

The study of the relationship between hardiness with the attitudes towards infertility and the frequency of in vitro fertilization (IVF) in infertile women

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ABSTRACT

The present study was conducted to examine the relationship between hardiness with the attitudes towards infertility and the frequency of IVF in infertile women in Mashhad. The population was all infertile women in Mashhad who were sampled voluntarily. The infertile women willing to answer the questions of the questionnaire were invited, and 49 people referring to perform IVF in Novin Infertility Clinic, Mashhad, or referring to Najafi Health Center, Mashhad for post-operative care during pregnancy were selected as the sample and responded to Kobasa's Hardiness and Attitude towards Infertility questionnaires. Descriptive statistics (mean and variance) and inferential statistics (Pearson correlation coefficient and Spearman) were used for data analysis. SPSS software was used reach the results faster. The results showed a correlation between hardiness with attitude towards infertility and the frequency of IVF. Moreover, there was a significant negative correlation between the components of hardiness (commitment, challenge, and control) with attitude towards infertility and the frequency of IVF.

Keywords: Hardiness, attitude towards infertility, frequency of IVF, infertile women

Introduction

In the recent years, the effect of psychological factors on infertility has received a great deal of attention and the medical science has discussed the relationship between infertility and psychological factors ^[1]. According to the World Health Organization (WHO), pregnancy failure has involved around 80 million people around the world. About one fourth of Iranian couples go through initial infertility during their conjugal life. Moreover, 3.4% of couples have an initial infertility problem at any time.

Infertility is a crisis in life that ends in a series of cultural, social, psychological and emotional responses, as infertility is an

unexpected phenomenon that might go unexplained, last for a long time, and can affect the infertile person and his relationships with others as well ^[1]. Even in today's world, in spite of the drastic changes in family values, parental experience is undeniably significant to men and women. Considering the importance of fertility, infertility is a major reason for lowering health in developing countries and a serious problem at the same time. This can lead to psychological and social problems for people, infamy and deprivation, and direct the infertile couples to divorce, men marrying to other women or relationships beyond the married life ^[1]. Many personal and environmental factors affect the attitude of couples towards infertility and practicing various treatment methods, including IVF. This study examines the relationship between hardiness with attitude towards infertility and the frequency of IVF. It is suppose that social and familial support and couples' hardiness can be related to their attitude towards infertility and their carrying on the treatment procedure. Although IVF has managed to defeat some barriers of fertility and bring about hope for infertile couples, it has had some problems as well. The patients need to get psychological counseling and support, before and during IVF cycles for ensuring the best results and enhancing patients' experience. Various studies have considered

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psychological disorders related to IVF and believed that performing various infertility treatments may end in anxiety and depression symptoms in 10-50% of women. Patients undergoing IVF treatment are anxious and fail in treatment cycles often developing anxiety and depression [2]. Overall, 96 codes were singled out. The data was classified in two classes. The elements were decreasing and increasing hope in treatments of infertility. Overall, five themes along 20 sub-themes were singled out. The elements rising that emerged from the data were "spiritual source," "family support and interaction" and "information via media," and the diminishing elements included "treatments nature" and "negatively-oriented mind." The results of Seebel (1997) and Ferguson-Smith (1991) indicated that the success rate of IVF for each fetus was 25%, and the live birth rate in each period was 18%. As a result, infertile women's involvement with infertility stress is quite understandable [3]. The problem of infertility, especially in our culture, where many families are extended and as the role of parents and relatives in the lives of couples becomes deeper, with delay in pregnancy, curiosities and pressures of the friends and neighbors cause worry in the couples [4]. Diamond et al. (2001) considered the attitude towards infertility in four areas of infertility, gender beliefs, concept and value of the child, and parental role and beliefs about treatment methods. Pasch, Dunkel-Schetter & Christensen (2005) believe that the views of each of the spouses can be defined as follows: the importance of the child, infertility treatment process, the expression of feelings about infertility and the effect of infertility on the individual [5]. In his meta-analytic study, Grill (1994, quoted from Karami Nuri, Akhundi, and Behjati Ardakani, 2003) [6] concluded that experiencing infertility could be examined in terms of social texture, focus on sexual role, family structure, and couple relationship, reproductive technology, control over life, attitude towards the future and interpersonal relationships. The results show that the emotional problems of dealing with unsuccessful fertility treatments go beyond the treatment goals, stressing the need for proper availability of therapeutic support for women dealing with unwanted childlessness in longer times. The results also refer to specific resources and types of support that might be specifically helping, such as peer support from other women without children, and therapeutic interventions assisting women to develop positive attitudes towards having no children and specifying alternative sources for its fulfillment. The results also showed the need for social action working in coping with the misconceptions and stigma regarding infertility and having no children adding more problems to the lives of women who have no children while they do not want it to be so.

Methodology

The study was applied regarding the purpose, cross-sectional, and correlational in terms of collecting and data analysis. The population was all infertile women in Mashhad selected voluntarily as the sample.

The following questionnaires were used to collect data.

Psychological Hardiness Questionnaire: Kobasa Hardiness Questionnaire (1979) has 50 questions with 5 options in three components of challenge, commitment and control, each of which has 17, 16, and 17 questions, respectively, scored based on a three-option scale. In his study, Moazedian estimated its reliability 90%.

The attitude towards Infertility questionnaire: Nilarforoshan et al. (2005) developed the researcher-made questionnaire of attitude towards infertility with 50 items. In this scale, he used a 5-option Likert scale [7]. The maximum score in this test is 255 and minimum 51, and the individual's score is calculated by adding up his scores in the items. The higher the individual's score is, the more negative his attitude toward infertility is. The content and face validity of this questionnaire was evaluated by psychologists and counselors of infertility and statistics. Cronbach's alpha was used to determine the reliability that was 0.96. Descriptive statistics (mean and variance) and inferential statistics of Pearson correlation coefficient were used for data analysis. Spss was used to speed up the results.

Results

Table 1: Descriptive statistics of the frequency of IVF

Frequency of IVF	Frequency	Percent
1	20	40.8
2	13	26.5
3	11	22.4
4	3	6.1
6	1	2
7	1	2

Table 1 shows the descriptive statistics of the frequency of IVFs. They have done IVF 40%, 26%, 22%, 6%, 2% and 2%, respectively, 1 to 7 times.

Table 2: Descriptive statistics of marriage duration

Marriage duration	Frequency	Percent
2	1	2
3	3	6.1
4	5	10.2
5	2	¼
6	4	8.2
7	3	6.1
8	2	¼
9	2	¼
10	5	10.2
11	3	6.1
12	4	8.2
13	7	14.3
14	1	2
15	2	¼
16	1	2
17	3	6.1

24 1 2

Table 2 shows the descriptive statistics of marriage duration. The most frequent duration was 13 years.

Table 3: Descriptive statistics of correlation test

IVF frequency		
Sig.	Correlation coefficient	Hardiness total score
0.00	0.70	

As shown in Table 3, there is a significant positive correlation between the total score of hardiness and the frequency of IVFs.

Table 4: Descriptive statistics of correlation test

IVF frequency		
	Correlation coefficient	Sig.
Commitment	0.60	0.000
Challenge	0.54	0.00
Control	0.60	0.00

As is seen in Table 4, there is a significant positive relationship between commitment, challenge, control (hardiness components) and IVF frequency.

Table 5: Descriptive statistics of correlation test

IVF frequency		
	Correlation coefficient	Sig.
Infertility and treatment	-0.35	0.01
Parent and child roles	-0.34	0.01
Interpersonal relationships	-0.51	0.00
Marriage and sexual relations	-0.36	0.01
Control of life	-0.23	0.11
Future	-0.36	0.01
Self and spouse	-0.40	0.00
Social acceptance	-0.25	0.08
Total attitude score	-0.26	0.01

As is seen in Table 5, there is a significant negative correlation between the sub-components of attitude towards infertility and the overall score of attitude with the frequency of IVFs ($P < 0.05$). Nonetheless, there is no significant correlation between social acceptance and the frequency of IVFs ($P < 0.05$).

- Is hardiness a good predictor of attitude towards infertility and the frequency of IVF in infertile women?

Table 6: The table of the fitness of the regression model

Model	R (multiple correlation coefficient)	(Determination coefficient) R^2	Modified R^2	Standard deviation of coefficient of determination
1	0.74	0.71	0.66	0.36

The coefficient of determination of the multiple regression models in the model is 0.66; meaning that the multiple linear regressions alone justifies about 72% of the total variance, and the rest is the share of other variables not included in the model.

Table 7: Significance test of regression equation

	Sum of squares	Degree of freedom	Mean of squares	F	P
Regression	55.82	1	53.85		
Residual	34.04	49	0.12	317.75	0.001
	105.361	48			

Observed F is significant at $P \leq 0.05$ level, so the result of the equation can be generalized to the population.

Table 8: The results of regression coefficient for hardiness

Resource	Standard error	Regression coefficient	T value	Sig.
Hardiness	0.99	0.89	29.17	0.001

According to the results of the regression model, the attitude prediction equation relative to infertility and the frequency of IVF in infertile women respondents is as follows:

$$Y = 0.89 X^1$$

According to the results in Table 8, the significance of the test for hardiness is less than 0.05. Thus, hardiness is effective in predicting attitude towards infertility and the frequency of IVFs in infertile women.

Discussion and Conclusion

The statistical analysis regarding this hypothesis shows a relationship between hardiness and the frequency of IVFs in infertile women in Mashhad. As stated in the previous hypothesis, the more tenacity the women have, they will make greater efforts to achieve the fruitful treatment. There was a relationship between the attitude towards infertility and the frequency of IVFs in infertile women in Mashhad. The results of statistical analysis of this hypothesis showed a correlation between attitude towards infertility and the frequency of IVFs in infertile women. This result is in line with the previous studies, including Badienejad, Massoudnia and Askari (2011). For example, in a study entitled "The relationship between psychosocial elements and coping strategies among infertile couples referring to Yazd Infertility Research-Treatment Center," Badienejad, Massoudnia and Askari (2011) showed a significant difference between different levels of social support and coping strategies for social support, coping strategies, re-evaluation / adaptation, emotional coping, active coping, and self-coping. Moreover, there was a significant difference between attitude towards infertility and coping strategies of re-

evaluation / Adaptation, avoidance coping, active coping, and self-restraint coping. Overall, there was a relationship between perceived social support, self-esteem, attitude towards infertility and the source of control with the components of coping strategies. The researcher-made questionnaire on attitude towards infertility contained 51 items. In this scale, a 5-option Likert scale was used. The maximum score in this test is 255 and minimum 51, and the individual's score is calculated by adding up his scores in the items. The higher the individual's score is, the more negative his attitude toward infertility is. According to the references, the items of this questionnaire have eight domains. As is seen in the results, there is a significant negative correlation between the underlying components of attitude towards infertility and the frequency of IVFs ($P < 0.05$).

According to the results, there is a significant relationship between the hardiness and attitude towards infertility and the frequency of IVFs. Although IVF has managed to defeat some barriers of fertility and bring about hope for infertile couples, though it has had some problems too. Many studies have considered psychological disorders related to IVF and believed that performing various infertility treatments may end in anxiety and depression symptoms in 10-50% of women. Patients undergoing IVF treatment are anxious and fail in treatment cycles often developing anxiety and depression.

Infertile women facing stress is understandable, especially in our culture where many families are extended and as the role of parents and relatives in the lives of couples becomes deeper, with delay in pregnancy, curiosities and pressures of the friends and neighbors cause worry in the couples. According to our definition of hardiness, as self-treatment of IVF causes some stress in the individual, there is a relationship between the hardiness and the frequency of IVF in infertile women.

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