Determıne the Level of Infertılıty and the Affectıng Factors: Sample of Turkey

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Abstract

Aim: The aim of this study is to determine the level of infertility and the affecting factors in infertile women.

Method: This descriptive cross-sectional study was carried out in the obstetrics and gynecology outpatient clinic of a university hospital located in a city center in Central Anatolia between January 1, 2022 and July 1, 2022. The study was carried out with 178 infertile women diagnosed with primary infertility and followed for at least one year for infertility. In order to collect the data of the study, the Introductory Information Form prepared by the researchers in line with the literature and the Infertility Influence Scale (IIS) were used. One-Way Anova, Independent Sample T Test and Pearson Correlation test were used to evaluate the data.

Results: It was determined that the total mean score of the women in IIS was 66.46±6.88. Although the women participating in the study had a high IIS score, it was determined that the women's age, education level, employment status, income status, place of residence, duration of infertility, duration of treatment and the treatment method they received did not affect the mean score of IIS (p>0.05). There was no significant correlation between the age of infertile women and their IIS score.

Conclusion: İnfertile women's are highly affected by infertility. Socio-demographic characteristics do not affect the level of being affected by infertility.

Keywords: Infertility; Affected by infertility; Primary infertility; Nursing.

Introduction

World Health Organization; He sees infertility as a health problem that affects all societies and causes many crises, and defines infertility as the absence of pregnancy despite the fact that couples have regular unprotected sexual intercourse for a year or more [1].

Although the incidence of infertility varies between countries in the world, it generally affects 8-12% of couples of reproductive age [2]. However, the incidence of infertility varies between 5-30% due to the difference in development levels between countries [3].

It is thought that 40% of the source of infertility is female, 40% is male and 20% is related to unknown reasons or both genders. In Turkey, which has a patriarchal society structure, although fertility is not reflected in the literature because it is seen as the responsibility of women, female gender is seen as the source and cause of infertility at higher rates [4,5]. Even if infertility is caused by male causes, it is mostly attributed to women because of the complexity of interventional diagnosis-treatment methods, and it is shown as if it is female [6].

Infertility is a condition that affects the personality, life and quality of life of individuals. It is a multidimensional health problem that negatively affects women, especially bio-psycho-socially [7]. When the literature is examined, the woman who was the cause of infertility-induced factors, advanced age, frequency and timing of sexual intercourse, drugs, alcohol and tobacco use, exercise, and lose weight, stress and anxiety, inadequate and unbalanced nutrition, toxins, chemical agents, sexually transmitted diseases, diabetes, hypertension and chronic diseases such as asthma [8,9] was reported. In addition, congenital developmental

factors, anovulation, ovarian problems such as polycystic ovarian syndrome, luteal phase failure, uterine cervix, tubal, vulva and vaginal factors may also cause infertility [10].

For a woman with infertility; lack of ability to give birth, low self-esteem, feeling psychologically incomplete, social isolation, being alone in old age, lack of maternal role in society, etc. means different [11]. The results of many studies also support that women are more affected by infertility than men [12,13]. This level of influence directly affects the treatment compliance process of the woman and the success of the treatment. In a study of infertile women, it was found that women who failed treatment had higher levels of anxiety and depression than women who were successful in treatment [14]. Because women internalize infertility more than men, they are affected more negatively emotionally [15].

Managing the infertility process requires a professional team understanding. Healthcare professional are very important in terms of their duties, responsibilities and roles, as they are closely interested in the patient. The purpose of care in this process; It is to evaluate the physical, psychological and social conditions of couples and to determine the problems and needs in this area and to ensure that they receive appropriate care services [16]. Starting from the diagnosis and treatment process, the healthcare professionals should provide care with holistic and evidence-based approaches by determining which factors affect individuals and to what extent [17].

The aim of this study is to determine the level of infertile women affected by infertility and the factors that affect it.

Methods

Type of Research

The research was conducted in descriptive and cross-sectional type.

Place of Research

Research; It was carried out in the obstetrics clinic of a university hospital located in a city center in Central Anatolia.

Population and Sample of the Research

The population of the study consisted of women who applied to the gynecology outpatient clinic of a university hospital between January 1, 2022 and July 1, 2022 due to infertility problems (n=450), and the sample number was determined as 128 by performing G-power analysis. All infertile women who applied to the outpatient clinic between January 2022 and June 2022 and met the inclusion criteria constituted the sample. The study was completed with 178 infertile women. İnclusion criteria; to be diagnosed with primary infertility, to be followed in the hospital for at least one year, to have no psychiatric disease, to be over 18 years old. Exclusion criteria; to have a physical disability, to be secondary infertile, to be diagnosed with a psychiatric illness.

Collection of Research Data

The data of the study were collected between January 1, 2022 and July 1, 2022 through the Introductory Information Form and the Infertility Influence Scale (IIS).

- **Introductory Information Form:** In the form created by the researchers by scanning the relevant literature [18,19]; There are a total of 18 questions evaluating the sociodemographic and infertility-related characteristics of women.

- **Infertility Influence Scale (IIS):** The scale developed by Akyüz et al. (2008) describes how individuals feel and emotional states regarding infertility [20]. The scale consists of 21 items,

of which 16 are straight and five are reversed. The scale is 4-point Likert-type and positive items are scored as 1: never, 4: always, while negative items (3,10,13,14 and 21st items) are scored in the opposite way. A score between 21 and 84 can be obtained from the scale. The scale does not have a cutoff point and subscales. High scores from the scale indicate that it is highly affected by infertility. The reliability coefficient of the item scores of the scale was found to be 0.93. In this study, the Cronbach Alpha coefficient of the scale was found to be 0.87. The data were collected by the researchers by face-to-face interview method. It took about 20 minutes for a woman to fill out the forms. The data of the study were collected in the training room next to the obstetrics clinic.

Evaluation of Data

The data obtained from the research were transferred to the computer environment and evaluated through the Statistical Package for Social Sciences for Windows (SPSS) 25.00 statistical program. The Kolmogorov-Smirnov normality test was used to check whether the data were normally distributed, and it was determined that all variables were in accordance with the normal distribution. One Way Anova, Independent Sample T Test and Pearson Correlation Test were performed. Significance level was accepted as $p < 0.05$.

Ethical Aspect of Research

Institutional permission and ethical approval from the Non-Interventional Clinical Research Ethics Committee (Ethics Decision No: 40262) were obtained before the study was conducted. The participants were informed about the purpose of the study, that the information obtained would not be used outside of the research and that the confidentiality of their personal information would be protected, and their verbal and written consent was obtained.

Results

The average age of the participants is 30.71±4.71. 36.5% of them are high school graduates, 61.2% are not working, 56.6% of them have income equal to their expenses, 59% live in the city center. It was determined that 67.4% of the women included in the study were infertile for 1 to 5 years, and 71.4% of them had been treated for 1 to 5 years. It was determined that 48.3% of the participants had at least one to intrauterine insemination, and 42.1% had IVF treatment. It was determined that 51.7% of the causes of infertility were female and 37.6% of them were infertility of unknown origin.

In Table 1, the mean scores of infertile women in the IIS scale, min. and max. values are given. Mean IIS score of infertile women was calculated as 66.46±6.88, minimum value 55.00 and maximum value 82.00.

Table-1: Infertility influence scale mean score of infertile women, min. and max. Values (n=178).

Scale	n	$\overline{X}$±SS	Min.	Max.
Infertility Influence Scale (IIS)	178	66.46±6.88	55	82

It was determined that the age, education level, employment status, income status, place of residence, duration of infertility, duration of treatment and treatment method of the women included in the study did not affect the mean score of IIS ($p > 0.05$; Table 2).

Table-2: Distribution of the mean IIS scores of infertile women according to some characteristics (n=178).

	Infertility Influence Scale	Test
	Average±SS	p
Age		
Between 21-34	66.81±7.24	t=3.8451
Between 35-44	65.67±6.11	p=0.051
Educational Status		
Primary school	65.13±6.99	-
Secondary education	65.29±6.32	t=1.0482
High school	66.92±6.30	p=0.373
Undergraduate and above	67.32±7.67	-
Working status		
Not working	66.05±6.89	-
Self-employment	67.70±6.64	t=1.4902
Officer	63.75±4.88	p=0.219
Employee	67.90±7.49	-
Income Status		
Income less than expenses	67.58±6.82	t=1.3812
Income equal to expenses	66.12±7.20	p=0.254
Income more than expenses	64.75±4.05	-
Living Place		
Province	66.49±7.27	t=0.6992
District	66.03±6.49	p=0.499
Town/village	68.80±4.82	-
Infertility Period		
1-2 years	67.42±7.30	-
3-5 years	65.93±6.93	t=1.8252
6-10 years	64.92±5.47	p=0.144
11 years and above	68.75±7.81	-
Treatment Time		
1-2 years	67.10±7.03	-
3-5 years	65.84±6.88	t=0.6142
6-10 years	65.72±6.09	p=0.607
11 years and above	67.63±8.74	-
Cause of Infertility		
Woman	65.76±6.71	-
Man	69.90±9.13	t=1.6212
Man+Woman	69.00±6.78	p=0.186
Unexplained	66.55±6.62	-
Treatment Method		
II*	65.73±6.03	t=1.3601
IVF**	66.82±7.03	p=0.259
Oral Drug Therapy	68.52±9.70	-
*Intrauterine insemination, **In vitro fertilization, 1One Way Anova, 2 Independent Sample T Test		

Pearson Correlation Test was performed in order to determine the relationship between the age of infertile women and their IIS score. There was no statistically significant correlation between the age of the women and their IIS score (p>0.05).

Discussion

It was determined that the mean age of the women included in the study was 30.71±4.71 years. When other studies with infertile women in the literature are examined; In some studies, the average age of the participants was found to be below 35 years of age [18,21], while in some studies, the average age of women was found to be 35 years or older [22]. The reason for this may be the increase in the education level of women, their career plans, and the increasing age at marriage. The increase in the average age of infertile women may cause a decrease in fertility rates.

In this study, it was determined that 51.7% of the causes of infertility were caused by women and 37.6% of them were infertility of unknown origin. Many studies also support this data. In a study conducted in the Netherlands, the rate of female factor infertility was found to be 27% [25], and in a study conducted in India, this rate was found to be 73.3% [21]. The reason for this difference between the rates may be the difference between the sample sizes and the difference in the culture and structure of the society in which the studies were conducted. It should not be ignored that the causes of infertility vary in different societies and even in different populations.

The mean score of the women in the study on the Infertility Influence Scale (IIS) was 66.46±6.88. In the study in which the validity and reliability of the scale was conducted, the mean score of the women's IIS was found to be 45.94±10.9 [20]. In the study conducted by Kocataş and Erbaş (2021), it was determined that the mean IIS score was 38.20±9.6 points and their exposure to infertility was low [19]. Unlike the literature, it can be said that infertile women in our study are more affected by infertility. The reason for this situation may be that the study was conducted in a small city in central Anatolia. In the Anatolian region of the country, giving birth to a child can be considered a status for women. For this reason, women living in this region may be exposed to more pressure by the society. This situation causes women to be more affected by infertility.

It was determined that the age, education and employment status of the women in this study did not affect the mean score of IIS (p>0.05) (Table 2). Similarly, in the study conducted by Kocataş and Erbaş (2021), no significant difference was found between the age, educational status and employment status of women and their status of being affected by infertility [19]. However, there are studies in the literature that do not support the findings of the study. There are studies showing that unemployed women are more affected by infertility. For example; Levent and Gölbaşı (2021), in their study on infertile women, found that unemployed women were more affected by infertility, anxiety, hopelessness, depression, etc. It has been found that he experiences emotions more [26]. More studies are needed to show the effect of sociodemographic data on the level of being affected by infertility.

In our study, it was concluded that the place where women live (village, city) did not affect the mean score of the scale of being affected by infertility (Table 2). In the literature, there are studies showing that living in the countryside or in the city affects the level of being affected by infertility. In the study of Donkor

and Sandall (2007), it was determined that infertile women living in the city were more affected by infertility [27], and in the study of Sis Çelik and Kırca (2018), women living in rural areas were more affected by infertility [28]. The reason why these results are so different may be that factors other than the place where the woman lives also affect the effect of infertility.

It was determined that the infertility period of the woman and the treatment method she chose for infertility did not affect the mean IIS score (Table 2). However, it has been concluded in the literature that the duration of infertility and the type of treatment applied affect the psychological level of infertility, and that women who receive hormone therapy are more affected by infertility [29]. Although our study findings are inconsistent with the literature, in fact, as the number of child-free days for a woman increases, this may lead to an increase in negative thoughts in women and a decrease in hopes of becoming pregnant.

Conclusion

Although women who participated in the study and had infertility problems were highly affected by infertility, there was no significant relationship between education level, employment status, income status, place of residence, duration of infertility, duration of treatment and treatment received and infertility effect scale. However, in the literature, the opposite is true of this study. For a woman, not being able to fulfill her reproductive function and not being a parent causes feelings of guilt and deterioration of relations between spouses. In order to accurately determine the level of influence of infertile women on infertility and the factors affecting it, factor detection should be carried out by evaluating couples individually and in groups from the very beginning of the diagnosis and treatment process. New solution-oriented approaches can contribute to the infertility process.

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