (Table 1).

Table 2. Comparison of Depression and Marital Adjustment According to the Marriage Pattern

| Variables Marriage Pattern | Depression | | | Marital Adjustment | | |
|---------------------------------|------------|--------|-------------------------|--------------------|--------|-------------------------|
| | Mean Rank | Median | Mann Whitney | Mean Rank | Median | Mann Whitney |
| With visual methods (n= 112) | 132,49 | 10,00 | U=4481,500 p= 0,000* | 93,73 | 46,00 | U=4170,000 p= 0,000* |
| Acquainted (n= 116) | 97,13 | 5,00 | | 134,55 | 51,00 | |

*** Statistical significance**

As seen in Table 2, there was a significant difference in women's depression scores according to marriage pattern ($p = 0,000$). The scores of women who married with visual methods were found to be significantly higher than those who married acquainted ($p < 0,05$) (Table 2).

There was also a significant difference between marital adjustment scores of women according to marriage pattern ($p = 0,000$). Marital adjustment scores of women who married acquainted were significantly higher than women married with visual methods ($p < 0,05$) (Table 2).

Table 3 Comparison of Depression and Marital Adjustment According to the Communication Problem with the Spouse

| Variables Communication problem with the spouse | Depression | | | Marital Adjustment | | |
|--|------------|---------|------------------------|--------------------|---------|-------------------------|
| | Mean Rank | Media n | Mann Whitney | Mean Rank | Media n | Mann Whitney |
| Yes (n= 58) | 159,0 | 14,00 | U=2302,500 p=0,000* | 65,06 | 39,00 | U=2062,500 p= 0,000* |
| No (n= 170) | 99,04 | 5,00 | | 131,37 | 50,00 | |
| Total (n=228) | | | | | | |

*** Statistical significance**

As shown in Table 3, there was a significant difference between the depression scores of women according to the communication problem with their spouse ($p = 0,000$). It was determined that depression scores of women who had communication problems with their spouse were significantly higher than those of women who did not have communication problems ($p < 0,05$) (Table 3).

There was a significant difference between marital adjustment scores of women according to the communication problem with their spouses ($p = 0,000$). Marital adjustment of women who had problems in communicating with spouses was found to be significantly lower than that of women who did not have communication problems ($p < 0,05$) (Table 3).

Table 4. Comparison of Depression and Marital Adjustment According to the Change in Attitude of Partner as a Result of Infertility

| Variables Change in attitude of spouse as a result of infertility | Depression | | | Marital Adjustment | | |
|--|--------------|--------|-------------|--------------------|--------|-------------|
| | Mean Rank | Median | | Mean Rank | Median | |
| Absent (n= 57) | 122,31 | 9,00 | $p=0,000^*$ | 103,80 | 46,00 | $p=0,000^*$ |
| Positively changed (n= 157) | 103,27 | 6,00 | | 127,38 | 50,00 | |
| Negatively changed (n= 14) | 208,61 | 31,50 | | 13,68 | 17,00 | |
| Total (n=228) | | | | | | |

*** Statistical significance**

As seen in Table 4, there was a significant difference between the depression scores of women according to the change in attitude of spouse as a result of infertility ($p = 0,000$). As a result of the bilateral comparisons, it was determined that the depression scores of women who indicated that the attitude of the spouse negatively changed as a result of the infertility were significantly higher than the depression scores of the women who indicated that the attitude of the spouse did not change and positively changed ($p < 0,05$) (Table 4).

The marital adjustment scores of the women were significantly different ($p = 0,000$) (Table 4) according to the change in the attitude of the spouse as a result of the infertility. As a result of the bilateral comparisons, it was found that the marital adjustment scores of the women who indicated that the attitude of the spouse changed positively as a result of infertility were significantly higher than the marital adjustment scores of the women who stated that the attitude of the spouse did not change ($p < 0,05$). The marital adjustment scores of women who stated that the attitude of the spouse did not change as a result of infertility were significantly higher than the marital adjustment scores of the women who indicated that the attitude of the spouse changed negatively ($p < 0,05$). The marital adjustment scores of women who stated that the attitude of the spouse changed positively as a result of infertility was significantly higher than the marital adjustment scores of the women who stated that the attitude of the spouse was negative ($p < 0,05$) (Table 4).

Table 5. Comparison of Depression and Marital Adjustment According to the Reaction to the infertility from the spouse's family

| Variables | Depression | | | Marital Adjustment | | |
|--|------------|--------|----------|--------------------|--------|----------|
| | Mean Rank | Median | | Mean Rank | Median | |
| Reaction to the infertility from the spouse's family | | | | | | |
| Absent (n= 120) | 107,17 | 6,50 | p=0,000* | 119,69 | 49,00 | p=0,000* |
| Insightful and supportive (n= 80) | 101,88 | 6,00 | | 133,28 | 50,50 | |
| Critical and condescending (n= 28) | 181,98 | 21,50 | | 38,63 | 27,50 | |
| Total (n=228) | | | | | | |

*** Statistical significance**

The depression scores of women differed significantly according to the reaction to the infertility from the spouse's family ($p = 0,000$) (Table 5). As a result of the bilateral comparisons, it was found that women who received a critical and condescending reaction to the infertility from the spouse's family had significantly higher scores on depression ($p < 0,05$) than those who received sympathetic and supportive response from the spouse's family and those did not received any response from the spouse's family ($p < 0,05$) (Table 5).

Marital adjustment scores of the women were significantly different according to the reaction to the infertility from the spouse's family ($p = 0,000$) (Table 5). As a result of the bilateral comparisons, it was found that marital adjustment scores of women who did not received any reaction to the infertility from the spouse's family were significantly higher than women who received critical and condescending responses ($p < 0,05$); marital adjustment scores of women who received insightful and supportive responses from the spouse's family were found to be significantly higher ($p < 0,05$) than women who received critical and condescending responses (Table 5).

Table 6. Comparison of Depression and Marital Adjustment According to the Duration of Infertility

| Variables | Depression | | | Marital Adjustment | | |
|---------------------------|------------|--------|----------|--------------------|--------|----------|
| | Mean Rank | Median | | Mean Rank | Median | |
| Duration of Infertility | | | | | | |
| 1-2 years (n= 47) | 98,16 | 5,00 | p=0,000* | 139,20 | 50,00 | p=0,004* |
| 3-5 years (n= 82) | 99,67 | 5,00 | | 119,86 | 49,00 | |
| 6-10 years (n= 57) | 141,60 | 11,00 | | 97,69 | 45,00 | |
| 11 years and more (n= 42) | 124,96 | 10,00 | | 99,20 | 46,00 | |
| Total (n=228) | | | | | | |

*** Statistical significance**

As seen in Table 6, depression scores of women differed significantly according to the duration of infertility ($p = 0,000$). As a result of bilateral comparisons, depression scores of women who were infertile for 6-10 years were significantly higher than those of infertile for 1-2 years ($p < 0,05$); The depression scores of women who were infertile for 6-10 years were significantly

higher than those of infertile women for 3-5 years ($p < 0,05$); The depression scores of 11 years and over infertile women were significantly higher than those of infertile women for 3-5 years ($p < 0,05$).

Marital adjustment scores of women differed significantly according to the duration of infertility ($p = 0.004$); As a result of the bilateral comparisons, marital adjustment scores of women who were infertile for 1-2 years were significantly higher than those of infertile women for 6-10 years ($p < 0,05$); The marital adjustment scores of women who were infertile for 1-2 years were significantly higher than that of infertile women for 11 years and more ($p < 0,05$); Marital adjustment scores of women who were infertile for 3-5 years were significantly higher than those of infertile women for 6-10 years ($p < 0,05$) (Table 6).

Table 7: Relationship between Depression scores and marital adjustment scores

| Variables | Marital Adjustment |
|--------------|--------------------|
| r | -,656** |
| Depression p | 0,000 |
| N | 228 |

** Statistical significance

There was a significant ($p = 0,000$) and negative correlation ($r = -0.65$) between the depression scores of women and marital adjustment scores (Table 7).

According to monthly incomes, according to the status of previous gynecological illness, according to the state of thinking about adoption, according to the status of kinship with the spouse, according to the presence of any psychiatric treatment previously, according to the presence of a psychiatric treatment, according to the status of infertility, according to the state of infertility, it was found that there was no significant difference between women's depression scores and marital adjustment scores ($p > 0,05$).

In a study with women who had been in infertility treatment it was determined that 34.2% of the patients were married less than 5 years, 34.2% were married for 6-10 years and 31.6% were married more than 11 years [5]. In the same study, 52.6% of infertile couples married visually [5]. In another study, 56.7% of the women have been married for 6 years and over [[6]. In the same study, 77.8% of the women were married acquainted [6]. In another study it was found that almost all of the couples in all groups were first marriages and the average marriage duration was $9,88 + 5,50$ years, the majority of them were married visually [4]. In our study, it was determined that 38,6% of the women were married for 6-10 years, 50,9% were married acquainted, 49,1% of them were married visually.

In literature, studies on marital satisfaction and adjustment in infertile couples; some studies show that marital satisfaction is not different between men and women, and that infertility

affects marital adjustment and communication between couples more negatively in women. In a study of 370 infertile women in Iran [12], depression was found in 40% of women. In another study, 21.1% of infertile women found mild depression and 10.5% had moderate depression [5]. In a study conducted during the IVF treatment with 391 women in the Netherlands women were asked to record their feelings daily during the treatment cycle and the anxiety and depression symptoms in women during the IVF treatment were significantly higher in the study [13]. In our study, 228 women who were treated for infertility were found to have a mild depression rating of 14.5% and a moderate depression rating of 17.1%.

In a study [14] it was determined that depression was found to decrease as age increased and it was determined that low level of education, long duration of infertility, unemployment, no support from spousal parents increases depression scores. In the study conducted by Güz et al. (2003), it was determined that there was no significant difference in the marital adjustment scores of women according to the response received from their spouse's family [15]. In our study, the depressed levels of women who responded negatively were significantly higher and marital adjustment was found to be significantly higher for women who received positive support from their spouse. Marital adjustment was found to be higher for those who did not change their attitudes than those who changed negatively. It was determined that there was a significant difference between depression levels and marital adjustment according to the response from the spouse's family to the infertile state. Women with understanding and supportive responses from their spouse's family showed low levels of depression and high marital adjustment. Marital adjustment and low levels of depression were found among women who received critical and condescending responses from their spouse's family.

The relationship between infertility and psychological signs and symptoms has been studied in many studies. Gürbüz (2007) [4] investigated the effects of marriage adaptation and depressive status on in vitro fertilization and embryo transfer (IVF-ET) outcomes in infertile couples the average depression score of the women was determined as 21.11 ± 5.74 . In our study, the mean depression score was 10.38 ± 9.66 . The level of depression determined in our study was found to be lower than that of Gürbüz (2007)'s study [4].

In a study regardless of the cause of infertility, there was a significant negative ($p < 0.001$) relationship between the Beck Depression Scale and the Dual Compliance Scale in all groups. [4]. According to this result, marriage adaptation is disrupted and the findings of depression may be said to increase. In our study, it was determined that there was a negative correlation ($r = -0.656$; $p < 0.000$) between Marital Adjustment Scale and Beck Depression Scale. Similar findings were obtained with our study of Gürbüz (2007) [4].

CONCLUSION

- Women who married as acquainted had lower levels of depression and higher marital adjustment than married women as visually.
- The levels of depression of women with communication problems with their spouses were significantly higher and marital adjustment was lower than those without communication problems with spouses,
- It was found that there was a significant ($r = -0.656, p < 0.000$) and negative correlation between women's depression scores and marital adjustment scores.

As a result, it was seen that infertility affects women psychologically in the negative direction and this situation affects the harmony in marriage of women. In this context, it is suggested that studies that determine the level of depression experienced by women in infertility treatment should be done in institutions and institutions providing infertile illness treatment and it may be suggested to provide psychological expert assistance to the illnesses deemed necessary according to the result. The role that falls on midwives and nurses here is great. It is important that initiatives are undertaken to support women's marital adjustment and psychological status. Compliance in the marriage of patients with low levels of depression was found to be high. There are studies that demonstrate that the psychological state of the patients and the harmony in their marriage affects the outcomes of infertility treatment negatively. It may be possible to improve the treatment outcome of patients and increase the treatment success by applying psychological help and initiatives that will improve marital compatibility.

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