

## Factors causing stress in women undergoing in-vitro fertilization treatment

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### ABSTRACT

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**Purpose:** This descriptive study was conducted to identify the factors causing stress in women undergoing in-vitro fertilization (IVF) treatment.

**Materials and methods:** The study sample consisted of 151 women who were receiving IVF therapy in the assisted reproductive techniques units of three state hospitals in İstanbul. The study data were collected using a Questionnaire and a Distress/Problem Identification form both developed by the investigators.

**Results:** A considerable percentage of the women whose income was less than their expenses stated that they feared their infertility treatment would be

a failure. The majority of the women who gave the answer “the cause is not known” or “me” when they are asked “who is responsible for not being able to have a child” stated that they were annoyed when people asked questions about having children and felt strained and uneasy on the days of coming to the center.

**Conclusions:** We suggest that trainings should be planned for health teams and health teams should establish support groups and organize meetings for couples.

**Keywords:** Infertility, women, in-vitro fertilization, nursing, stress factors

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## **INTRODUCTION**

Infertility is not only a problem having cultural, religious and social-class related aspects, It also brings with it other medical, psychiatric, psychological and social problems [1]. Infertility can be defined as not being able to become pregnant in a period of one year despite regular sexual relations without using any contraceptive methods [2]. The number of couples affected by infertility has increased worldwide to become 48.5 million in 2010. It was also reported in 2010 that the primary infertility was 1.5% and secondary infertility 3% in women [3]. According to the Women's Health Survey in Turkey, the incidence of infertility in the women aged 15-65 was 4.8% [4].

In order for pregnancy to occur in the case of infertility, assisted reproductive techniques are needed. From the assisted reproductive techniques, IVF is usually preferred today [1]. IVF is based on the development of an embryo as a result of the fertilization of the oocyte with a sperm cell within a culture under in-vitro conditions and retransfer of it to the uterus [5]. More than a million babies have been born in the world as a result of the assisted reproductive techniques and approximately 1-4% of all pregnancies in the developed countries constitute this type of pregnancies today. In our country, around 108,000 test tube baby procedures have been attempted between 2006 and 2009 and 25% of these resulted in live births [6].

High levels of stress in women undergoing IVF treatment reduce the occurrence of a possible pregnancy [7]. Stress is a condition of pushing the mental and physical limits of a person when encountering new situations and it affects the health and productivity of that person negatively [8]. IVF is one of the assisted reproductive techniques with the potential of creating the highest psychological tension in infertile couples [9]. In a study found that women who continued with their IVF treatment had higher rates of anxiety compared to those whose treatments were discontinued [10]. In the IVF treatment, the infertile persons/couples experience intense emotional problems when pregnancy does not occur and it may be very difficult for them to overcome their sorrow. The resistance shown towards unsuccessful treatment may turn into anger in time [11]. Due to stress, couples reportedly experience problems such as withdrawing from their IVF treatment, having an ovulation problem and facing a sudden threat of miscarriage [12]. In rural areas of our country, couples without children are being blamed by their community but the blame is inflicted mostly on the woman who then is forced to allow her husband to take a woman to co-wife so that he can have children [13]. In a study, both of the couples are affected emotionally during IVF

treatment, but women experience more emotional problems compared to men [14]. Nursing services play an important role in the success of IVF treatment. According to the United Kingdom Centre and Council, fostering of clinician nurses is vital for securing continuity in healthcare services [15]. A nurse should be able to provide consultancy to the couples undergoing IVF treatment in the best way possible, furnish them with adequate information and respond to their questions on ethical matters [16].

There are a limited number of studies in the literature that deal with the distress and problems of women receiving IVF treatment. The results obtained from these studies help determine the stress factors faced by women receiving IVF treatment and support them in coping with such stressors. They will also provide major contribution to the nurses working in infertility units in understanding the problems of IVF receiving couples and giving care to them. This study was conducted to identify the factors leading to stress in women undergoing IVF treatment.

## **MATERIALS AND METHODS**

### **Study population and sample**

The study population consisted of 453 women who were receiving IVF treatment in the assisted reproductive techniques units of six state hospitals in Istanbul. The study sample consisted of 151 women being treated in three of these hospitals. The data of this descriptive study were collected between May 2012 and March 2013. When determining the sample size, the number of female patients aged 25-40 who were receiving IVF treatment in the said hospitals for not having had any children was considered. One hospital was excluded from the sample for not having obtained an ethics committee approval, one hospital for not having had a test tube baby practicing license and another hospital for not practicing any IVF treatment between the dates for which a practicing license was obtained.

### **Data collection instruments**

The study data were collected using a questionnaire and a Distress/Problem Identification Form developed by the investigators based on the information in the literature.

The Questionnaire contained 17 questions relating to the descriptive characteristics of the women, their marital status, contraceptive methods they used, their IVF treatments and their pregnancy status.

There were 22 statements in the Distress/Problem Identification Form designed to determine the distress and problems experienced by women undergoing IVF treatment. The women

were asked to mark these statements as “yes” or “no”. They were then asked to check one of the choices, “sometimes”, “mostly” and “always”, to show how much the situation affected them. Expert views were obtained from four instructors specialized in this field with respect to question types and contents when preparing the Distress/ Problem Identification Form.

#### **Administration of Data Collecting Instruments**

The data collection instruments were administered by way of interviews with the women after informing them of the purpose and method of the study and explaining the surveys to be used in the study. Support was provided to the women in reading and filling out the surveys when needed. Since a private room was not available to hold the interviews with the women, the data was collected in the outpatient clinic, mostly while they were waiting for their turn, after their examination and while resting in the recovery room after the procedure.

#### **Evaluation of Data**

Descriptive statistical methods (numbers, percentages, means and standard deviations) were used when evaluating the data obtained from the study. The relationship between the qualitatively grouped variables was analyzed using the Pearson chi-square test. The results obtained were evaluated within 95% confidence interval and 5% significance level.

#### **Ethical Concerns**

The approval of the Clinical Trials Ethics Committee of Mersin University (date: 09.02.2012; number: 2012/82) was obtained to be able to carry out the study. Written permissions of the relevant institutions were also obtained to collect data. Verbal statements of women were taken.

#### **Limitations and Generalizability of the Study**

The generalizability of the study is limited to the hospitals where it was performed. Since a private room was not available for the investigator to hold the interviews with the women, the data was collected in the outpatient clinic environment.

## **RESULTS**

Approximately 43.7% of the women were in the 30-35 age group, 55% of them were graduates of primary school, 58.3% were unemployed, and 90.7% had social security. The monthly income status was “income equal to expenses” in 61.6% of the women and 66.2% of them lived in Istanbul city. The place of living for

the longest time was the metropolis in 57% and 78.8% had a nuclear family structure.

Some 64.9% of the women felt uncomfortable when people around them started talking about having children and 76.2% of them were annoyed when people around them asked questions about having children. Approximately 68.9% of the women concealed having infertility treatment from people due to prejudices and annoying comments, fear of being blamed unfairly, unwillingness to give an explanation, and wishing to make it a surprise. 54.3% of the women were annoyed when people around them asked questions about the treatment. 74.2% of the women were supported by their spouses and immediate relatives, and 72.8% by their friends during their treatment. 84.1% of the women feared that their treatment would be a failure. Negative developments in 18.5% of the women with respect to their treatment. These included insufficient ova formation despite medication, slow ova development, and medication side effects (nausea, vomiting, weight gain, swelling, distress, etc.). 73.5% of the women felt strained and uneasy on the days of coming to the center. 62.9% of the women were annoyed dealing with the official procedures related to their treatment. 77.5% of the women were tired due to the trips between the center and their home. Some 15.2% of the women were not happy with the physical conditions at the center including crowd, the buildings being old, the environment being tight and dense, and the spaces allocated to patients being inadequate. 65.6% of the women had difficulties in affording their treatment expenses. 22.5% of the women were not adequately informed about the treatment process. 4% of the women complained that they were not provided adequate information by their doctors and could not see them frequent enough. Approximately 7.9% of the women stated that they were dissatisfied with the nurses for not giving adequate information, being inattentive, reflecting their job stress on the patients, and being insufficient in number. 17.2% of the women complained about public servants and other staff for not being good-humored, sensitive and understanding, not providing detailed information, answering questions in a loud and tense way, and behaving in a hasty and impatient manner. Approximately 51.7% of the women stated that they were hurt during the procedures of uterus imaging, ova collection, examination, blood drawing, and injection. 71.5% of the women were not bothered about the fact that the treatment was being administered to them not to their spouses. 9% of the women stated that they were accused by their spouses for “being infertile, not becoming pregnant before any treatment and not adhering to the treatment properly”. 47.7% of the women had a

decrease in the number and frequency of sexual relations with their spouses during their treatment.

94.7% of the women had the support of their spouses throughout their treatment (Table 1).

**Table 1.** Distress and problems experienced by women receiving IVF treatment

Distress/Problem	Affected		How Often Affected		
	Yes	No	Sometimes	Mostly	Always
Are you annoyed when people around you start talking about issues related to having children?					
<b>n (%)</b>	98 (64.9)	53 (35.1)	48 (49)	28 (28.6)	22 (22.4)
Are you irritated when people around you ask questions about having children?					
	115 (76.2)	36 (23.8)	47 (40.9)	46(40.0)	22 (19.1)
Do you hide from people that you undergo infertility treatment?					
	47 (31.1)	104 (68.9)	20 (42.6)	17(36.2)	10 (21.3)
Are you irritated when people around you ask questions about the treatment?					
	82(54.3)	69 (45.7)	39 (47.6)	28(34.1)	15 (18.3)
Have your relatives supported you during your treatment?					
	112 (74.2)	39 (25.8)	18 (46.2)	13(33.3)	8 (20.5)
Have your friends supported you during your treatment?					
	110 (72.8)	41(27.2)	18 (43.9)	17(41.5)	6 (14.6)
Do you fear that the treatment will be a failure?					
	127(84.1)	24 (15.9)	44 (34.6)	46(36.2)	37 (29.1)
Was there any negative development related to the treatment?					
	28 (18.5)	123 (81.5)	12 (42.9)	12(42.9)	4 (14.3)
Do you feel strained and uneasy on the days of coming to the center?					
	111 (73.5)	40 (26.5)	64 (57.7)	35(31.5)	12 (10.8)
Are you annoyed dealing with the formalities associated with the treatment?					
	95 (62.9)	56 (37.1)	31 (32.6)	39(41.1)	25 (26.3)
Does traveling between the center and home make you tired?					
	117 (77.5)	34 (22.5)	42 (35.9)	41(35.0)	34 (29.1)
Are you happy with the physical conditions at the center?					
	128 (84.8)	23 (15.2)	13 (56.5)	7 (30.4)	3 (13.0)
Are you struggling to meet the treatment expenses?					
	99 (65.6)	52 (34.4)	35 (35.4)	46 (46.5)	18 (18.2)
Have you been informed adequately about the treatment process?					
	117 (77.5)	34 (22.5)	20 (58.8)	10 (29.4)	4 (11.8)
Are you happy with your doctor’s approach towards you in general?					
	145 (96.0)	6 (4.0)	3 (50.0)	1 (16.7)	2 (33.3)
Are you happy with the nurses’ approach towards you in general?					
	139 (92.1)	12 (7.9)	9 (75.0)	2 (16.7)	1 (8.3)
Are you happy with the approach of the civil servants and other staff towards you in general??					
	135 (82.8)	26 (17.2)	9 (34.6)	12 (46.2)	5 (19.2)
Do you get hurt during the procedures administered for diagnosis and treatment?					
	78 (51.7)	73 (48.3)	43 (55.1)	32 (41.0)	3 (3.8)
Are you annoyed about the fact that the treatment is being administered to you. not to your spouse?					
	43 (28.5)	108 (71.5)	26 (60.5)	10 (23.3)	7 (16.3)
Do you think that your spouse puts the blame on you?					
	9 (6.0)	142 (94.0)	5 (55.6)	2 (22.2)	2 (22.2)
Has there been any reduction in the number and frequency of sexual relations with your spouse during the treatment?					
	72 (47.7)	79 (52.3)	45 (62.5)	23 (31.9)	4 (5.6)
Do you believe that your spouse has supported you during the treatment?					
	143 (94.7)	8 (5.3)	4 (50.0)	2 (25.0)	2 (25.0)

The majority of the women whose income was more than their expenses (61.5%) concealed from people that they were undergoing infertility treatment. This ratio was 24.4% in those whose income was less than their expenses. An evaluation of the monthly incomes of the women and the extent to which they hide their receiving infertility treatment from people showed that there was a statistically significant correlation between them

( $p=0.037$ ). A large majority of the women who had their income less than their expenses (95.6%) stated that they were afraid of their infertility treatment turning out to be a failure. This ratio was 69.2% in those who had their income more than their expenses. A statistically significant correlation was found between the monthly incomes of the women and the extent to which they feared their treatment would be unsuccessful ( $p=0.025$ ) (Table 2).

**Table 2.** Tendency to hide the infertility treatment from people and fearing that the treatment would be a failure with respect to the monthly incomes of women

Distress/Problems	Monthly income status						p
	Income less than expenses		Income equal to expenses		Income more than expenses		
	n	%	n	%	n	%	
Hiding infertility treatment from people							
Yes	11	24,4	28	30,1	8	61,5	$X^2=6,591$ $p=0,037$
No	34	75,6	65	69,9	5	38,5	
Fearing that the treatment would be a failure							
Yes	43	95,6	75	80,6	9	69,2	$X^2=7,398$ $p=0,025$
No	2	4,4	18	19,4	4	30,8	

A large majority of the women who did not know from whom the inability of having children originated (96.4%) were irritated when people asked questions about having children. This ratio was 66.1% in the women who stated that it was originated from their spouses. There was a statistically significant correlation between knowing the person who was responsible for not being able to have children and being irritated when people asked questions about having children

( $p=0.019$ ). Most of the women who did not know from whom the inability of having children originated (92.9%) felt strained and uneasy on the days of coming to the center. This ratio was 78.9% in those who stated that it originated from her. There was a statistically significant correlation between knowing the person who was responsible for not being able to have children and feeling strained and uneasy on the days of coming to the center ( $p=0.025$ ) (Table 3).

**Table 3.** The relationship between from whom originated the woman's inability to have a child and being annoyed about people's asking questions related to having children

Distress/Problems	From whom originated the woman's inability to have a child								p
	Her		Her spouse		Both of them		Cause not known		
	n	%	n	%	n	%	n	%	
Being annoyed when people around her ask questions related to having children									
Yes	30	78.9	41	66.1	17	73.9	27	96.4	$X^2=9.998$ $p=0.019$
No	8	21.1	21	33.9	6	26.1	1	3.6	
Feeling strained and uneasy on the days of coming to the center									
Yes	30	78.9	40	64.5	15	65.2	26	92.9	$X^2=9.347$ $p=0.025$
No	8	21.1	22	35.5	8	34.8	2	7.1	

## **DISCUSSION**

Some 64.9% of the women felt uncomfortable when people around them started talking about having children and 76.2% of them were annoyed when people around them asked questions about having children. We think that mentioning the women undergoing IVF treatment about having children and asking them questions on this issue is a matter of annoyance for them. In a study, women receiving infertility treatment were worn out, felt guilty, were despised and alienated, and were threatened with divorce or a co-wife [17]. In a study, women receiving infertility treatment found the questions of the people from their social environment in the form “why haven’t you had a child yet, did you delay treatment?” irritating and stigmatizing [18]. In a study, it was stated that 63.7% of women were annoyed by the questions of the people around them relating to having children. The literature data was found similar to the results of the present study [19].

Approximately 68.9% of the women concealed having infertility treatment from people due to prejudices and annoying comments, fear of being blamed unfairly, unwillingness to give an explanation, and wishing to make it a surprise. Women undergoing IVF treatment see themselves ‘different’ or ‘faulty’ and feel ashamed. A woman open to support and suggestions would not seek compassion or mercy. They may have to hide the situation from others [20]. It was stated in a study, that women confined sharing of their infertility treatment to their family members and a few friends to avoid negative attitudes [18]. These results are similar to the results of our study. It is stated in a study with infertile women that 62.3% of them felt anger and resentment due to the unfair beliefs of people around them concerning test tube baby procedures [19].

54.3% of the women were annoyed when people around them asked questions about the treatment. When the people in their community ask questions about the treatment, the pressure on the women may increase and this may cause them to experience anxiety. The stress felt will increase if these are questions involving curiosity. In fact, it has been reported that there is a reverse relationship between the stress levels of the women undergoing infertility treatment and the rates at which they become pregnant [7]. In a study, 62.3% of the women undergoing infertility treatment were found to feel anger and resentment due to the mistaken beliefs of people around them regarding test tube baby procedures [19]. The data in the literature support this result.

74.2% of the women were supported by their spouses and immediate relatives, and 72.8% by their friends during their treatment. It was stated

in a study, that the social support received from the family was an important factor affecting the mental health of infertile women [21]. It was found in a study, that 81.9% of the women in the process of IVF treatment were supported by their own families, 65.2% of them by their close associates and 52% by the family of their spouses [19]. These results are in line with those of the present study.

84.1% of the women feared that their treatment would be a failure. The low probability of the occurrence of pregnancy in the IVF treatment may induce women to experience a fear of failure. It was stated in a study that waiting for the result of an IVF treatment can be stressful and spiritually destructive for couples [22].

We found negative developments in 18.5% of the women with respect to their treatment. These included insufficient ova formation despite medication, slow ova development, and medication side effects (nausea, vomiting, weight gain, swelling, distress, etc.). 73.5% of the women felt strained and uneasy on the days of coming to the center. Since the IVF treatment is a difficult and tiring process, we think that it is normal that the women fell strained and uneasy when they come to the center. The IVF treatment leads to discontent and emotional exhaustion in women [23]. Especially when there are negative developments in relation to the treatment, there will be an increase in the negative emotions experienced. It was found in a study that women who continued with their IVF treatment had higher rates of anxiety compared to those whose treatments were discontinued [10]. The findings in the literature support the result of this study.

77.5% of the women were tired due to the trips between the center and their home. Since the sample group of our study consisted of women coming from Istanbul city, its districts and other provinces, traveling to and from the center can be difficult.

Some 15.2% of the women were not happy with the physical conditions at the center including crowd, the buildings being old, the environment being tight and dense, and the spaces allocated to patients being inadequate. The IVF treatment is a process that increases the anxiety, depression and stress levels of couples [7]. Therefore, we think that the unfavorable conditions in the center where the treatment is administered would increase the emotional burden on the women.

We found that 65.6% of the women had difficulties in affording their treatment expenses. The IVF treatment involves physical, psychological and financial burdens [15]. In a study, where the psychosocial problems of infertile women were investigated, 51.5% of the women were found to struggle in meeting their treatment expenses and to

experience economic difficulties [19]. The literature data confirm the results of this study.

In this study, 22.5% of the women were not adequately informed about the treatment process. Although our country has also signed a number of international conventions defending the rights of infertile individuals and couples such as the Charter of Sexual and Reproductive Rights of the International Planned Parenthood Federation (IPPF), the information, training and consultancy services provided to infertile people are still inadequate [11].

In this study, 4% of the women complained that they were not provided adequate information by their doctors and could not see them frequent enough. We can say that a large majority of the patients were happy with their doctor. The fact that the patients had the right to select their doctors may have increased their satisfaction. However, the lack of the opportunity to communicate and discuss complaints due to the short time doctors can allocate to patients may also be a factor disguising dissatisfaction. In a study, where assessed the communicative skills of doctors during infertility consultations, the satisfaction level of female patients was found to be 9.4 (as per the scale ranging between 0 and 10) [24]. This also is compatible with the results of our study.

Approximately 7.9% of the women stated that they were dissatisfied with the nurses for not giving adequate information, being inattentive, reflecting their job stress on the patients, and being insufficient in number. Infertility nursing is a recently defined and newly developing field in Turkey [25]. In infertility centers, nurses are not expected to provide services in line with the "roles and responsibilities of infertility nurses". This may lead nurses to work primarily in a job-oriented manner and to overlook patient care.

We found that 17.2% of the women complained about public servants and other staff for not being good-humored, sensitive and understanding, not providing detailed information, answering questions in a loud and tense way, and behaving in a hasty and impatient manner. The persons to whom women direct their problems and complaints first and most frequently are the public servants and hospital staff. We think these problems and complaints generally include subjects relating to formalities, seeking information, asking questions, relaying complaints, examination sequence and appointments. We think that public servants and staff find it difficult to show an empathic approach towards the women for reasons such as workload and insufficient knowledge on the treatment.

Approximately 51.7% of the women stated that they were hurt during the procedures of uterus imaging, ova collection, examination, blood

drawing, and injection. In a study, the procedures the women receiving IVF treatment found very stressful were ova collection (52%), seeing how many follicles developed (32%), embryo transfer (29%), injection (29%), and vaginal ultrasound (14%) [26]. Their result is similar to that of the present study.

71.5% of the women were not bothered about the fact that the treatment was being administered to them not to their spouses. We think that the desire to have a child is so great for women that they willingly allow all difficult procedures to be applied to their own bodies. It was found in a study, that 77% of the women receiving infertility treatment described having a child as "the most important thing in their life and an event in the center of life" [21]. Even if the cause of infertility originates from the man, it is often the women who is made subject to complex interventional treatment methods and women experience more stress than men [7,20]. We think that women who are exposed to many stressors during their treatment exhibit patient, understanding and selfless behaviors by the nature of their social roles.

In this study 9% of the women stated that they were accused by their spouses for "being infertile, not becoming pregnant before any treatment and not adhering to the treatment properly". As the IVF treatment starts becoming complicated and interventional, anxiety increases in the couples and they begin to give angry reactions to each other. Efforts to find a meaningful explanation for infertility direct couples to go through reminiscences of their faulty behaviors and adverse events that had to be punished. Couples may then start blaming themselves or the other with feelings of hostility and grudge [20].

In this study 47.7% of the women had a decrease in the number and frequency of sexual relations with their spouses during their treatment. Sexual dysfunction may occur due to the tests and procedures involved in the infertility treatment. It has been reported that sexual dysfunctions are more common in women [27]. In a study, 52.9% of the women receiving infertility treatment stated that they felt annoyed about health professionals scheduling their sexual relations, they felt ashamed of it, and they thought that their privacy was violated and their private life was disclosed [19]. These support the results of our study.

94.7% of the women had the support of their spouses throughout their treatment. We think that the common ideals, dreams and goals shared between the couples during IVF treatment can augment the support between them. It was stated in a study, that a large majority of the couples treated with assisted reproductive techniques are very content with their relationships with their spouses

and feel very happy [14]. This result is also compatible with the results of the present study.

More than half of the women whose income was more than their expenses concealed the fact that they were undergoing infertility treatment. It seemed that as the women's income increased, their tendency to hide their infertility treatment from people also increased. Alongside its physical, psychological, social and emotional effects, infertility also has financial consequences. Couples may need the economic support of their loved ones to meet the high costs of infertility treatment. However, any kind of financial support to be received from outside sources would mean that they will find out about this process. Infertile couples are under great social pressure and feel the need to hide this highly personal problem [12]. Women with a poor income status, on the other hand, will not be able to conceal from their community, even if they wanted to, that they undergo infertility treatment. We think that women with a good income status, on the contrary, will have more means to hide their infertility treatment from the people around them.

A considerable percentage of the women whose income is less than their expenses stated that they feared that their infertility treatment would be a failure. We found that as the income of women decreased, they experience more fear that their infertility treatment would be unsuccessful. In a study, 51.5% of the women were found to struggle in affording their treatment expenses and to experience economic difficulties [19]. Women with a poor income status may think that their infertility treatment is probably the "last treatment" they can afford financially and this may lead to the fear that "the treatment will turn out to be a failure".

The majority of the women who gave the answer "the cause is not known" or "me" when they are asked "who is responsible for not being able to have a child" stated that they were annoyed when people asked questions about having children. There are cultural reasons why women struggle more with the psychosocial problems associated with infertility. In the Turkish culture, the first questions directed to women are "Are you married?" and "Do you have children?" [9]. The psychological meaning of having no children for women is inability to give birth, loss of control, psychological deficiency, feeling isolated from the women's community, self-depreciation, loneliness, insufficient social security, insufficient social roles, and decreased self-respect [13]. We think that in cases where the reason for inability to have children is not known, women will worry about uncertainty and in cases where it originates from them they will experience a feeling of guilt. Women in such moods may suffer more from the problems relating to having children.

## CONCLUSIONS

In conclusion, we found in this study that women receiving IVF treatment experienced many emotional, psychological, socioeconomic and cultural problems. In view of the study results we can recommend the following:

- Establishment of support groups for women undergoing IVF treatment and their spouses by nurses specialized in this field in cooperation with other healthcare disciplines. Dealing with subjects such as stress management and pain control, and ideas, feelings and experiences about infertility in the group meetings,
- Organization of regular trainings for the doctors, nurses, public servants and other staff working at infertility units about the psychosocial problems experienced by infertile couples, empathy, and therapeutic communication skills,
- Organization of educations for infertile couples before starting their IVF treatments about the bio-psycho-social dimension of infertility, stages of the treatment, official procedures and financial support sources. Organization of such educations routinely by the healthcare team in the infertility center and nurses assuming effective role in this team,
- Scheduling meetings at infertility centers where the treatment team and couples can communicate their wishes, complaints, opinions and proposals, and
- Organizing educations to raise awareness and concern about infertility in every individual in the society.

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## Conflicts of Interest

The authors declare that they have no conflicts of interest.

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