

# Relationships between the perceived social support and adjustment to infertility in women with unsuccessful infertility treatments, Turkey-2017

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## Abstract

**Context:** It is thought that social support plays a key role in ensuring adjustment for women as a result of failed infertility treatment. Social support and infertility issues are discussed in the literature. However, a relationship between infertility treatment failure and adjustment to infertility was not detected in studies.

**Aims:** The purpose of this study was to examine the relationships between the perceived social support and adjustment to infertility in women with unsuccessful infertility treatments.

**Settings and Design:** This was a cross-sectional, descriptive-analytic study performed in a university hospital in Eastern Turkey between September 2016 and September 2017.

**Materials and Methods:** The study participants consisted of primary infertile women admitted to the clinic with at least one failed treatment experience. Two hundred and six infertile women were included in the research sample by convenience method. A demographic data form, the Multidimensional Scale of Perceived Social Support, and the Fertility Adjustment Scale were used.

**Statistical Analysis Used:** Data were analyzed using in descriptive statistics (mean, standard deviation, and frequency). The Pearson's correlation was used and  $P < 0.05$  was considered to be statistically significant.

**Results:** There was a significant positive correlation between the perceived social support from family, friends, and significant others and adjustment to infertility ( $r = 0.17, P < 0.05$ ;  $r = 0.35, P < 0.01$ ; and  $r = 0.23, P < 0.01$ , respectively).

**Conclusions:** There was a significant positive correlation between the adjustment to infertility and perceived social support from the family, friends, and the special someone of the women undergoing failed infertility treatments.

**Keywords:** Adjustment, Infertility, Social support, Treatment failure

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## INTRODUCTION

Infertility is defined as the inability to become pregnant, even if a couple has regular sexual intercourse (3–4 times/week)

without using any birth control methods over a period of 1 year.<sup>[1]</sup> The worldwide infertility rates vary based on the

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country, and according to the World Health Organization, the infertility incidence was 15%, with every six couples in developing countries observed to be affected.<sup>[2]</sup> In Turkey, there is no clear information regarding the incidence of infertility, but it has been reported in the range of 10%–20%.<sup>[3]</sup>

Infertility is not only a physiological problem but also a cultural crisis, in which psychological, familial, and social problems can be experienced.<sup>[4,5]</sup> Nowadays, couples begin to search for treatment options to alleviate this stress and life crisis, and they often see assisted reproductive technology (ART) as a solution. ART provides hope for couples, and it is often seen as their last chance for pregnancy.<sup>[6]</sup> In the evaluation of infertility, it is believed that the treatment period influences an important part of the population.<sup>[7]</sup> Most infertile couples hope that the treatment will be successful and that pregnancy will occur at the beginning of the treatment.<sup>[6,8]</sup> However, the infertility treatment success rate is not 100%, there is always the possibility of failure, even in the best-administered ART. For this reason, the infertility treatment process can wear couples out both physically and spiritually.<sup>[1]</sup>

An infertility treatment failure is often an unexpected loss for the women, her spouse, and her family, and it can require an adjustment to a childless life while coping with emerging challenges.<sup>[9]</sup> In previous studies conducted with infertile women, the women stated that an unsuccessful treatment was the saddest experience for them.<sup>[10,11]</sup> Some couples are able to adapt to a treatment failure, while other couples cannot. Often, an adjustment to infertility implies adoption, which means that the couple can act together regardless of their decision, and in most cases, they can continue their lives with a certain degree of determination and peace.<sup>[10]</sup> For an infertile woman, this adjustment is defined as the behavioral, cognitive, and emotional acceptance of the possibility or impossibility of childbearing.<sup>[12]</sup> Infertile individuals should attempt to alter their cognitive, behavioral, and emotional conduct.<sup>[13]</sup> Personal characteristics, with regard to fertility problems, and social support are important variables that affect the adjustment to unsuccessful ART in women.<sup>[14]</sup>

Social support is considered to be any kind of help provided by people (friends, family, or that special one) around the individual who is under stress while dealing with this difficult situation.<sup>[15]</sup> Social support plays a key role in the adaptation of infertile couples to this life crisis. Previous studies have revealed that women especially experience more adjustment problems in couples who undergo ART.<sup>[16]</sup> Although it has been found that most women can adapt after unsuccessful ART, a significant proportion of these women still have

emotional problems according to the follow-ups. For this reason, infertile women require the support of their families, friends, and health-care professionals when a treatment fails. Often, infertile women also feel the need to conceal the problem because they are under social pressure. Those couples who cannot share their health problems with their families and relatives remain unsupported for this reason. This can cause loneliness, despite being part of a crowd, and it can deprive them of the support that they need at this stressful time. Couples have stated that the distress they experience during this process is the most stressful period of their lives.<sup>[3]</sup> However, social support can be effective for reducing women's infertility stress.<sup>[17]</sup> Social support is a valuable coping method that contributes to love, affection, confidence, self-expression, self-knowledge, and sense of belonging. Even if it cannot eliminate the stressful situation, it enables individuals to be more optimistic by decreasing their levels of anxiety. Social support helps individuals coping with challenging situations, decreasing their desperation, and generating new solutions.<sup>[18]</sup>

Monitoring infertile women who have undergone unsuccessful infertility treatments is an important problem in Turkey. The consultancy to be provided to infertile women will positively affect their social support, success of the treatment, and women's health in the solution of problems;<sup>[18]</sup> there are a limited number of studies in the literature that have analyzed the effects of unsuccessful infertility treatments on infertile women and couples. Infertility treatment failure can affect one's quality of life.<sup>[4]</sup> In addition, women's adjustments to *in vitro* fertilization and social support was a protective factor for reducing the anxiety and depression levels in women undergoing unsuccessful infertility treatments. In the same study, it was also determined that the emotional status of the women who focused on new life goals 3–5 years after the failed ART as an adjustment indicator was better off.<sup>[13]</sup> Daniluk reported that emotional adjustment after an unsuccessful ART attempt could help one focus on the future.<sup>[19]</sup>

As the role of social support in adjustment to infertility has been less considered in the literature, the aim of the present study was to determine the relationships between social support and adjustment to infertility in women with unsuccessful infertility treatments.

## MATERIALS AND METHODS

### Design

This was a descriptive-analytic cross-sectional study. This study was designed in accordance with the STROBE checklist: cross-sectional studies guide.

## Participants and settings

This study was conducted at the infertility clinic of a university hospital in Eastern Turkey between September 2016 and September 2017. Two hundred and six infertile women who met the sampling criteria and volunteered to participate in the study were included in the sample by convenience method. The inclusion criteria were as follows: (a) primary infertile women who had undergone at least one failed of infertility treatment of any kind; (b) being 18–50 years old women; (c) ability to speak, read, and write in Turkish; (d) no psychiatric diagnoses; and (e) being willing to take part in this study.

## Data collection

The infertile women were psychologically very sensitive about sharing their very private, confidential information at the time of the interview. Therefore, the data were collected in a private room for infertile patients in the polyclinic. The women filled out the forms while they were alone in this room, which took 15–20 min.

## Instruments

### *Demographic information form*

The demographic information form, which was prepared by the researchers according to the literature, contained 10 sociodemographic questions, including age, education, work, social security, income, infertility reason, infertility diagnosis, and treatment.<sup>[13,20,21]</sup>

### *Multidimensional Scale of Perceived Social Support*

The Multidimensional Scale of Perceived Social Support (MSPSS) was developed by Zimet *et al.* in 1988 to determine the sources of social support perceived by the individuals.<sup>[22]</sup> Its Turkish reliability and validity study was carried out by Eker and Akar in 1995.<sup>[22]</sup> It consisted of a total of 12 items used to measure the social support received from three different sources (family, friends, and that special someone). The scale was a Likert-type graded scale (1–7 points) ranging from “absolutely no” to “absolutely yes.” The scale had three subscales, each of which contained four items to determine the support of the family, friends, and that special someone. The total score of the scale was obtained via the summation of the scores of all the subscales, while the subscale score was obtained by the summation of the scores of 4 items. The lowest score that could be obtained from the subscales was 4, while the highest score was 28. The lowest score to be obtained from the scale was 12, while the highest score was 84. The higher scores reflected a greater perception of social support.<sup>[22]</sup> In the original study, the Cronbach’s alpha was 0.80–0.95; in the present study, the Cronbach’s alpha was 0.91.<sup>[22]</sup>

### *Turkish Version of the Fertility Adjustment Scale*

The Turkish version of the Fertility Adjustment Scale (T-FAS) was developed by Glover *et al.* in 1999 to standardize the measurement of the psychological adjustment in infertility.<sup>[12]</sup> Arslan and Okumuş adapted it to Turkish in 2012.<sup>[23]</sup> The original scale consisted of 12 items; however, a 10-item structure was obtained as a result of the Turkish validity and reliability study. At least 10, and at most 40, points were taken from the 4-point Likert-type scale (1 – does not fit me at all, 2 – does fit me a bit, 3 – fits me very well, and 4 – fits me completely). The items were balanced in terms of the positive and negative expressions to obtain answers that were not influenced. The positive items were scored in reverse as 1, 4, 7, 8, and 10. The total score was obtained by scoring the individual items, and there was no cutoff point on the scale. A high score was considered to be an indication of inadequate adjustment. In the original scale, the reliability coefficient was  $\alpha = 0.85$ . There were no subscale, s<sup>[21]</sup> and in the present study, the Cronbach’s alpha = 0.74.

## Data analyses

For the coding and statistical analysis of the data, the Statistical Package for the Social Sciences software 16.0 (SPSS Inc., Chicago, IL, USA) was used. Descriptive statistics including, percentages, mean scores (M), and standard deviation were used in the analysis of sociodemographic data. The Pearson’s correlation was used to analyze the MSPSS and T-FAS results, and  $P < 0.05$  was considered to be statistically significant.

## Ethical considerations

For this study, written permission was obtained from the noninvasive clinical applications ethics committee of a university hospital in Eastern Turkey (No. 2016/231). In addition, written permission was obtained from the institution, and written consent was obtained from each of the women.

## RESULTS

The general characteristics of the 206 infertile women are shown in Table 1. Overall, most of the participants were between the ages of 26 and 35 years, literate, and primary school graduates. Most of these women had social insurance coverage, did not work, lived in a city, and perceived their income levels as moderate at the time of the study.

The infertility-related characteristics are shown in Table 2. Most of them exhibited the same infertility diagnoses

and infertility treatment durations which ranged from 3 to 6 years. Most of the women experienced at least one unsuccessful round of ART, and women's infertility was determined by female factors.

Table 3 shows the mean score of the women T-FAS and MSPSS scale and also subscale of the MSPSS score from the family, friend, and the significant other.

A significant positive correlation was found between the perceived social support from the family, friends, and that special someone and compliance with infertility. When the social support from the family, friends, and that special

someone perceived by the women who had undergone unsuccessful infertility treatments increased, the infertility adaptation increased [Table 4].

## DISCUSSION

In this study, the relationships between the adjustment to infertility and the social support perceived from three different social sources (special someone, family, and friends) among the women who had undergone unsuccessful infertility treatments were determined.

The result of our study about women's adjustment score was 23.2 that was in accordance with another study, and the mean score for the women's adjustment to infertility during the infertility treatment was 25.4.<sup>[24]</sup> The result of our study for the social support score was 59.2, which was in accordance with the literature. The infertile Turkish women had total social support scores of 52.8, respectively, during the treatment process.<sup>[18]</sup> In our study, the mean score from the family support subscale was consistent with the results of another study, in which the women stated that their families provided the highest level of support.<sup>[18]</sup> However, the score from the support of that special someone subscale was 15.6 in their study, but our score was higher with 21.3. This difference is thought to be related to the difference between the sample groups. The most important cause of a low score from the special someone's support subscale is

**Table 1: Sociodemographic characteristics of women with unsuccessful infertility treatments, Turkey (n=206)**

| Sociodemographic characteristics | n (%)      |
|----------------------------------|------------|
| Age (years)                      |            |
| 19-25                            | 43 (20.9)  |
| 26-35                            | 113 (54.9) |
| ≥36                              | 50 (24.3)  |
| Education                        |            |
| Literate                         | 59 (28.6)  |
| Elementary school                | 59 (28.6)  |
| Secondary school                 | 35 (17.0)  |
| High school                      | 30 (14.6)  |
| University                       | 23 (11.2)  |
| Work activity                    |            |
| Working                          | 24 (11.7)  |
| Nonworking                       | 182 (88.3) |
| Income                           |            |
| Bad                              | 69 (33.5)  |
| Moderate                         | 112 (54.4) |
| Good                             | 25 (12.1)  |
| Social security                  |            |
| Yes                              | 168 (81.6) |
| No                               | 38 (18.4)  |
| Place of accommodation           |            |
| City                             | 160 (77.7) |
| District, town, and village      | 46 (22.3)  |

**Table 2: Characteristics related to infertility in women with unsuccessful infertility treatments, Turkey (n=206)**

|   | n (%)      |
|---|------------|
| Time from the diagnosis (years)               |            |
| Under 3                                       | 38 (18.4)  |
| 3-6   | 96 (46.6)  |
| Over 6  | 72 (35.0)  |
| Duration of treatment (years)                 |            |
| Under 3                                       | 84 (40.8)  |
| 3-6   | 80 (38.8)  |
| Over 6  | 42 (20.4)  |
| Number of unsuccessful infertility treatments |            |
| 1   | 154 (74.8) |
| 2   | 38 (18.4)  |
| ≥3  | 14 (6.8)   |
| Reason for infertility                        |            |
| Female factor                                 | 96 (46.6)  |
| Male factor                                   | 67 (32.5)  |
| Unknown cause                                 | 37 (18.0)  |
| Female + male factor                          | 6 (2.9)    |

**Table 3: Descriptive findings of the Multidimensional Scale of Perceived Social Support and the Turkish version of Fertility Adjustment Scale in women with unsuccessful infertility treatments, Turkey**

| Scale items       | Possible range of values | Participant values (n=206) |       |
|-------------------|--------------------------|----------------------------|-------|
|                   |                          | Mean±SD                    | Range |
| MSPSS             |                          |                            |       |
| General           | 12-84                    | 59.2±15.8                  | 12-84 |
| Family            | 4-28                     | 20.3±6.5                   | 4-28  |
| Friends           | 4-28                     | 17.5±6.9                   | 4-28  |
| Significant other | 4-28                     | 21.3±6.2                   | 4-28  |
| T-FAS             | 10-40                    | 23.2±5.4                   | 11-40 |

MSPSS: Multidimensional Scale of Perceived Social Support, T-FAS: Turkish version of Fertility Adjustment Scale, SD: Standard deviation

**Table 4: Correlation between social support and adjustment with infertility in women with unsuccessful infertility treatments**

| Variable                | Variable |               |                |
|-------------------------|----------|---------------|----------------|
|                         | T-FAS    | MSPSS: Family | MSPSS: Friends |
| T-FAS                   | -        | -             | -              |
| MSPSS:Family            | 0.17*    | -             | -              |
| MSPSS:Friends           | 0.35**   | 0.43**        | -              |
| MSPSS:Significant other | 0.23**   | 0.56**        | 0.40**         |
| MSPSS:General           | 0.31**   | -             | -              |

\*Pearson correlation:  $P < 0.05$  (two-tailed test), \*\*Pearson correlation:  $P < 0.01$  (two-tailed test). MSPSS: Multidimensional Scale of Perceived Social Support, T-FAS: Turkish version of Fertility Adjustment Scale



that women are more negatively affected and feel more guilt and stress than men, regardless of the cause of infertility, in Turkey. If the infertility is caused by the woman, the guilt and stress are even higher. Overall, it is believed that women cannot accept support from that special someone because their spouses marry a co-wife (second wife) or get a divorce as a result of social pressure. Infertility and treatment in Turkey are not shared with friends because they are seen as private family issues. This is because there is a perception of social pressure, especially from those people closest to them. Infertility adjustment level is low for the women who need to hide their infertility,<sup>[25]</sup> which supports our opinion.

In that study, it was believed that the adjustment to infertility increased because the reproductive health-care professionals provided social support at the spiritual level. According to the results of our study, when the perceived social support scores of the women with unsuccessful infertility treatments increased, their adjustment to infertility increased. These results were consistent with the literature. The studies conducted with infertile individuals have shown that the total social support decreases the stress, anxiety, and depression and strengthens the coping capacity and quality of life.<sup>[14,26,27]</sup> In addition, the effects of nursing care were based on Watson's Human Caring Theory on the level of adjustment to infertility in infertile women.<sup>[24]</sup> The level of adjustment to infertility was low in those women who were negatively affected by their environmental interactions and who needed to hide their infertility from those around them.<sup>[25]</sup>

In the literature, there were studies that analyzed the relationships between social support and stress,<sup>[16]</sup> depression,<sup>[18]</sup> the quality of life,<sup>[28]</sup> and despair.<sup>[29]</sup> However, there were no studies that analyzed the relationships between women's adjustment to infertility and social support after undergoing unsuccessful infertility treatments. For this reason, it is believed that the results of this study will be an important contribution to the literature.

This study had some limitations. First, the sample was limited to women. There is also a need for studies that analyze the adjustment of men to unsuccessful infertility treatments, as well as how couples and their marriages are affected by this process. In addition, in our study, a low correlation was found between the variables, and the absence of a control group was another limitation.

## CONCLUSIONS

There was a significant positive correlation between the adjustment to infertility and the scores of the perceived

social support from the family, friends, and that special someone of the women who had undergone failed infertility treatments. Increasing awareness of infertility nurses and other health professionals in this area will help them to provide some strategies such as performing educational programs to increasing social support for infertile women or substitute interventions for those ones who have not appropriate social support.

## Conflicts of interest

There are no conflicts of interest.

## Authors' contribution

All authors contributed to this research.

Conception and Design: YDO, MD.

Data Collection: YDO and MD.

Analysis: YDO and MD.

Manuscript Writing: YDO, MD.

Drafting the article or revising it critically for important intellectual content: YDO, MD,

Final approval of the version to be published: YDO, MD.

All authors have agreed on the final version drafting the article.

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## REFERENCES

1. American College of Obstetricians and Gynecologists. Treating Infertility; 2017. Available from: <https://www.acog.org/Patients/FAQs/Treating-Infertility#treatment>. [Last accessed on 2017 Dec 10].
2. World Health Organization. Mother or Nothing: The Agony of Infertilityn WHO Bulletin. Available from: <http://www.who.int/bulletin/volumes/88/12/10.011210.pdf?ua=1>. [Last accessed on 2017 Dec 10].
3. Kirca N, Pasinoglu T. Psychosocial problems during infertility treatment. *Curr Approaches Psychiatry* 2013;5:162-78.
4. Karaca A, Ünsal G. Stress level of infertile women due to infertility and effective factors. *J Educ Res Nurs* 2015;12:126-32.
5. Devine KS. Caring for the infertile woman. *MCN Am J Matern Child Nurs* 2003;28:100-5.
6. Su TJ, Chen YC. Transforming hope: The lived experience of infertile women who terminated treatment after *in vitro* fertilization failure. *J Nurs Res* 2006;14:46-54.
7. Haliloglu S, Saglam ZA, Toprak D, Çetin A. Evaluation of the sociodemographic characteristics of women patients admitted to infertility outpatient clinic. *Smyrna Med J* 2013;15:1-7.
8. Boden J. When IVF treatment fails. *Hum Fertil (Camb)* 2007;10:93-8.
9. Lee GL, Hui Choi WH, Chan CH, Chan CL, Ng EH. Life after unsuccessful IVF treatment in an assisted reproduction unit: A qualitative analysis of gains through loss among Chinese persons in Hong Kong. *Hum Reprod* 2009;24:1920-9.
10. Durgun-Ozan Y, Okumus H. Experiences of Turkish women about

- infertility treatment: A qualitative study. *IJBCS* 2013;2:56-64.
11. Widge A. Seeking conception: Experiences of urban Indian women with *in vitro* fertilisation. *Patient Educ Couns* 2005;59:226-33.
  12. Glover L, Hunter M, Richards JM, Katz M, Abel PD. Development of the fertility adjustment scale. *Fertil Steril* 1999;72:623-8.
  13. Verhaak CM, Smeenk JM, van Minnen A, Kremer JA, Kraaijmaat FW. A longitudinal, prospective study on emotional adjustment before, during and after consecutive fertility treatment cycles. *Hum Reprod* 2005;20:2253-60.
  14. Gameiro S, Finnigan A. Long-term adjustment to unmet parenthood goals following ART: A systematic review and meta-analysis. *Hum Reprod Update* 2017;23:322-37.
  15. Golden J, Conroy RM, Lawlor BA. Social support network structure in older people: Underlying dimensions and association with psychological and physical health. *Psychol Health Med* 2009;14:280-90.
  16. Verhaak CM, Smeenk JM, Nahuis MJ, Kremer JA, Braat DD. Long-term psychological adjustment to IVF/ICSI treatment in women. *Hum Reprod* 2007;22:305-8.
  17. Martins MV, Peterson BD, Almeida VM, Costa ME. Direct and indirect effects of perceived social support on women's infertility-related stress. *Hum Reprod* 2011;26:2113-21.
  18. Erdem K, Ejder Apay S. A sectional study: The Relationship between perceived social support and depression in Turkish infertile women. *Int J Fertil Steril* 2014;8:303-14.
  19. Daniluk JC. Reconstructing their lives: A longitudinal, qualitative analysis of the transition to biological childlessness for infertile couples. *J Couns Dev* 2001;79:439-49.
  20. Payne D, Goedeke S. Holding together: Caring for clients undergoing assisted reproductive technologies. *J Adv Nurs* 2007;60:645-53.
  21. Boz I, Okumus H. The "everything about the existence" experiences of Turkish women with infertility: Solicited diaries in qualitative research. *J Nurs Res* 2017;25:68-275.
  22. Eker D, Arkar H. Multidimensional scale of perceived social support factor structure: A study of validity and reliability. *Turk J Psychol* 1995;10:45-55.
  23. Arslan I, Okumus H. Psychometric properties of the Turkish version of the fertility adjustment scale. *J Nurs Sci* 2016;8:224-31.
  24. Arslan-Özkan İ, Okumuş H, Buldukoğlu K. A randomized controlled trial of the effects of nursing care based on Watson's Theory of Human Caring on distress, self-efficacy and adjustment in infertile women. *J Adv Nurs* 2014;70:1801-12.
  25. Bilgiç D, Özkan SA, Beji NK. Adjustment levels of individuals to infertility problem. *J Obstet Womens Health Dis Nurs Special Topics* 2016;2:51-61.
  26. Neter E, Goren S. Infertility centrality in the woman's identity and goal adjustment predict psychological adjustment among women in ongoing fertility treatments. *Int J Behav Med* 2017;24:880-92.
  27. Péloquin K, Brassard A, Arpin V, Sabourin S, Wright J. Whose fault is it? Blame predicting psychological adjustment and couple satisfaction in couples seeking fertility treatment. *J Psychosom Obstet Gynaecol* 2018;39:64-72.
  28. Steuber KR, High A. Disclosure strategies, social support, and quality of life in infertile women. *Hum Reprod* 2015;30:1635-42.
  29. Yağmur Y, Oltuluoğlu H. Social support and hopelessness in women undergoing infertility treatment in eastern Turkey. *Public Health Nurs* 2012;29:99-104.