

Association between Coping Strategies and Infertility Stress among a Group of Women with Fertility Problem in Shiraz, Iran

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Abstract

Background: Studies have shown that individuals with fertility problems experience psychosocial problems. The use of various coping strategies seems to have different impacts on women with infertility stress. The aim of this study was to examine the role of coping strategies (active-avoidance, passive-avoidance, active confronting and meaning based) in predicting infertility stress among a group of women seeking infertility treatment in Shiraz.

Methods: One hundred twenty infertile women were recruited from several infertility clinics in Shiraz using convenience sampling method. The participants completed research measures including the Infertility Problem Stress Inventory and the Ways of Coping Scale (passive-avoidance, active-avoidance, active-confronting, meaning-based). Multiple regression analysis was used for data analysis. A p-value less than 0.05 was considered as statistically significant.

Results: The findings showed that participants had the highest scores on passive-avoidance coping strategies followed by meaning-based coping, active-confronting coping and active-avoidance coping. The findings also indicated that women who utilized more active-avoidance coping strategies reported less infertility stress. Furthermore, the results of regression analysis demonstrated that two coping strategies including active-avoidance ($\beta=0.35$, $p<0.001$) and meaning-based coping ($\beta=-0.50$, $p<0.001$) predicted infertility stress significantly. Moreover, meaning-based coping strategy was the strongest predictor of low infertility stress.

Conclusion: The present study showed that the majority of infertile women used passive-avoidance coping strategy. Furthermore, those who perceived their infertility problem as meaningful had a low infertility stress, while those who used active-avoidance coping strategies had high infertility stress.

Keywords: Coping skills, Female, Fertility, Infertility, Psychological, Stress.

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Introduction

There is no precise information on the incidence of infertility in Iran, but, it is estimated that about 22% of Iranian women experience primary infertility (1). Infertility has been found to yield psychological and social consequences, and the female partner tends to be more adversely affected than her male counterpart (2). The inability to have children is felt by individuals and couples as a stressful experience (3). Research has shown that women with infertility

problems experience perceived lack of control in their life (4), social isolation, loneliness, (5), sexual dysfunction (6), low self-esteem (7), and fertility distress (8). The loss of control over one's life has been regarded as the most difficult consequence of infertility (9). Many studies have been conducted on stress and coping within the infertility context. The influence of coping strategies appears to depend on the specific constraints imposed by the stressful situation (10). It is believed

that appraisal of controllability is an important factor in adoptions of coping strategies. In a study, Bento and his colleagues (11) found that appraisal of high controllability was related to adopting active coping strategies. The use of more passive and less active coping strategies has also been found to be related to psychological distress in patients with chronic illnesses (12). Although, infertility has an adverse effect on both men and women, females seem to suffer more. Women are under more pressure to conceive than men. According to some studies, in some cultures and societies such as Iran, there is a relatively high pressure on women to have a child (13). In such cultures, children are an important source of social desirability. They represent the creation of family bonds that link individuals, couples and generations to each other (14). Therefore, infertility can have a devastating effect on women's mental health. With regard to the fact that certain coping strategies have different impacts on individuals' mental health, it is important to understand which forms of coping strategies are used more frequently by infertile women. Thus, the aim of this study was to examine the contribution of coping strategies including active-avoidance coping, passive-avoidance coping, active-confronting coping and meaning based-coping in predicting infertile stress among a group of women seeking infertility treatment in Shiraz, Iran.

Methods

Participants were recruited from several infertility clinics in Shiraz using convenience sampling method. The sample consisted of 120 infertile women undergoing infertility treatment. This study was conducted between July and December 2012. The participants who had been trying to conceive for a year or more were included in the study. The informed written consent was obtained from the participants. Patients who agreed to participate in this study were asked to complete the questionnaires. Statistical analyses were performed using SPSS (version 16) software. Simultaneous multiple regression was utilized to analyze the data. A p -value <0.05 was considered significant.

Measures

Fertility Problem Stress Scale: The Fertility Problem Stress Inventory was designed to measure infertility-related stress. This scale was developed by Schmidt (15) and consists of 14 items. The

scale is composed of three domains including personal domain (6 items), marital domain (4 items) and social domain (4 items). Responses are rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Research undertaken to determine reliability revealed an internal consistency of 0.74, 0.79 and 0.82 for the subscales, respectively (15). In this study, Cronbach's alpha coefficients were 0.70, 0.76, and 0.85 for personal, social, and marital domains, respectively. The Farsi version of the scale was submitted to a panel of experts to evaluate its content validity. The panel consisted of four infertility experts. All four approved the content validity of the instrument.

Ways of Coping Scale: The Ways of Coping Scale was used to assess strategies coping with infertility stress. This scale was designed by Schmidt (15) and consists of 29 items and four subscales. The subscales 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. thinking about the fertility problem in a positive light, finding other goals in life). The authors developed their own scale based on Ways of Coping Questionnaire (16, 17). The responses to this scale are rated based on a 4-point Likert scale ranging from 1 (not used) to 4 (used a great deal). A Cronbach's alpha ranging from 0.62 to 0.77 for the dimensions of the scale has been reported (15). The reliability of this scale was examined in this study and Cronbach's alpha coefficient for the subscales ranged from 0.57 to 0.79. The scale showed good convergent validity with Ways of Coping Questionnaire ($r=0.68$, $p<0.01$).

Results

The mean age of the participants was 29.2 (SD=4.5) years and the ages were ranging from 24 to 52. The education level for the sample was: below high school (38%), high school (27%), undergraduate (32%), and postgraduate (3%). Majority of women were housewives (74%). In addition, the mean duration of infertility was 4.2 years, and the mean length of fertility treatments was 2.8 years. The descriptive data are presented in table 1. As seen in the table, the highest score of infertility stress is related to personal domain followed by marital and social domains. In terms of coping strategies, the highest score was on passive-

Table 1. Descriptive statistics for components of coping strategies and infertility stress

Infertile stress domains	Mean± SD
Personal	1.80±0.51
Marital	1.64±0.68
Social	1.10±0.79
Coping strategies	Mean± SD
Active-avoidance	0.83±0.66
Passive-avoidance	2.36±0.62
Active-confronting	1.66±0.74
Meaning-based	1.79±0.64

avoidance coping and the lowest score was on active-avoidance. In order to identify the contribution of various components of coping strategies, an analysis of simultaneous multiple regression was conducted. At first, independent variables such as active-avoidance strategies, active-confronting strategies, passive-avoidance strategies and meaning-based coping were entered into the model, and then, infertility stress score as a dependent variable was entered into the model. The results demonstrated that active-avoidance coping ($\beta=0.35$, $p<0.001$) was a significant predictor of high infertility stress, while meaning-based coping ($\beta=-.50$, $p<0.001$) was the significant predictor of low infertility stress. Findings also indicated that two other coping strategies including passive-avoidance and active-confronting did not predict infertility stress. Moreover, among all variables tested for their influences on stress, the meaning-based coping strategy was the most predictive of women's infertility stress. The model explained 36% of total variance of prediction. The results are shown in table 2.

Discussion

The present study sought to examine the association between various forms of coping strategies and infertility stress. The findings showed that women with fertility problem used passive avoidance coping more frequently than other forms of

coping strategies such as active-avoidance coping or active-confronting coping. In passive avoidance coping, the participants looked for a miracle and wished for positive changes. This finding differs from a number of studies indicating frequent use of active-avoidance coping among infertile women elsewhere (15). A possible explanation for frequent use of passive avoidance coping may be that participants of this study perceived less control over their infertility condition. Furthermore, infertility in Iranian culture is a social stigma and infertile women try to avoid the condition. In Iranian society, where childbearing is highly valued, infertility is against the societal norms and thus may be considered as a stigma (14, 18). Another explanation for the use of passive avoidance coping may be related to low level of education. The finding of this study indicated a significant association between the low level of education and passive-avoidance coping. Previous studies have shown that low educated people were more likely to use passive coping than high educated people (18, 19). The majority of participants in this study had a low level of education which might have made them to use passive avoidance. Furthermore, findings of this study demonstrated that active-avoidance predicted high stress, while meaning-based coping predicted low infertility stress. These results confirmed previous findings concerning the negative effect of coping through escaping (15, 20–22). Findings also support the theories indicating the use of avoidance strategy in situations such as infertility that individuals do not have control on it (11, 22). Although, the use of avoidance coping may be ineffective, in the case of infertility in which controllability is low, it can be an adaptive coping. The result of this study for meaning-based coping was in agreement with previous research demonstrating that personal meaning has an important impact on psychological well-being as a coping mechanism particularly when individuals suffer and face challenging life events such as infertility (23–25). The role of meaning-based coping in reducing infertility

Table 2. Multiple regression analysis for predicting infertility stress

Coping strategy	B	β	t	p	R ²
Active-avoidance coping	1.06	0.35	4.13	0.001	0.36
Active-confronting coping	-0.04	-0.02	-0.17	0.89	--
Passive-avoidance coping	-0.05	-0.01	-0.10	0.92	--
Meaning-based coping	-1.22	-0.50	-5.08	0.001	--

stress seems to be more important for Iranians. Religious beliefs are significant in daily life of Iranian people providing a meaningful framework for infertile women. The results of this study suggest that different forms of coping strategies may have different impacts on coping. This study has several limitations. The first one is the small sample of infertile women. With regard to high prevalence of infertility, future studies should survey a large sample of people with diverse characteristics. Furthermore, there may be some other important variables such as religious beliefs which contribute to infertility stress. Therefore, future studies should consider this. Finally, the current study did not include men in the research, therefore, the future research needs to investigate coping strategies among men with infertility problem and compare the results with those of women. Findings of the current study would help health services to promote the health of infertile couples and to provide psycho-education interventions.

Conclusion

The results of this study suggest that infertile women used passive avoidance coping more frequently than other coping types. This study also indicated that the use of meaning-based coping had positive impact on stress reduction, while use of active-avoidance coping increased infertility stress. This study highlights the importance of coping strategies in improving the mental health of women with fertility problem. The clinical interventions for infertile individuals may need to promote awareness about the usefulness of coping strategies.

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Conflict of Interest

Authors declare no conflict of interest.

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