

*Original Article*

## The relation between social support and stress in treatment of infertility in infertile couples referred to infertility centers of Isfahan in 2007

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### Abstract

**BACKGROUND:** Experiencing infertility is a crisis in couples' life, affecting all aspects of their life. In addition to stresses of infertility problems, going through treatment is also associated with physical, psychological, social and economic stress. Therefore, identifying social factors especially social support related to stress of infertility treatments seems necessary. This study investigates the relationship between social support and stress of infertility treatment.

**METHODS:** It is a descriptive correlative study on 75 couples (150 subjects) who referred to clinics of Isfahan for professional treatment of infertility. The sampling method was simple and the subjects were selected based on entry criteria. Data were collected by a questionnaire completed by interview and included personal and social characteristics, infertility treatment stress and social support.

**RESULTS:** The mean score of infertility treatment related stress was 58.68 and 86.7% of couples experienced average to severe stress in professional treatments for infertility. The highest and lowest score of social support were 23.28 and 84.45 for spouse support and 2<sup>nd</sup> and 3<sup>rd</sup> level relatives, respectively. There was an inverse correlation between social support and infertility treatment related stress ( $p = 0.0001$ ). Also, there was a significant relation between age, sex, and career with infertility treatment stress.

**CONCLUSION:** Considering the findings of the study, it seems necessary to provide educational courses for couples on different techniques of reducing stress, counseling and information and emotional support by health personnel as well as general education of families on how to provide support for couples.

**KEY WORDS:** Infertility, infertility treatment stress, social support.

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Human beings want to have children not only for the joy of it but as a deep desire to continue their generation and leave a valuable memory of themselves.<sup>1</sup> There are so many reasons for not having children for some people, like some are infertile and cannot have a child.<sup>2</sup> Based on the definition by World Health Organization, infertile couples are those who after a year of sexual relation without using contraceptives have been unable to con-

ceive.<sup>3</sup> According to studies, about 50-80 million people in the world experience a kind of infertility in their life.<sup>4</sup> It is estimated that one out of ten couples experience a primary or secondary infertility.<sup>5</sup> Noruzi MD, the head of Iranian scientific society of productivity and infertility says that the statistics of infertility in Iran is 2-3 million couples and every year 100000 infertile couples are added to this population.<sup>6</sup> Infertility is the most stressful experience of couple's life

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and in addition to this stress, trying for treatments brings them more stress,<sup>7</sup> so that infertility stress for those who don't search for treatments reduces by time, but it increases for those who search for treatments.<sup>8</sup> By the development of infertility treatments and more complicated methods, the stress is increased as well and can affect the outcomes of treatment too.<sup>9</sup> There are many studies on this topic and two third of studies show a significant relation between stress and the treatments' results.<sup>10</sup>

One of the main challenges of infertile couples is how to direct this problem, in regard with themselves and their spouse, both in marital life and various areas of their social life.<sup>2</sup> The quality of their adjustment with infertility problem and successful treatment may be affected by several factors including sex, adjustment method, personality and characteristics, level of stress, social support, marital relationship, economical conditions and etc.<sup>11</sup> The results of a study by Schneider in 2005 show that social support and spouse's support at the onset of treatment and 24 months later are very important for men and are significantly related to the level of their stress.<sup>12</sup> Studying infertility is very important since it affects all aspects of life especially social life. Because most researches on this topic are done in European and American countries and their study population is culturally and socially different from Iran, generalizing the results of those studies to Iranian population doesn't seem right and researchers insist that these studies should be done independently in different races, nations and societies.<sup>12</sup> So far, there has not been any studies on social support and its relation with infertility treatment related stress in Iran. This issue is part of educational and career responsibilities of midwifery expertise, midwives and physicians who should know the social support and personal characteristics related to infertility treatment related stress and the differences between infertile men and women in order to provide effective useful advices and control treatment related stress for a more successful results.

The objectives of this study include: 1- the

relationship between social and personal characteristics with infertility treatment related stress in infertile couples referred to infertility treatment centers of Isfahan in 2007 and 2- relationship between social support and infertility treatment related stress in infertile couples referred to infertility treatment centers of Isfahan in 2007.

## Methods

This is a descriptive correlative study. Data collection method was cross-sectional. The study is one-group, one-stage and multi-variables. 75 couples or 150 subjects referred to infertility treatment clinics of Isfahan (Shahid Beheshti center for infertility treatments, under Medical Science University and Isfahan private center of infertility treatment) seeking for professional infertility treatments were selected by simple method and by considering the including criteria. Data were collected by a questionnaire including 3 parts: 1- personal and social characteristics, 2- infertility treatment stress and 3- social support. The questionnaire was completed by interviewing subjects. Content analysis and Cronbach's alpha were used for validity and reliability. The Cronbach's alpha for treatment related stress part of questionnaire was 0.78 and for the social support part was 0.87. Data were analyzed using SPSS and descriptive and inferential statistical methods of Pearson, Spearman, independent t-test and ANOVA. The treatment related stress part included 13 questions using Lee's TSS (treatment related Stress Scale) in 2001<sup>13</sup> and the scores for answers are 0-3 and total score range is 0 to 39. The scores were calculated from 100. Social support including spouse's support and other relatives (first, second and third level relatives, friends, neighbors) was measured by 11 separated questions for each level. Social support questions were from the questionnaire of IPRI (interpersonal relationship inventory) by Tilden in 1990 and the answers were based on Likhert scale scoring from 1-5. The total score of social support could range from 11 to 55 and calculated from 100.

## Results

The mean age of subjects was  $5.86 \pm 31$ , the length of their marriage was  $5.86 \pm 7$ , length of their infertility was  $5.86 \pm 6$  and monthly income of their family was  $368 \pm 201$  thousand tomans. The highest mean score of treatment related stress was 62.82 for couples with primary school educations and the lowest mean of treatment related stress was 49.35 for couples with graduate degrees. The highest mean score of treatment related stress was 76 for careers related to women and working at home and in men was 62.17 for drivers. The total mean score of treatment related stress was 58.68 with the range between 0 and 94.87, which was 67.58 for women and 49.77 for men. About 86.7% of couples experienced average to severe stress. Table 1 shows the frequency distribution of infertility treatment related stress of the subjects. Regarding the first objective of the study, findings show that there is an inverse correlation between age and infertility treatment related stress with p value of 0.011 and there is a significant relation between career, sex and treatment related stress with p value of 0.0001. But there was no significant correlation between the length of marriage, length of infertility, family income and education with infertility treatment related stress.

**Table 1.** Frequency distribution of infertility treatment related stress of the subjects

Treatment related stress	Frequency	Percentage
0-36 weak	20	13.3
36-67 average	76	50.7
More than 67 Severe	54	36
Total	150	100

Regarding the second objective, tables 2 and 3 show that the highest mean of scores for social support is that of spouse's support and lowest mean score if that of 2<sup>nd</sup> and 3<sup>rd</sup> level relatives. So that 84.6% of couples can express their problem of infertility with their spouse, but 60.1% are worried and in doubt to express their infertility and treatments. About 70.5% of couples had no enjoyable time with their 2<sup>nd</sup> and 3<sup>rd</sup> lev-

el relatives and cannot easily talk to them about everything. In general, the support of 2<sup>nd</sup> and 3<sup>rd</sup> level relatives was less related to the infertility treatment related stress compared to supports of others. The results of statistical test, as presented in table 3, show a significant inverse correlation between infertility treatment related stress and the score of 2<sup>nd</sup> and 3<sup>rd</sup> level relatives support ( $p = 0.004$ ) and support of friends and neighbors ( $p = 0.001$ ).

**Table 2.** Mean score of social support

Social support	Mean score	Standard deviation	Minimum	Maximum
Spouse	84.45	12.33	29.55	100
1 <sup>st</sup> level relatives	67.54	16.81	18.18	95.45
2 <sup>nd</sup> & 3 <sup>rd</sup> level relatives	23.28	17.78	0	70.45
Friends and neighbors	31.74	22.93	0	90.91

**Table 3.** Relation between social support score and infertility treatment related stress

Social support	Correlation coefficient	P value
Spouse	-0.014	0.861
1 <sup>st</sup> level relatives	-0.103	0.210
2 <sup>nd</sup> & 3 <sup>rd</sup> level relatives	-0.232	0.004
Friends and neighbors	-0.276	0.001

## Discussion

The results show a significant relationship between variables of age with infertility treatment related stress. Fekkes in 2003 showed a significant relationship between the age of subjects and psychological problems compared to normal population, so that the younger subjects had higher anxiety compared to older subjects.<sup>14</sup> Beutel and Newton in both 1999 also found a significant relationship between age and infertility stress.<sup>15,16</sup> It can be concluded that higher stress in young couple can be related to their worries about the future of their marital life, relatives pressure on them to have children, lack of knowledge about confrontation styles, adjustment for stress control and lack of treatment experience. While in older couples with longer infertility period, probably the infertility

problem has faded out or they have treatment experiences and confront the related stress more effectively.

Moreover, there was a significant relationship between sex and infertility treatment related stress. Lee et al<sup>13</sup> in 2001, Anderson et al<sup>17</sup> in 2003, and Halman et al<sup>18</sup> in 1994 also found a significant relationship between sex and the infertility treatment related anxiety so that women had more anxiety compared to men going to infertility clinics and following diagnosis tests and treatments. Because women are more involved in treatment process compared to men and believe themselves more responsible than men for the problem. Even in cases that infertility is related to men, it is women who are condemned.

The results show a significant relationship between career and infertility treatment related stress. The result of a study by Boivin et al in 2006 on social status and 3 variables of education, career and professional trainings showed that there was no significant relation between social status and stress during treatment.<sup>19</sup> Also, Alborzi in 2001 did not find any significant relation between career and mean score of infertility related stress among women under treatment.<sup>20</sup> Studies available to the researcher show no relation between infertility related stress and career, and since the present study measured the infertility treatment related stress (professional techniques of IVF, micro-injection, etc), this relation can be related to the interference of treatment stages with social and career situations, or women's idea of the necessity of post-operation rest, taking off days from work and their worries about the news going to colleagues.

The main aim of this study was to find the relationship between social support and infertility treatment related stress and results showed that there is an inverse correlation between these two. Lechner et al<sup>21</sup> in 2007 and Mindes et al<sup>22</sup> in 2003 also showed that those who did not receive sufficient social supports had more distress symptoms along with demonstration of

anxiety. Therefore, there is a direct relationship between lack of social support and demonstration of psychological distress. Peterson et al<sup>23</sup> in 2006 and Hsu et al<sup>24</sup> in 2002 found that women compared to men feel more responsible about infertility problem and its treatments and need more social support, and their stress had an inverse correlation with social support. In Brucker et al<sup>25</sup> study in 2004, it was found that perceived support for psychological adjustment from health personnel during diagnosis and treatment stages had significant relation with treatment related stress in men. The researcher believes that inverse correlation between lack of social support by 2<sup>nd</sup> and 3<sup>rd</sup> level relatives, friends and neighbors and infertility treatment related stress can be due to lack of communication and relationship with them, which lead to less support. But in the case of spouse whose support was highest level, but could not significantly reduce infertility treatment related stress, perhaps the nature of professional treatments of infertility has a role. Or maybe if the sample size is bigger, we can find a significant inverse correlation between spouse's support and infertility treatment related stress. Also, first level relatives' supports increased the treatment related stress, which can be due to ineffective relationship which increases stress while providing support.

The authors declare that have no conflict of interest in this study and they have surveyed under the research ethics.

## Conclusion

With regard to average to severe stress couples experience in infertility treatments and other findings of the study, it seems necessary to provide educational courses on infertility and processes of diagnosis and treatment and using various techniques to reduce stress for couples. Health personnel should educate couples and families to provide sufficient and effective social support and should provide them informative counseling and emotional support.



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