

Marital Maladjustment in Infertile Couples Who Referred to Ghadir Mother and Child Hospital, Shiraz

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Abstract

Background: Twenty percent of married couples at reproductive age suffer from infertility. This common problem might cause significant problems in couples' mental health and quality of life.

Objectives: Accordingly, the goal of the present study is to evaluate the frequency of marital maladjustment in these patients in Shiraz, Iran.

Patients and Methods: This cross-sectional study was performed on 100 infertile couples (with a mean age of 33.39 ± 6) randomly selected from those referred to Ghadir Mother and Child hospital, from March 2011 to March 2012. All of them completed the dyadic adjustment scale (DAS) and a demographic questionnaire. Data were analyzed using SPSS software, using frequency, percent, and t-tests.

Results: All the patients declared that they had maladjustment in their marital relationship. Although the cut-off point of the questionnaire is 100, the mean score was 51.32. This maladjustment revealed no gender differences, but in the dyadic consensus score, patients who lived in urban areas and were employed had a significantly higher mean than those who resided in rural areas and were unemployed. In addition, highly educated couples had a higher level of marital adjustment.

Conclusions: Marital adjustment is one of the most important factors impacted by the infertility of one or both partners. Marital adjustment impairment is affected by the social, economic, and demographic characteristics of couples. Strategies that target lifestyle modifications may improve the marital life of infertile couples and save their marriages from corruption.

Keywords: Infertility, Marital Maladjustment, Demographic Factors

1. Background

Infertility is a common disorder affecting 10% - 15% of American and 20% of worldwide married couples at reproductive age. Male and female partners are individually responsible for 40% of infertility cases, while in the remaining 20%, both male and female partners are involved. Infertility is defined as the failure of pregnancy after 12 months of unprotected intercourse between partners. Infertility can have remarkable implications for the mental health of couples as well as the quality of their marital relationship (1). Although infertility may result from several psychiatric disorders such as depression, obsessive compulsive symptoms, psychoticism, anxiety, and substance abuse, the psychiatric consequences of infertility cannot be underemphasized. The "psychologic sequelae model" attributes infertility to several numerous losses that promote psychopathologic issues. These losses include the loss of potential children and a complete family, genetic continuity, pregnancy, life goals, control over one's body, and the partners' love and attention. As a married couple

learns of the infertility of his/her partner, a crisis of emotional disturbances occurs. Several studies have been conducted to identify the components of early psychological consequences of infertility in the affected individuals. They have reported the loss of self-esteem, feelings of guilt, hostility, sadness, marital problems, and sexual disturbances as the most common psychiatric sequela of infertility (2).

Men and women experience different types and severities of emotional and psychological difficulties regarding infertility. Infertility has been thought of as a female disorder traditionally in all societies. Although scientific statistics have succeeded to prove the equal prevalence of male and female factors of infertility, infertile women have greater psychological complications than men. The key factor responsible for this variation is the different socialization patterns for men and women (3). Irrespective of which partner is responsible for infertility, women are dominant patients of infertility centers. Even when the male partner is infertile, women undergo invasive and non-invasive treatment

modalities. Moreover, women carry a greater psychological burden of infertility in couples with male infertility; it means that although women don't have any organic problems themselves, they encounter more social pressure (4).

Several demographic and social variables, such as education, age, sex, and previous medical conditions, can affect an individual's reaction to infertility and emotional complications. Studies have successfully demonstrated the relationship between socioeconomic factors (education, occupation, and economic status) and stress and marital satisfaction resulting from infertility. A study by Mollaiynezhad et al. suggested that economic status and family composition can greatly increase the burden of psychological stress resulting from infertility (5).

The greatest source of emotional distress caused by infertility is probably the loss of control over one's life. Infertility acts for couples as a focal point where marital arguments begin, distracting the couple from more important tasks in their lives. Another cause of emotional challenges in an infertile couple arises from the basic psychological need of productivity as a source of identity and emotional development. Impairment in fertility causes the partner to become irritated, angry, and confused (6). Two separate studies conducted by Cwikel et al. and Domar et al. reported a twofold increased prevalence of depressive emotions in infertile women compared to childbearing women. The prevalence of major depressive disorder was estimated as 11% in infertile women compared to 3.9% in normal female population in a study by Downet and colleagues in 1992 (7-9). Other studies have been conducted to measure depression, hostility, and anxiety scores in infertile women, demonstrating dramatically higher scores in infertile women than those in a matched fertile population. In addition, depression scores in infertile women have been shown to be at the same levels as those with HIV infection, hypertension, myocardial infarction, and cancer (10).

Marital adjustment and sexual satisfaction are the most important factors impacted by the infertility of one or both partners. Studies have reported a dramatic decrease in couples' conjugal quality of life and relationships. These impairments, similar to other psychosocial complications of infertility, may vary according to the economic, occupational, educational, social, and religious characteristics of couples (11, 12). Benazon et al. (13) reported a lower prevalence of marital adjustment disorders among infertile couples who were successfully treated by assisted reproductive technologies (ART) than infertile couples without ART in the first year of infertility. Marital adjustment may also be caused by an inconvenient form of treatment plans, meaning that they found it difficult to follow the treatment procedure. Couples find it difficult to schedule their sexual relationships. Sex becomes mechanized and intimacy decreases. All the mentioned factors along with the stress of achieving a sexual contact that leads to pregnancy result in significant impairments in libido and sexual potency (13).

Monga et al. (14) also studied the effect of infertility on marital adjustment parameters and reported that mari-

tal adjustment scores were significantly lower in infertile women than fertile ones. For infertile men, the scores did not vary significantly. They also studied sexual functioning factors and compared them among fertile and infertile groups. The results revealed no significant variation among women in infertile and fertile groups on the Brief index of sexual functioning for women (BISF-W). Similarly for infertile men, a comparison of the scores revealed almost no significant decline in sexual functioning (14). According to the current studies mentioned above, it could be concluded that marital adjustment is one of the psychological constructs that is affected by infertility; as such, it is important for physicians to estimate this problem and understand whether it is affected by demographic factors.

2. Objectives

Therefore, the goal of the present study is to evaluate the frequency of marital maladjustment in infertile patients and evaluate this maladjustment among diverse demographic factors.

3. Patients and Methods

This study was performed as a cross-sectional survey. The sample size was estimated using Power SSC software via considering a type I error equal to 0.05 and 0.8 as the power of the test and an effect size equal to one. According to this method, 100 infertile couples (100 males, 100 females) were selected from the infertile patients referred to Ghadir Mother and Child Hospital affiliated to Shiraz University of Medical Sciences (SUMS) between March 2011 and March 2012 and included in the project via a convenience sampling method if they met the following criteria: 1) at least 3 months of an established diagnosis of infertility, 2) a negative history of treatment with any medications interfering with normal sexual performance, 3) a negative history of drug abuse, 4) an education level of at least primary school. The researchers selected the one whose reception code was even on the sampling days. This method was used to randomize the sample. If the patients fulfilled the inclusion criteria, they completed the questionnaire; if not, they were excluded. The researchers worked on the project approximately five days per week throughout the year, except on holidays.

Written informed consent for participation in the project was obtained from all patients. The study protocol was approved by and performed under supervision of the ethics committee of SUMS.

Data were gathered using a self-administered questionnaire containing questions on personal data and marital adjustment. The personal information section was designed to gather information regarding educational, residential, and infertility specific issues. The second part of the questionnaire contained the dyadic adjustment scale (DAS), which included 32 questions for the evaluation of couples' marital adjustment on a 6-point Likert scale; the questionnaire's cut-off point in-

indicated that if a participant has a score below 100, he/she is maladjusted; lower scores indicate lower marital adjustment. The cut-off score was estimated by previous research on 218 normal couples who had been married at least 13.2 years. The questionnaire had acceptable psychometric characteristics in the Persian language (formal language of Iran); according to Yarmohammadian et al. reliability via the split half method is 0.96, internal consistency is 0.91, and criterion validity 0.94 (15). This version was used in the present research.

The collected data were analyzed using the statistical package for social sciences (SPSS Inc., Illinois, USA), version 16. Descriptive statistics, mean (SD), mean comparison tests for independent groups (independent sample t-test), one-way ANOVA, and one sample t-tests were used for data analysis. A p-value of less than 0.05 was considered statistically significant. Before using this method, the normal distribution of the data was evaluated using the Kolomograph-Smirnov test, and it was concluded that the distribution is normal.

4. Results

A total of 100 couples (100 males and 100 females with mean ages of 35.49 and 31.39, respectively) referred to the infertility clinic at Ghadir Mother and Child hospital with impressions of infertility for a variety of reasons over 5 years, with mean years of 6.9 (4.5), were evaluated. Based on the questionnaire cut-off point, if an infertile couple had a score lower than the cut-off, they had dissatisfaction in their marital relationship, with a mean score of 51.32 (13.67). Moreover, the one-sample t-test showed that their marital maladjustment was significantly lower than the normal population. Table 1 presents this finding.

In line with the results, the differences in these findings were evaluated in relation to diverse demographic factors such as gender, job, education, income, and place of living. The results of an independent-sample t-test and one-way ANOVA indicated that gender did not impact marital dissatisfaction, but job, place of living, education, and income affected the total score and subscales of the marital adjustment scale. The results are presented in Table 2.

Table 1. Comparison of Marital Maladjustment With the Normal Population

	Test Value: 100		95% Confidence Interval of the Difference	
	Mean ^a	P Value	Lower	Upper
Total maladjustment score	51.32 ± 13.67	0.001	46.74	50.6

^aValues are expressed as mean ± SD.

Table 2. Comparison of Marital Maladjustment According to Demographic Factors^a

Variables	No. (%)	Total Adjustment Score	Dyadic Satisfaction	Dyadic Cohesion	Dyadic Consensus	Affection Expression
Gender						
Male	100 (50)	51.58 (14.45)	22.89 (7.72)	14.4 (10.56)	2.64 (10.56)	2.21 (1.75)
Female	100 (50)	51.07 (12.92)	23.49 (7.12)	14.39 (10.7)	1.64 (10.71)	2.23 (1.93)
P Value		0.79	0.56	0.24	0.99	0.93
Job						
Employed	104 (52)	51.38 (13.22)	24.05(6.4)	13.39 (9.3)	13.31 (6.7)	2 (1.6)
Unemployed	82 (41)	52.62 (13.7)	23 (7.8)	16.14 (11.8)	11.03 (5)	2.4 (2.3)
P Value		0.53	0.31	0.07	0.01 ^b	0.08
Place of residence						
Rural	70 (35)	51.38 (14.92)	22.37 (7.9)	15.95 (13.8)	11 (4.7)	2.38 (2.3)
Urban	121 (60)	50.84 (13.09)	23.74 (6.5)	13.6 (7.83)	12.86 (6.5)	2.19 (1.47)
P Value		0.79	0.91	0.134	0.03 ^b	0.48
Education						
Primary school	34 (17)	46 (15.47)	18.52 (7.58)	15.5 (10.91)	9.91 (5.43)	2.52 (1.59)
Guidance and High school	64 (32)	49.15 (15.04)	21.25 (7.27)	15.56 (12.96)	10.96 (4.13)	2.45 (2.39)
Diploma	57 (28.5)	54.41 (12.82)	26.33 (6.55)	12.75 (9.49)	13.87 (8.62)	1.92 (1.43)
College education	42 (21)	54.35 (9.24)	26.04 (4.48)	14.02 (7.27)	13.73 (3.06)	2 (1.49)
P value		0.009 ^b	0.001 ^b	0.46	0.002 ^b	0.26
Monthly income, R						
< 5,000,000	71 (35.5)	49.5 (17.6)	21.92 (8.1)	15.15 (12.3)	11.15 (8.7)	2.28 (2.09)
5,000,000 - 10,000,000	85 (42.5)	52.3 (10.6)	25.15 (5.9)	13.4 (8.7)	13.21 (2.9)	2.05 (1.5)
10,000,000 - 30,000,000	11 (5.5)	53.8 (8.4)	25 (4.6)	13.2 (6.2)	15.2 (2.7)	1.4 (0.93)
P Value		0.37	0.015 ^b	0.564	0.034 ^b	0.326

^aValues are expressed as mean (SD) unless otherwise indicated.

^b $p \leq 0.05$.

The results indicated that infertile couples had few differences according to gender, but in the Dyadic Consensus score, those who lived in urban areas and were employed had a significantly higher mean than those who lived in rural areas and were unemployed. Moreover, a comparison of education and monthly income, according to a post Hoc test (LSD), revealed that there were some significant differences among different levels. For education, patients with at least a diploma had significantly better marital adjustment than those with less education, as indicated by their total scores, dyadic satisfaction, and dyadic consensus. In terms of monthly income, significant differences were observed in LSD for dyadic satisfaction and dyadic consensus. According to these relationships, patients with a monthly income of 5,000,000 Rials or less had lower marital satisfaction among the infertile couples. The infertile participants who had higher income and education showed improvement in marital adjustment.

The present research also indicated that different parts of marital maladjustment had no significant relationship with age, but the dyadic consensus score had a significant and negative linear relationship with the duration of infertility ($r = -0.158$; $P = 0.037$), which means the longer the infertility had lasted the more the dissatisfaction in this subscale.

5. Discussion

The key finding of the present study was that all couples who suffered from infertility experienced marital maladjustment as well. Certain demographic factors might moderate the effects of infertility on this kind of maladjustment, but only to a certain extent.

Infertility, defined as the failure to conceive despite 12 months of unprotected intercourse, is a common disorder with a worldwide prevalence of 20% - 25% (1). Infertility has been found by several researchers to be associated with mental and emotional morbidities ranging from mild mood and behavioral disorders to overt severe depression and social dissociation (2). In a study by Sbaragli et al. psychiatric problems, such as panic disorder, generalized anxiety disorder, obsessive compulsive disorder, adjustment disorder, depression, and binge eating disorder, were found to be significantly more frequent in the infertile population (2). Psychiatric morbidities of infertility are more likely to occur in women. This higher prevalence can be due to certain psychological characteristics and socialization processes in women. Socio-demographic factors have also been reported to influence the psychiatric consequences of infertility. In a study by Noorbala and colleagues entitled, "Study of psychiatric disorders among fertile and infertile women and some predisposing factors," it was reported that occupational and educational factors affect the magnitude of the psychiatric consequences of infertility (16).

Marital adjustment disorders among infertile couples

are important psychiatric disorders resulting from infertility. Marital adjustment impairment reduces the quality of conjugal life. In advanced stages, marital adjustment disorders may even lead to divorce and the termination of marital relationships. Similar to other psychiatric consequences of infertility, marital adjustment impairment is affected by the social, economic, and demographic characteristics of couples. In the present study, we evaluated the determining roles of gender, occupation, education, economic status, the duration of infertility, and the area of residence on marital adjustment disorders. Our data obtained from 200 infertile men and women determined that gender was not a significant determinant of marital adjustment impairment in infertile couples, although many recent studies have proven that sex contributes to psychiatric disorders in infertile couples. Our finding may be primarily due to the both-partner-determined nature of adjustment disorders. The occurrence of marital adjustment disorders in a couple is counted statistically for both male and female partners, although it results in no sex dominance of the disorder. In 1991, a study conducted by Berg et al. revealed no significant emotional and psychiatric difference among the male and female partners of infertile couples. In only one parameter of psychiatric distress investigated in the study, somatization, female patients showed a significantly higher incidence of symptoms than male counterparts (3).

In a similar study in 2000, Mollaiynezhad et al. reported that all infertile couples they investigated suffered from emotional stress and 46% of their cases experienced impaired marital adjustment. They also indicated that economic problems, familial integration, and the length of infertility treatment had a significant correlation with the load of emotional stress individuals experienced. Their study concluded that the duration of infertility and a previous history of unsuccessful pregnancies had a strong relationship with marital adjustment disorders among infertile couples (5). These results are inconsistent with the findings of our study due to varying factors and study designs.

Regarding the demographic factors studied in this project, our results indicate significantly lower marital adjustment disorders in highly educated couples than low-educated matches. Other factors such as occupation, salary, and residential area were not significantly related to the marital adjustment score in infertile patients. Aghanwa et al. studied psychiatric disturbances in infertile couples versus fertile matched subjects regarding demographic variables such as education, religion, the duration of marriage, previous marriages, the knowledge of adoption, previous mental illness, previous pregnancy losses, and the death of children. They found no significant relationship between these factors and emotional stress and psychiatric disorders among couples. Marital adjustment was not investigated in their study (17).

We also evaluated the duration of infertility and its influence on marital adjustment. Our data failed to support

any marital adjustment variation among couples with different durations of infertility in the total marital maladjustment score, but the correlation coefficient Dyadic Consensus and the length of infertility impression were significant.

Marital adjustment disorders can be observed in many couples experiencing infertility. Better knowledge of the determining factors that influence marital adjustment disorders can lead to significant improvements in psychotherapeutic strategies in infertile couples. These psychological interventions that target lifestyle changes could help to improve the marital life of infertile couples and improve their quality of life. The authors recommend further investigations with a larger study population and an evaluation of more sociodemographic factors to clarify their determining role on marital adjustment in infertile couples.

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Footnotes

Authors' Contribution: Study concept and design: Ali Sahraian, Sedighe Amooee; collection of the data: Arsalan Bahmanipoor; analysis and interpretation of the data: Arash Mani, Hossein Mahmoodian, and Arsalan Bahmanipoor; drafting the manuscript: all authors; critical revision of the manuscript for important intellectual content: Arash Mani, Ali Sahraian, and Hossein Mahmoodian; statistical analysis: Arash Mani.

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