

İnfertil Çiftlerin COVID-19 Korkusu ve Tedaviye Devam Etme Durumlarının Belirlenmesi

Determination of Infertile Couples; Fear of COVID-19 and their Continuation with Treatment

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Özet: Amaç: COVID-19 pandemisi tedavi sürecinde olan infertil çiftlerin korku ve belirsizlik yaşamalarına neden olabilir. Bu araştırma, infertilite tedavisi alan çiftlerin COVID-19 korkusu ve tedaviye devam etme durumlarını belirlemek amacıyla yapıldı. **Yöntem:** Bu tanımlayıcı araştırma, Şubat- Nisan 2021 tarihleri arasında Tüp Bebek Merkezi Ünitesi'nde infertilite tedavisi alan araştırmaya katılmaya gönüllü olan 202 (101 kadın,101 erkek) infertil çift oluşturdu. Araştırmanın verileri; infertilite tedavisi alan çiftlerin sosyo-demografik ve infertiliteye ilişkin özelliklerini belirlemeye yönelik anket formu ve COVID-19 korku ölçeği kullanılarak toplandı. Elde edilen veriler; tanımlayıcı istatistikler, iki grup ortalamaları karşılaştırması için student's t testi ve ikiden fazla grup ortalamaları karşılaştırması için oneway ANOVA testi kullanılarak değerlendirildi. **Bulgular:** Araştırmada infertil kadınların yaş ortalaması 31.3±5.74 (19-47), erkeklerin yaş ortalaması 34.58±5.26 (25-48) dur. Araştırmada infertil çiftlerin COVID 19 korku ölçeği puan ortalamasının 23.63±1.54 olduğu saptandı. Yapılan benzer çalışmalar incelendiğinde COVID 19 korku ölçeğinden aldıkları puanların bizim araştırmamızın sonucuna yakın olduğu belirlendi. Çiftlerin infertilite süresine göre COVID-19 korku ölçeği puan ortalamaları aralarında anlamlı bir farklılığın olduğu belirlendi (p<0.005). **Sonuç:** Araştırmada infertil çiftlerin COVID-19 pandemi korkusunun orta düzeyin üzerinde olduğu ve çiftlerin çoğunluğunun pandemi sürecinde tedaviye istekli olduğu saptandı.

Anahtar Kelimeler: COVID-19, Hemşire, İnfertilite, Korku

Abstract: Aim: The COVID-19 pandemic may cause fear and uncertainty in infertile couples during their treatment. To investigate infertile couples' fear of COVID-19 and whether they continue with treatment. **Methods:** This descriptive study was conducted from February to April 2021 in 101 (101 women and 101 men) infertile couples receiving fertility treatment at the IVF Center Unit. Study data were collected using a questionnaire to determine the sociodemographic and infertility-related characteristics of the couples receiving infertility treatment and the Fear of COVID-19 Scale scores. The data were evaluated using descriptive statistics, a students t-test to compare the means of two groups, and one-way ANOVA to compare the means of more than two groups. **Results:** The mean age of infertile women was 31.3 ± 5.74 years old (19-47) and that of infertile men was 34.58 ± 5.26 (25-48). The couples' mean Fear of COVID-19 Scale score was 23.63±1.54. When similar studies were examined, it was determined that the scores obtained from the COVID-19 fear scale were close to the results of our study. A significant difference in the mean Fear of COVID-19 Scale score was found regarding the infertility periods of the couples (p<0.005). **Conclusion:** In the study fear of COVID-19 in infertile couples is at a moderate level. Most of the couples wanted to continue with treatment during the pandemic.

Keywords: COVID-19, Nurse, Infertility, Fear

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INTRODUCTION

The COVID-19 infection, the first case of which was seen in December 2019 in the Wuhan region of China, spread worldwide in a short timeframe, and was declared a pandemic by the World Health Organization (WHO) on March 11, 2020 (World Health Organization [WHO], 2020). The first case registered in Turkey was on March 10, 2020. As of November 2022, the number of diagnosed patients approached 17 million and the number of individuals who lost their lives reached 102 thousand (Republic of Turkey Ministry of Health, 2022). COVID-19 infection has caused a crisis for both society and healthcare systems due to its high rate of transmission and severe respiratory failure that requires special care (Altın, 2020). This crisis has negatively affected many people, especially infertile couples who want to have children.

Infertility is defined as the inability to conceive or maintain a pregnancy despite having regular sexual intercourse (two or three times a week) for at least one year without using any contraception (Taşkın, 2016; Deka & Sarma, 2010). Worldwide, 10-15% of couples of reproductive age have infertility problems, with more than 80 million people being affected (WHO, 2017). The infertility rate in Turkey has been reported to be 10-20% (Turkish Statistical Institute [TÜİK], 2020). Diagnosis and treatment of infertility are part of a difficult and long process that affects couples physically, psychologically, and financially. During this period, couples may experience stress, panic, and intense emotional pressure (Beji, 2016). In Turkey, which has a socially and culturally heterogeneous structure, femininity is associated with motherhood and masculinity with productivity; thus, infertility negatively affects the mental health and quality of life of couples, leading to depression, anxiety, and fear (Deka & Sarma, 2010; Beji, 2016). The fear and anxiety levels experienced by infertile couples can change in unexpected situations such as altered socioeconomic status, environmental factors, and epidemics. Previous studies have reported that in addition to the fertility treatment itself, infertile

couples' fears and future plans are also affected by the COVID-19 pandemic (Tokgöz et al., 2020; Peivendi et al., 2020; Haham et al., 2021). Unfortunately, infertile couples must cope with the dilemma of delaying treatment and loss of pregnancy opportunities due to the COVID-19 pandemic. The present study aimed to determine infertile couples' fear of COVID-19 and whether they continued with treatment.

MATERIAL AND METHODS

Study Design

This is a descriptive cross-sectional study conducted in a single Reproductive Endocrinology and Infertility Unit of a university-based hospital in Turkey.

Study population and setting

The study population consisted of infertile couples that applied to the IVF Center of Mersin University between February and April 2021. The number of couples to be included in the sample was calculated by power analyses according to the chi-square test to determine the relationship between the study variables (Cook & Weisburg, 1999; Ostle & Malone, 1988; Zar, 1984).

As a result of the statistical calculations, at least 100 couples (100 women and 100 men) had to be included in the sample with a test power of 81.23%. Inclusion criteria were age 18 years and over, infertile couple and ability to speak and understand Turkish. No sample selection was carried out and 101 couples (101 women and 101 men) who agreed to participate and who filled out the online forms were included. This cross-sectional study was performed through an online survey to prevent the spread of COVID-19.

Instruments

First research instrument

Sociodemographic Data Form

The "Sociodemographic Data Form" was developed in light of the literature (Altın, 2020; Deka & Sarma, 2010; Gordon & Balsom, 2020). The questionnaire consists of two parts with 11

questions in total, seven of which are related to the sociodemographic characteristics of the couples and four are related to infertility treatment (duration of infertility treatment, the reason for not having children, etc.).

Second research instrument

Fear of COVID-19 Scale

The Fear of COVID-19 Scale was developed by Ahorsu et al. (2020) to determine individuals' fear of COVID-19. The items of the scale were created based on a comprehensive review of existing scales on fear, expert assessments, and participant interviews. The scale has a single-factor structure and consists of seven items in a five-point Likert-type scale (1 = Strongly disagree; 5 = Strongly agree). There is no reverse item in the scale. High scores obtained from the scale indicate a high fear of COVID-19. A Turkish version was used. The Cronbach's alpha coefficient of the questionnaire was 0.82 in our sample, indicating acceptable internal consistency.

Data Analysis

The data obtained in the present study were evaluated using SPSS version 20. The mean \pm standard deviation, median (maximum-minimum), percentage, and frequency values were used for analysis. Variables were evaluated after checking for normality and homogeneity of variances (Shapiro-Wilk and Levene's tests). A Student's t-test was used for the comparison of two groups and Tukey's test was used for the comparison of three or more groups. The significance level was accepted as $p < 0.05$.

Ethic

The necessary information and aim of the present study were explained at the beginning of the survey. The web-based questionnaire was sent to the participants via an online global platform. The survey was completely voluntary and anonymous. All procedures were approved by Toros University Clinical Sciences Institutional Ethics Review Board (Decision No: 1374) and the Republic of Turkey

Ministry of Health, Mersin Provincial Directorate of Health.

RESULTS

It was determined that the mean Fear of COVID-19 Scale score of infertile women was 23.63 ± 1.40 (17-30) and that of infertile men was 23.74 ± 1.64 (17-30). The infertile couples' mean Fear of COVID-19 Scale score was determined to be 23.63 ± 1.54 . Examination revealed that the infertile couples obtained at least "17" and at most "30" points from the Fear of COVID-19 Scale (Table 1).

The mean age of infertile women was 31.3 ± 5.74 years old (19-47) and that of infertile men was 34.58 ± 5.26 (25-48). There was a significant difference in the mean Fear of COVID-19 Scale score according to the couples' employment status ($p < 0.005$). No significant difference in the mean Fear of COVID-19 Scale score was found according to educational status, income level, social security status, or COVID-19 history ($p > 0.005$) (Table 2).

Comparison of the couples' infertility characteristics and their willingness for treatment with the mean Fear of COVID-19 Scale scores showed that there was a significant difference in the mean Fear of COVID-19 Scale scores according to infertility duration ($p < 0.005$). No significant difference was found according to the reason for infertility or willingness for treatment ($p > 0.005$) (Table 3).

Table 1. The Mean Fear of COVID-19 Scale Scores for Infertile Couples

	Women (n = 101)		Men (n = 101)		Total (202)
	X ±SD	Min-Max	X±SD	Min-Max	X±SD
Fear of COVID-19 Scale	23.63±1.40	17-30	23.74±1.64	17-30	23.63±1.54

Table 2. Comparison of the Mean Fear of COVID-19 Scale Scores with the Couples' Sociodemographic Characteristics (n = 202)

Characteristic	Women (n = 101)		Men (n = 101)	
	n	$\bar{X}\pm SD$	n	$\bar{X}\pm SD$
Educational status				
Illiterate	22	22.47±1.30	14	21.36±1.27
Primary school	19	23.32±1.21	18	22.57±1.31
Secondary school	26	23.38±1.25	36	21.16±1.39
High school	34	25.36±1.35	33	24.33±1.13
University	22	23.56±1.62	14	23.79±1.28
p		0.219**		0.408**
Employment status				
Working	37	25.21±1.40	91	26.23±1.32
Not working	64	24.47±1.25	10	24.27±1.46
p		0.001*		0.002*
Perceived income level				
Lower than the expenses	19	24.24±1.22	16	24.15±1.15
Equal to the expenses	69	25.12±1.14	69	25.12±1.24
More than the expenses	13	23.28±1.33	16	20.17±1.11
p		0.408**		0.103**
Social security status				
Insured	94	22.23±1.28	95	22.21±1.17
Not insured	7	23.74±1.41	6	23.29±1.32
p		0.908*		0.852*
COVID-19 history				
Yes	12	21.27±1.39	16	20.15±1.24
No	89	22.29±1.21	85	22.23±1.78
p		0.684*		0.247*

*Student's *t*-test, **ANOVA

Table 3. Comparison of the Couples' Infertility Characteristics and Their Willingness for Treatment With the Mean Fear of COVID-19 Scale Scores

Infertility duration	n	$\bar{X} \pm SD$				
1-3 years	102	22.24±1.12				
4-7 years	61	24.35±1.29				
>7 years	39	25.23 ± 1.27				
p		0.001**				
Reason for infertility	n	$\bar{X} \pm SD$				
Female factors	51	23.28±1.33				
Male factors	49	23.15±1.28				
Other	102	24.19±1.73				
p		0.587**				
	Women (n = 101)		Men (n = 101)			
Willingness for treatment	n	$\bar{X} \pm SD$		n	$\bar{X} \pm SD$	
Yes	84	24.17±1.15		75	23.29±1.26	
No	13	23.19±1.27		16	23.35±1.38	
I don't know	4	23.65±1.48		10	22.18±1.14	
p		0.210			0.152	

*Student's *t*-test, **ANOVA

DISCUSSION

The COVID-19 pandemic is a crisis that has caused widespread anxiety and fear among individuals (Ahorsu et al., 2020), especially due to the rapid spread of the virus, mutations, and uncertainties regarding vaccines and treatment. To prevent the spread of the virus, many measures were taken in Turkey according to recommendations by the Ministry of Health and Scientific Committee, which caused sudden and unexpected changes in individuals' lives.

It is inevitable that such changes and uncertainties will affect the psychology of individuals and induce fear. The present study is based on the fear of COVID-19 experienced by infertile couples, one of the groups most affected by the pandemic, and their willingness to continue with treatment. Uncertainties regarding COVID-19 added to those already existing about the infertility treatment process, rendering this group even more important. We followed

national regulations, as well as regulations of international reproductive health societies such as the American Society for Reproductive Medicine (ASRM), the European Society of Human Reproduction and Embryology (ESHRE), and the International Federation of Fertility Societies (IFFS) to identify plans for fertility treatments.

The present study shows that the fear of COVID-19 in infertile couples was at a moderate level. In addition, it was found that the Fear of COVID-19 Scale score was similar in both genders. Espesito et al. (2020) reported that infertile couples had moderate-to-severe COVID-19 anxiety. Tokgöz et al. (2020) found that anxiety levels in infertile women were high. Peivendi et al. (2020) determined that infertile individuals had a fear of contracting COVID-19. Haham et al. (2021) found that infertile women had high stress levels due to COVID-19. Barra et al. (2020) reported that infertile individuals

displayed high anxiety and depression scores during the pandemic. This may be explained by the anxiety and disappointment of once again losing the opportunity of pregnancy due to postponement of infertility treatments. Moreover, it may also be caused by uncertainties such as not knowing how long the pandemic will continue and the ongoing restrictions.

Comparison of the infertile couples' sociodemographic characteristics with the mean Fear of COVID-19 Scale score showed that there was a significant difference in the score according to employment status. It was found that the Fear of COVID-19 Scale scores were higher in working couples as compared with those in unemployed couples. This can be explained by the concern of not being able to provide the necessary social isolation in a working environment, which increases the risk of COVID-19 transmission.

Comparison of the couples' infertility characteristics and their willingness for treatment with the mean Fear of COVID-19 Scale scores showed that there was a significant difference in the mean Fear of COVID-19 Scale scores according to infertility duration ($p < 0.005$). It was found that fear of COVID-19 increased as the infertility duration increased. Previous studies have found that the psychological effects of infertility are complicated and affected by many variables; therefore, it is imperative that the importance of many factors, such as the duration of infertility and fertility treatment, effects of the diagnosis, relationship of the couples, individual factors, and sociodemographic characteristics, are highlighted. Tokgöz et al. (2020) reported that anxiety levels increase as the duration of infertility increases. Prolongation of the infertility period may be associated with unsuccessful attempts and decreased fertility capacity due to increasing age. Adding

uncertainties due to the pandemic to this long and difficult treatment process can cause individuals to experience anxiety and fear.

It was found that most of the couples were willing to continue with treatment during the pandemic. Peivendi et al. (2020) found that infertile individuals had a high desire to continue with their treatment. It is a remarkable finding that couples wanted to continue with treatment despite their fear of COVID-19. Most infertile couples want to utilize every opportunity to conceive a child, whatever the chances of success. In Turkey, this can be explained by social and cultural values that having children and being a family is paramount.

CONCLUSION AND SUGGESTIONS

The COVID-19 pandemic remains an unprecedented global problem. Appropriate continuation of treatments is important for women who need emergency treatment. In general, reflections of the psychological consequences of COVID-19 on infertile patients should be considered and psychological and social support should be planned.

LIMITATIONS

This study has various limitations. One of them is the lack of a COVID-19 fear scale for infertile individuals. In future studies, it would be useful to develop a scale to measure the fear of Covid 19 in infertile individuals. Another limitation is that this study was conducted with infertile couples who applied to a single hospital in Turkey. Therefore, it is not possible to generalize the results of the study to the whole society. Future researchers who will conduct similar studies may be recommended to conduct research with larger sample groups across the country.

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