Original Article

Anxiety, Depression, Self-Efficacy and Adjustment in Infertile Turkish Women

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Abstract

Aim: The purpose of this study was to determine anxiety, depression, self-efficacy perception, adjustment and the association between these conditions in primary infertile women undergoing infertility treatment.

Methodology: It was a cross-sectional study. One-hundred and fifty-eight infertile women undergoing treatment were included in the study. Data were collected using a Personal Information Form, Hospital Anxiety and Depression Scale (HAD-A-HAD-D), Turkish Version of the Infertility Self-Efficacy Scale Short Form (TISE-SF), and Turkish Version of the Fertility Adjustment Scale (T-FAS).

Results: The mean scores of women were 21.55±5.19 for TISE-SF, 25.09±4.69 for T-FAS, 8.07±3.65 for HAD-A and 6.49±3.58 for HAD-D. There was a statistically significant weak negative correlation between TISE-SF and T-FAS scores (p=0.000; r=-0.282). There was a statistically significant moderate weak negative correlation between TISE-SF and HAD-A and HAD-D scores (p=0.000; r=-0.455; p=0.000; r=-0.426). There was a statistically significant weak positive correlation between T-FAS and HAD-A and HAD-D scores (p=0.000; r=0.319; p=0.010; r=0.205). There was a statistically significant moderate positive correlation between HAD-A and HAD-D scores (p=0.000; r=0.515).

Conclusion: Infertile women had high scores of anxiety and depression, moderate self-efficacy, and inadequate adjustment. Self-efficacy perception, anxiety and depression and adjustment are correlated with each other.

Keywords: Anxiety, depression, fertility adjustment, infertility, self-efficacy.

Introduction

Several negative psychological outcomes, such as anxiety and depression, are seen in women undergoing infertility treatment (Pasch, Gregorich, & Katz, 2012). It is known that the quality of life of women is impaired since infertile women spend so much time around the hospital during diagnosis and treatment (Goker et. al., 2017).

Self- efficacy is defined as the belief in one's ability to cope with a particular situation (Bandura, 2001). It involves the competence of individuals in maintaining a positive attitude, being comfortable while waiting for the test results, and coping with the psychological changes associated with the treatment (Cousineau et. al., 2006). Infertile women with high self-efficacy have shown less depression and anxiety (Faramarzi et. al., 2014).

Adjustment is the cognitive and emotional behaviour of the infertile individual towards the likelihood of not having a child (Arslan-Ozkan, Okumus, Lash, & Firat, 2014; Okumus & Arslan-Ozkan, 2012). The adjustment and perceived self-efficacy of women have significant effects on their behaviour during infertility treatment (Glover et. al., 1999). Cousineau et al. (2006) found that self-efficacy perceived by women in coping with infertility was effective and it was decreased during their treatment.

The infertility diagnosis should be understood as a biopsychosocial problem that affects men and women (Bártolo et. al., 2016). It is known that couples with fertility problems show inappropriate strategies for coping with this situation, and it is important to assess the patients to prevent mental health problems at an early stage of treatment (Cunha, Galhardo, & Pinto-Gouvei, 2016, Fallahzadeh et al., 2019). Therefore, it is important for health professionals to evaluate patients' adjustment to anxiety, depression, self-efficacy and infertility (Arslan-Ozkan et. al., 2014). In contrast, the literature information on self-efficacy perception and adjustment to infertility is limited. The aim of this study was to determine anxiety, depression, self-efficacy perception, adjustment and the association between these conditions in primary infertile women undergoing infertility treatment.

Materials and Methods

Design: It was a cross-sectional study.

Participants: The study was conducted in a private hospital and a public hospital in the western city of Turkey, Denizli. There was a total of 300 women in the above mentioned hospitals who were diagnosed with primary infertility and undergoing treatment. The sample size was calculated as 148 with a 95% confidence interval and 5% sampling error using the sample size calculation formula that was used when the universe was known for 80% power. It was planned to reach a greater number of individuals by considering the possible losses, and it was reached to 172 individuals. Four patients didn't want to participate to the study. Ten patients withdrew because of incomplete filling of scale (eight) or simply wishing to withdraw from the study (two). The study was completed with 158 primary infertile women. The inclusion criteria were as follows: primary infertility, between the ages of 18–45 and ability to speak, read and write in Turkish. The exclusion criteria were as follows: secondary infertility; being diagnosed with a chronic disease; insufficient Turkish language skills and/or being a foreign national.

Data collection: Data were collected using four forms. Women who accepted to participate in the study were given these questionnaires, and women filled in the questionnaires themselves.

Personal Information Form: This form was prepared by researchers in the light of the literature and consists of questions about socio-demographic characteristics of the participants, such as age and educational status, and their infertility treatments.

Hospital Anxiety and Depression Scale (HAD): The Hospital Anxiety and Depression Scale is a self-report rating scale designed to measure both anxiety and depression. It contains 14 questions, seven related to depression and seven to anxiety. The scale consists of two subscales: anxiety subscale (HAD-A) and depression subscale (HAD-D) (Zigmond & Snaith, 1983). Aydemir, Guvenir, Kuey, and Kultur (1997) established the validity and reliability of the Turkish version, and its Cronbach alpha was found as 0.85 for anxiety subscale, and 0.77

for depression subscale. The internal consistency coefficient of HAD-A and HAD-D in this study was 0.66, 0.65.

Turkish Version of The Infertility Self-Efficacy Scale Short Form (TISE-SF): Cousineau et al. developed a short form of the scale (ISE-SF) with 10 items (a=094). The short form was adapted to the Turkish context. The Cronbach's alpha of the Turkish version of the Infertility Self-Efficacy Scale, Short Form (TISE-SF) was 0.78. Scores on the TISE-SF range between 8–32. Higher scores indicate greater perceived self-efficacy (Arslan-Ozkan et. al., 2014). The internal consistency coefficient of TISE-SF in this study was 0.78.

Turkish Version of The Fertility Adjustment Scale (T-FAS): It was developed by Glover et al. to standardize the measurement of psychological adjustment in infertility. FAS examined the adjustment as heterogenous concept involving cognitive, behavioral, and emotional aspects (Glover et. al.,1999). The original scale includes 12 items (a=085). The Turkish version of FAS (T-FAS) has 10 items. Internal consistency of the T-FAS was 0.77. Scores on the FAS range between 10-40, with a high score indicating of inade-quate adjustment (Okumus & Arslan-Ozkan, 2012). The internal consistency coefficient of T-FAS in this study was 0.51.

Ethical considerations: The approvals were obtained from the Ethics Committee for Non-Interventional Investigations of the University of Pamukkale (Number of ethics committees: 60116787-020/35873) and from the two centers, where the study was conducted. The purpose of the study was explained to the infertile women who would participate in the study by the researchers, and verbal and written consents were obtained from those who agreed to participate in the study.

Results

Socio-demographic characteristics, treatment information and the mean scores of TISE-SF, HAD-A, HAD-D and T-FAS scales of the infertile women participating in the study are presented in Table 1.

The mean score of Infertility Self-Efficacy Scale (TISE-SF) was 21.55±5.19. The mean score of Fertility Adjustment Scale (T-FAS) 25.09±4.69. The mean score of anxiety sub-score (HAD-A) was 8.07±3.65. The mean score of depression sub-score (HAD-D) was -6.49±3.58 (Table 1).

The association between the mean scores of Infertility Self-Efficacy Scale, Infertility Adjustment Scale, and subscales of HAD-A and HAD-D are presented in Table 2. There was a statistically significant weak negative correlation between TISE-SF and T-FAS scores (p=0.000; r=-0.282). As the self-efficacy of infertile women increases, the level of adjustment to infertility also increases. There was a statistically significant moderate weak negative correlation between TISE-SF and HAD-A scores (p=0.000; r=-0.455). There was a statistically significant moderate weak negative correlation between TISE-SF and HAD-D scores (p=0.000; r=-0.426). The self-efficacy perception decreases as the level of anxiety and depression of infertile women increases. There was a statistically significant weak positive correlation between T-FAS and HAD-A scores (p=0.000; r=0.319). There was a statistically significant weak positive correlation between T-FAS and HAD-D scores (p=0.000; r=0.205). As the level of anxiety and depression of infertile women increases, the level of adjustment to infertility decreases. There was a statistically significant moderate positive correlation between HAD-A and HAD-D scores (p=0.000; r=0.515). As the anxiety level of infertile women increases, depression levels also increase (Table 2).

Table 1. Sociodemographic Characteristics, Treatment Information and The Mean Scores of TISE-SF, HAD-A, HAD-D, and T-FAS Scales of Infertile Women (n=158)

Variable	Mean±SD	Min.- Max.
Age	29.61±5.66	18-45
Desire to have a child, year	4.50±3.73	1-23
Duration of diagnosis	2.60±3.43	1-23
TISE-SF	21.55±5.19	9-32
T-FAS	25.09±4.69	11-37
HAD-A	8.07±3.65	0-19
HAD-D	6.49±3.58	0-16
Variable	**n (158)**	**%**
Place of live		
Village	23	14.6
Sub-province	37	23.4
Province	98	62.0
Educational status		
Literate	11	7.0
Primary education	76	48.1
High school	52	32.9
College	19	12.0
Working status		
Working	63	39.8
Not working	95	60.2
Social security		
Present	133	84.2
Absent	25	15.8
Family income		
Low	67	42.4
Moderate	91	57.6
Family type		
Elementary family	142	89.9
Extended family	16	10.1
Infertility caused by		
Woman	69	43.7

Man	10	6.3
Both woman and man	9	5.7
Uncertain	47	29.7
Not defined yet	23	14.6
Previous treatment		
Intra-uterine insemination	69	3.7
IVF	5	3.2
Ovulation induction	34	21.5
Hormone therapy	49	31.0
None	1	0.6
Current treatment		
Intra-uterine insemination	66	41.8
IVF	36	22.8
Ovulation induction	31	19.6
Hormone therapy	25	15.8

Table 2. The Association Between The Mean Scores of TISE-SF, T-FAS, HAD-A and HAD-D Sub-scale (n=158)

Scales		TISE-SF	T-FAS	HAD-A	HAD-D
TISE-SF	r	-	-0.282	-0.455	-0.426
	p		0.000*	0.000*	0.000*
T-FAS	r	-0.282	-	0.319	0.205
	p	0.000*		0.000*	0.010*
HAD-A	r	-0.455	0.319	-	0.515
	p	0.000*	0.000*		0.000*
HAD-D	r	-0.426	0.205	0.515	-
	p	0.000*	0.000*	0.000*	

*p<0.05

Discussion

Self-efficacy scores of infertile women were found to be moderate in the study. Arslan-Ozkan et al. found in their study that Turkish women had moderate levels of infertility self-efficacy scores (Arslan-Ozkan et. al., 2014). The findings of two studies conducted in Iran also showed moderate levels of self-efficacy among infertile women (Faramarzi et. al., 2014; Sani & Tamannaeifar, 2017).

Psychological adjustment in infertile women is treated as a heterogeneous concept involving cognitive, behavioural and emotional aspects. Individuals' adjustment at different stages of treatment may be different (Glover et. al., 1999). Moura-Ramos et al. (2016) emphasized that adjustment to infertility is a highly personal experience, influenced by previous experience and by each person's own representations of the importance of parenthood in their own lives. In this study, the adjustment scores of infertile women were slightly above the median scores. This finding is similar to previous studies (Arslan-Ozkan et. al., 2014; Glover et. al., 1999; Arslan & Okumus, 2016).

Depression and anxiety are common in infertile women (Yusuf, 2016). Depression is considered to be a major public health problem associated with infertility in developing countries where having a child is very important for socio-cultural, economic and religious reasons (Ojo, Oluwole, & Obadeji, 2017). Farzadi and Ghasemzadeh (2008) have shown that most of the infertile women in Iran are experiencing depression at different levels. Another study in Iran found that anxiety and depression increased after failure of treatment in infertile patients (Maroufizadeh et al., 2015).

Studies in the United States have also shown a high level of stress (Turner et al., 2013), anxiety (Pasch et. al., 2012; Turner et al., 2013) and depression in infertile women (Pasch et. al., 2012). In this study, mean scores of anxiety sub-scale (8.07) and depression sub-scale (6.49) were found to be higher in infertile women. However, a significant relationship was detected between anxiety and depression; as the anxiety level of women increased, depression levels also increased.

There were two studies conducted in different cultures with the measurement instrument (HAD) that we used our study. Ogawa, Takamatsu and Horiguchi (2011) determined that the levels of anxiety (5.7) and depression (4.9) were higher in Japan infertile women. Anxiety and depression levels in Turkish infertile women appear to be higher than those in different cultures. It is thought that this situation was caused by cultural differences.

In Turkish culture, most women believe that a child is necessary for being a family. This viewpoint causes increase of social pressure on infertile women (Topdemir-Kocyigit, 2012). The sources of psychological distress are often rooted in the socio-cultural pressures exerted on a woman, particularly by her in-laws (Hess, Ross, & GilillandJr, 2018).

In Turkey, especially in rural areas, if a woman is unable to bear children, she can be threatened with divorce, even is forced to endure marriage of their husbands with another woman (cowife), stigmatization and social exclusion by her husband's family. This situation both causes anxiety and with every failed treatment women loss their hope for being an ideal family with the loss of the child. This situation may lead a depression (Terzioglu et al., 2016; Sezgin & Hocaoglu, 2014).

In this study, it was determined that as the self-efficacy perception of infertile women decreased, anxiety and depression levels increased. Similarly, Faramarzi et al. (2014) showed that depressive symptoms of Iranian women with high self-efficacy in infertility were less and anxiety levels were lower.

Individuals with strong self-efficacy set their goals and strive to reach them, they increase their efforts when faced with failure. They immediately repair their self-efficacy after failure (Bandura, 1994). At the same time, a high self-efficacy person tends to perceive it as less threatening and stressful because of personal control against a stressful situation (Cousineau et. al., 2006). Albal and Kutlu (2010) suggested that initiatives to increase self-efficacy in depressed individuals might strengthen their desire to dealing with them.

All these studies indicate that attempts to increase self-efficacy in infertile women may reduce depressive symptoms and anxiety. Thus, it is important for health

professionals working in this area to make initiatives to increase the self-efficacy of infertile women.

Adjustment is important for women for dealing with fertility problems (Verhaak et al., 2007). In the study, it was determined that as the self-efficacy perception of infertile women increased, the adjustment also increased. It may be useful to develop training programs that enhance women's self-efficacy. Arslan-Ozkan et al. (2014) have shown that nursing care reduces the negative effects of infertility and improves self-efficacy and adjustment to infertility in infertile women. In another study, education and stress management program were increased the self-efficacy of infertile patients during their treatment (Cousineau et al., 2008). These studies indicate that infertility nurses are effective in improving self-efficacy and adjustment of infertile individuals.

It was detected in our study that the level of adjustment to infertility was decreased in infertile women, as the anxiety and depression levels were increased. In a study in Netherlands, they showed that the continuation of pregnancy demand after an unsuccessful treatment was significantly associated with anxiety and depression, and it was emphasized that there may be a relationship between emotional distress and adjustment (Verhaak et. al., 2007). In the same study, it was explained that positive adjustment was found to be related to the development of new life goals despite insisting on attempts to conceive.

Helping women to change their life goals after the treatment can positively affect their adaptation process. However, in Turkish society, infertility has a meaning of "infertility", which means sterility. As it is seen, infertility is regarded as a defect or deficiency and these women are especially defeated and humiliated in traditional regions (Topdemir-Kocyigit, 2012). Therefore, it may be necessary for Turkish women to be supported more than women in western societies.

Conclusion: Infertile women need to be more supported by health professionals. Particularly, well-equipped health professionals should initially assess the level of impact of infertile individuals and their psychological status, such as self-efficacy and adjustment. Infertility nurses should identify the individual who are at risk for affecting from infertility and adjustment difficulty, reduce the risk factors associated with self-efficacy perception in infertility and strengthen the protective factor. It is recommended that more studies be conducted on different religions and cultures in order to better understand the psychosocial effects of infertility on individuals.

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