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Araştırma Makalesi/ Research Article

The Determination of the Relationship Social Stigma and Infertility Distress in Infertile Women

İnfertil Kadınlarda Sosyal Damgalanma ile İnfertiliteden Etkilenme Arasındaki İlişkinin İncelenmesi

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ABSTRACT

Objective: This research was conducted to identify the relationship between social stigma and infertility distress in infertile women.

Method: Designed as descriptive research, the study had a sample comprised of 166 infertile women applying in January-April 2022.

Results: Means of participant women's IDS and ISS scores were calculated respectively as 46.33±15.22 and 74.22±31.82 points. It was discerned that women's IDS scores had statistically significant positive relationships with scores obtained by them from the ISS and its sub-scales ($p<0.01$). As the duration of being infertile increased, women's infertility distress levels and feelings of stigma also increased (successively $p=0.000$, $p=0.001$). As the age of menarche increased, women's infertility distress levels and feelings of stigma decreased (consecutively $p=0.029$, $p=0.007$).

Conclusion: Lastly, women had medium-level infertility distress and felt moderately stigmatized. Education and counseling can be provided to women and their partners about the psychological effects of infertility.

Keywords: Infertility, Social stigma, distress, women.

ÖZ

Amaç: Bu araştırma, infertil kadınlarda sosyal damgalanma ile infertiliteden etkilenme arasındaki ilişkiyi belirlemek amacıyla yapıldı.

Yöntem: Tanımlayıcı tipte olan araştırmanın örneklemini Ocak- Nisan 2022 tarihleri arasında 166 infertil kadın oluşturdu.

Bulgular: Araştırmaya katılan kadınların İEÖ puan ortalaması 46.33±15.22, İDÖ toplam puan ortalaması 74.22±31.82 olarak bulundu. Kadınların İEÖ ile İDÖ toplam puanları ve İDÖ alt boyutları arasında yüksek düzeylerde pozitif yönlü anlamlı bir ilişki belirlendi ($p<0.01$). Kadınların infertil olma süresi arttıkça infertiliteden etkilenmesi ve damgalanma hissi artmaktaydı (sırasıyla $p=0.000$, $p=0.001$). Kadınların menarş yaşı arttıkça infertiliteden etkilenmesi ve damgalanma hissi azalmaktaydı (sırasıyla $p=0.029$, $p=0.007$).

Sonuç: Sonuç olarak, kadınların infertiliteden orta düzeyde etkilendiği ve orta düzeyde damgalanma hissettiği belirlendi. Kadınlara ve eşlerine infertilitenin psikolojik etkileri konusunda eğitim ve danışmanlık yapılabilir.

Anahtar kelimeler: İnfertilite, sosyal damgalanma, sıkıntı, kadın

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Introduction

Infertility is defined as the failure to have a pregnancy, although couples willing to have children have sexual intercourse regularly for a minimum of one year without using any contraceptive method (Deyhoul et.al., 2017). The experience of infertility or the inability to have a child is a global health problem that is as old as human history (Ofosu-Budu and Hanninen, 2020). In certain studies, it was indicated that 8%-12% of couples across the world suffered from infertility (Kumar and Singh, 2015; Ofosu-Budu and Hanninen, 2020). In Türkiye, this rate ranges from 10% to 20% (Kaya and Oskay, 2020).

Having a child is a crucial goal for couples in most societies, and thus, infertility is a severe condition that leads to stress in couples in most cultures (Öztürk et al.,2021). Even if infertility is not a life-threatening condition, it becomes a social problem as stress experienced due to infertility affects the individual, family, and society (Tural and Sis-Çelik, 2019). As having a child is viewed as a sign of the woman's societal and social status particularly in traditional societies, the majority of women failing to fulfill this role are stigmatized and exposed to negative remarks (Daibes et. al.,2018; Kaya and Oskay, 2020). It is discerned that the failure to have a child affected both members of a couple; nevertheless, the woman felt more stress and social pressure than the man, and as a consequence of this situation, the woman had psychological problems (Tural and Sis-Çelik, 2019). The reason for the woman to experience more psychological problems is that, even when infertility stems from the man, the woman is more exposed to invasive diagnosis and therapy methods and public stigma (Shahraki et al., 2019; Tural and Sis-Çelik, 2019). In traditional societies, infertility is delineated as a woman's problem due to the ideal male perception. The reason for the failure to have a child is viewed as the woman, and thus, the ideal male form is protected and the fertility is advocated as the defining feature of masculinity (Hanna and Gough, 2020). In a qualitative study, it was identified that the women also upheld this position, and even in the case of male infertility, women stated that infertility stemmed from the woman (Dierickx et al.,2018). To put it in a nutshell, the infertility-related stigma caused by societal attitudes and biases is felt more by the women (Oskan-Fırat and Hotun-Şahin, 2022).

As it is discerned, women experience more psychosocial problems due to infertility. However, upon the review of the relevant literature, it is identified that studies examined solely the effect of infertility on women's psychological problems such as stress, anxiety, and depression. While developing strategies for the woman's health and planning care services to be offered to infertile women, the relationship between women's infertility distress and the social stigma should be identified. Therefore, purpose this research to find out the relationship between social stigma, infertility distress in infertile women.

Methods

Type of Research

This research was designed as a descriptive study

The Location and Time of the Study

The research was the women who applied in January-April 2022 to the Gynecology and Obstetrics Clinics of a university hospital in eastern Türkiye and were diagnosed with primary or secondary infertility.

The Population and Sample of the Study

The sample size for the research was calculated as 160 with an effect size of 0.57, a margin of error of 0.05, a confidence interval of 95%, and a statistical power of 95%. The research was finalized with 166 infertile women. Women who could have verbal communication, were literate, were diagnosed with primary or secondary infertility, and volunteered to participate in the study were included in the research.

Data Collection Tools

The research data were collected with the Personal Information Form, the Infertility Stigma Scale, and the Infertility Distress Scale.

The Personal Information Form

This form prepared by researchers in light of the review of the relevant literature contained 17 questions designed to find out about socio-demographic and obstetric characteristics of infertile women who were included in this research (age, employment status, family type, marriage duration, infertility type, and so on) (Altıparmak and Aksoy-Derya, 2018; Küçükkaya and Kılıç, 2022; Oskan-Fırat and Hotun-Şahin, 2022; Yılmaz and Şahin, 2020).

The Infertility Stigma Scale (ISS)

The ISS was developed in 2014 by Fu et al., and in 2019, Capık et al. performed the validity and reliability study for the ISS in Turkish. Designed as a five-point Likert-type scale, the ISS has 27 items and four sub-scales. The Self-Devaluation Sub-Scale has seven items (items 1, 2, 3, 4, 5, 6, 7), the

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Social Withdrawal Sub-Scale is comprised of five items (items 8, 9, 10, 11, 12), the Public Stigma Sub-Scale is composed of nine items (items 13, 14, 15, 16, 17, 18, 19, 20, 21), and the Family Stigma Sub-Scale is made up of six items (items 22, 23, 24, 25, 26, 27). The minimum and maximum scores to be obtained from the overall ISS are respectively 27 and 135 points. The ISS has no reverse-coded item. A high total ISS score shows that the woman feels high-level stigma. Cronbach's alpha coefficient was 0.93 for the ISS (Çapık et al.,2019; Fu et. al., 2015). In the current research, Cronbach's alpha coefficient was calculated as 0.96 for the ISS.

The Infertility Distress Scale (IDS)

The IDS developed by Akyüz et al. (2008) shows how the individual feels about infertility and defines the individual's emotional state with respect to infertility. The IDS has 21 items (16 straight-coded and 5 reverse-coded items). The IDS is a four-point Likert-type scale, and its straight-coded items are scored from 1 to 4 points (1: Never, 4: Always) whereas its reverse-coded items (items 3, 10, 13, 14, 21) are scored in the opposite direction. The minimum and maximum scores to be obtained from the IDS are successively 21 and 84 points. The IDS has no cut-off point and no sub-scale. A high score obtained by a respondent from the IDS indicates that the respondent has high-level infertility distress. Cronbach's alpha coefficient was identified as 0.93 for the IDS (Akyüz et al., 2008). In the current research, Cronbach's alpha coefficient was calculated as 0.93 for the IDS.

Data Collection

Researchers collected the research data with the face-to-face interview method from infertile women who agreed to participate in the research. The data collection process lasted approximately 10-15 minutes per woman.

Data Analysis

The research data were coded and evaluated with the Statistical Package for Social Science-SPSS (v. 23.0). In the research, descriptive statistics such as number, percentage, mean, standard deviation, median, minimum, and maximum were used in the evaluation of sociodemographic data. Skewness and kurtosis values were utilized to check whether the research data were normally distributed. The independent samples t-test, one-way analysis of variance (ANOVA), and Tukey's HSD test were used as parametric tests in the analysis of normally distributed data. Relationships between scale scores were evaluated with Pearson's correlation test. Cronbach's alpha coefficient was calculated in reliability tests for scales used in the research. The research results were evaluated at a confidence interval of 95% and a statistical significance level of 5% ($p<0.05$).

Ethical Considerations

To conduct the research, the ethical endorsement was obtained from the Health Sciences Scientific Research and Publications Ethics Committee of a local university (No: 2022/ 02-46). Also, before the research, permission was received from the university hospital of the relevant province in Türkiye (No: E-19003918-100-155864). Women were informed about the purpose of the research at the beginning of the survey form, and next, women who volunteered to participate in the research were asked to fill in the survey form. All subjects gave written informed consent in accordance with the Declaration of Helsinki.

Results

Table 1 displayed the breakdown of participant women's socio-demographic characteristics. The mean age of infertile women was 34.20±5.60 years, the mean age of their spouses was 37.61±5.65 years, and the mean marriage duration was 7.68±4.68 years. Besides, it was found that, of all participant infertile women, 36.7% were high school graduates, 69.9% were not working, 49.4% had spouses who were university graduates, 96.4% had working spouses, 90.4% had nuclear families, 88% were residing in the province center, and 51.8% had an income equaling their expenses.

Table 2 exhibited the breakdown of women's certain infertility-related characteristics. The mean duration of being infertile was 4.39±2.89 years, the mean age of menarche was 13.01±1.53 years, and the mean number of children was 0.19±0.44 for the participant women. Also, it was discerned that, of all participant infertile women, 81.9% had primary infertility, 97.6% were receiving infertility treatment, and 51.2% of the women who were receiving infertility treatment had in vitro fertilization.

Table 3 indicated the breakdown of scores obtained by infertile women from the IDS, the ISS, and ISS sub-scales. It was found that the mean of infertile women's IDS scores was 46.33±15.22 points whilst the means of scores obtained by them from the ISS and its Self-Devaluation Sub-Scale, Social Withdrawal Sub-Scale, Public Stigma Sub-Scale, and Family Stigma Sub-Scale were consecutively 74.22±31.82, 19.00±9.71, 14.90±5.09, 23.10±10.98, and 17.21±9.10 points. In

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this regard, infertile women had medium-level infertility distress and felt moderately stigmatized.

Table 1. The breakdown of infertile women's socio-demographic characteristics (n=166)

Variables	X±SD	Min.-Max.
Age (year)	34.20±5.60	22-48
Spouse's age (year)	37.61±5.65	26-54
Marriage duration (year)	7.68±4.68	1-25
	n	**%**
Education level		
Primary school	54	32.5
High school	61	36.7
University	51	30.8
Employment status		
Working	50	30.1
Not working	116	69.9
Spouse's education level		
Primary school	23	13.9
High school	61	36.7
University	82	49.4
Spouse's employment status		
Working	160	96.4
Not working	6	3.6
Family type		
Nuclear family	150	90.4
Extended family	16	9.6
Place of residence		
Province center	146	88.0
District	13	7.8
Village	7	4.2
Perceived income level		
Income below expenses	36	21.7
Income above expenses	44	26.5
Income equaling expenses	86	51.8

X±SD: Mean ± Standard Deviation; Min.-Max.: Minimum-Maximum; n: Number; %: Percentage

Table 4 showed the comparison of infertile women's mean scale scores as per their socio-demographic and infertility-related characteristics. As per the variables of the woman's education level, spouse's education level, and income level, statistically significant differences were identified in means of infertile women's IDS and ISS scores ($p<0.01$).

Table 2. The breakdown of women's certain infertility-related characteristics (n=166)

Variables	X±SD	Min.-Max.
Duration of being infertile (year)	4.39±2.89	1-14
Age of menarche (year)	13.01±1.53	9-17
Number of children	0.19±0.44	0-2
	n	**%**
Infertility type		
Primary infertility	136	81.9
Secondary infertility	30	18.1
Status of receiving infertility treatment		
Yes	162	97.6
No	4	2.4
Infertility treatment method *		
In vitro fertilization	85	51.2
İntrauterine insemination	73	44.0
Others (Gamete intrafallopian transfer, embriyo transferi)	4	2.4

X±SD: Mean ± Standard Deviation; Min.-Max.: Minimum-Maximum; n: Number; %: Percentage
** Treatment methods used by women receiving infertility treatment (n=162)*

Table 3. The breakdown of scores obtained by infertile women from the IDS, the ISS, and ISS sub-scales (n=166)

	Min.-Max.	Median	X±SD
IDS	22-83	47	46.33±15.22
ISS	27-135	73	74.22±31.82
Self-Devaluation Sub-Scale	7-35	19	19.00±9.71
Social Withdrawal Sub-Scale	5-25	16	14.90±5.09
Public Stigma Sub-Scale	9-45	23	23.10±10.98
Family Stigma Sub-Scale	6-30	19	17.21±9.10

Min.-Max.: Minimum-Maximum; X±SD: Mean ± Standard Deviation

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Table 4. The comparison of infertile women's mean scale scores as per their socio-demographic and infertility-related characteristics (n=166)

Characteristics		IDS		ISS	
		X±SD	Test; p	X±SD	Test; p
Education level	Primary school [x]	51.90±15.15	F=7.149[a]	84.96±31.38	F=5.925[a]
	High school [y]	45.77±16.17	**0.001**	73.01±33.12	**0.003**
	University [z]	41.11±12.08	**x>z***	64.31±27.48	**x>z***
Employment status	Working	43.02±15.41	t=1.857[b]	68.88±31.12	t=1.426[b]
	Not working	47.76±14.98	0.065	76.53±31.97	0.156
Spouse's education level	Primary school [x]	50.17±14.07	F=5.066[a]	84.13±31.72	F=6.690[a]
	High school [y]	49.88±15.61	**0.007**	82.36±31.70	**0.002**
	University [z]	42.62±14.49	**x,y>z***	65.40±29.81	**x,y>z***
Spouse's employment status	Working	46.31±15.43	t=-0.142[b]	74.20±32.21	t=-0.071[b]
	Not working	46.83±8.35	0.891	74.83±20.70	0.946
Family type	Nuclear family	46.83±15.61	t=1.807[b]	75.58±31.92	t=1.832[b]
	Extended family	41.68±10.18	0.084	61.56±28.77	0.083
Place of residence	Province center	46.17±15.60	F=0.104[a]	74.72±32.34	F=0.300[a]
	District	48.23±14.16	0.898	67.69±26.90	0.741
	Village	46.14±8.98		76.00±31.82	
Income level	Income below expenses [x]	50.05±12.50	F=9.378[a]	73.47±27.14	F=9.311[a]
	Income above expenses [y]	52.36±14.03	**0.000**	90.47±27.01	**0.000**
	Income equaling expenses [z]	41.69±15.47	**x,y>z***	66.23±33.04	**y>x,z ***
Infertility type	Primary infertility	46.30±15.46	t=-0.064[b]	73.83±31.90	t=-0.336[b]
	Secondary infertility	46.50±14.34	0.949	76.00±31.92	0.737
Status of receiving infertility treatment	Yes	46.45±15.34	t=0.642[b]	74.49±32.06	t=0.681[b]
	No	41.50±8.54	0.522	63.50±19.46	0.497
Infertility treatment method	In vitro fertilization	45.51±16.99	F=2.183[a]	72.57±34.36	F=0.902[a]
	Intrauterine insemination	48.27±13.15	0.116	77.53±29.21	0.408
	Others (Gamete intrafallopian transfer, embriyo transferi)	33.25±7.76		59.75±31.63	
Age (year)		r=0.017**; p=0.826		r=-0.013**; p=0.869	
Spouse's age (year)		r= 0.018**; p=0.815		r= -0.063**; p=0.421	
Marriage duration (year)		r=0.095**; p=0.224		r=0.066**; p=0.399	
Duration of being infertile (year)		r=0.293**; p=**0.000**		r=0.246**; p=**0.001**	
Age of menarche		r=-0.170**; p=**0.029**		r=-0.208**; p=**0.007**	
Number of children		r=-0.067**; p=0.394		r=-0.057**; p=0.470	

X±SD: Mean ± Standard Deviation

*a: One-way analysis of variance (ANOVA); b: Independent samples t-test; x,y,z: The indication of which group has a statistically significant difference from other groups as per the Tamhane's T2 test; *Tukey's HSD test; ** The Pearson's correlation coefficient*

In this context, women who were primary school graduates had higher levels of infertility distress and felt more stigmatized than women who were university graduates, next, women whose spouses were primary school graduates and women whose spouses were high school graduates had higher levels of infertility distress and felt more stigmatized than women whose spouses were university graduates, and also, women who had incomes above their expenses had higher levels of infertility distress and felt more stigmatized than women who had incomes equaling their expenses. As the duration of

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being infertile increased, women's infertility distress levels and feelings of stigma also increased (successively p=0.000, p=0.001). On the other hand, as the age of menarche increased, women's infertility distress levels and feelings of stigma decreased (consecutively p=0.029, p=0.007).

Table 5 presented the coefficients of correlations between infertile women's IDS scores and scores obtained by them from the ISS and its sub-scales. It was discerned that women's IDS scores had statistically significant strong positive relationships with scores obtained by them from the ISS and its sub-scales (p<0.01). In this respect, as women's overall stigma, self-devaluation, social withdrawal, public stigma, and family stigma levels increased, their infertility distress levels also increased.

Discussion

Infertility is a stressful condition for couples who are willing to have children and a circumstance that wears out the relationship between the two members of a couple. For both spouses, it is a life crisis that is psychologically threatening, emotionally stressful, financially costly, and due to the procedures used for diagnosis and treatment, is complicated. It is discerned that, especially in traditional societies, the woman's role in the family and society is addressed in association with fertility and child care. The woman, whose primary adulthood role at the societal level is viewed as motherhood, has difficulty in going beyond the thought, "The family contains a child" (Sen and Sevil, 2016). The results of this study, which was performed to analyze the relationship between social stigma and infertility distress in infertile women, were discussed alongside the relevant literature.

It is stated that stigma with respect to infertility is interpreted not as a deficiency or defect but as failing to comply with the rules of the group or staying out of the group. It is asserted that women began to have difficulty in realizing their other skills and biological infertility turned into an "inadequacy" in the social sense (Sen and Sevil, 2016). In the current research, it was found that the mean of women's ISS scores was 74.22±31.82 points and women felt moderately stigmatized. Upon the review of the relevant literature, it was discerned that the study by Yılmaz and Kavak (2019) found the mean ISS score as 60.79±2.03 points, the study by Küçükkaya and Kılıç (2022) identified the mean ISS score as 52.80±23.44 points, and the study by Kaya (2018) found the mean ISS score as 47.54 ±18.60 points, and thus, infertile women had medium-level stigma (Kaya, 2018; Küçükkaya and Kılıç, 2022; Yılmaz and Kavak, 2019). In the study by Donkor and Sandall, it was stated that 23% of 615 infertile women were moderately stigmatized whilst 41% of them were exposed to serious stigma (Donkor and Sandall, 2007). In the study performed by Missmer et al. (2011) with the participation of 1350 infertile women, it was identified that 49% of the women were stigmatized (Missmer et al.,2011). In the study conducted by Sophia and Punitha (2017) with the participation of infertile women and men, it was asserted that 62% of the participants were confronted with societal stigma (Sophia and Punitha, 2017). In the study carried out by Ergin et al. (2018) with the participation of 380 infertile women and 218 infertile men, it was stated that 38% of the participants had a social exclusion perception, and the social exclusion perception was more clearly identified especially in female partners (43% of the women, 29% of the men) (Ergin et.al., 2018). In the study by Yeshua (2017), it was identified that, in Israeli society, having a child was very important, and infertile women were highly stigmatized (Yeshua, 2017).

Our findings are consistent with the relevant literature, and qualitative and quantitative studies performed on the stigmatization with the participation of infertile women show that infertile women were exposed to stigma at varying levels and percentages. Especially in pronatalist societies, motherhood is viewed as one of the basic roles of womanhood. Infertile women failing to meet this expectation are exposed to stigma, and stigma leads to social isolation by causing the woman to have feelings of worthlessness, inadequacy, and embarrassment.

Moreover, in the current research, means of women's ISS Self-Devaluation Sub-Scale, Social Withdrawal Sub-Scale, Public Stigma Sub-Scale, and Family Stigma Sub-Scale scores were identified consecutively as 19.00±9.71, 14.90±5.09, 23.10±10.98, and 17.21±9.10 points. Thus, it is discerned that women obtained the highest mean score from the Public Stigma Sub-Scale of the ISS. In Turkish society, concepts of "being a woman" and "being a mother" are intertwined and cannot be easily separated from each other. In a similar vein to our findings, the study by Yilmaz and Kavak (2019) and the study by Küçükkaya and Kılıç (2022) also found that, among dimensions of infertility stigma, the public stigma was the one through which women were most affected (Küçükkaya and Kılıç, 2022;

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Yılmaz and Kavak, 2019). In the study by Dhont, it was stated that certain participants asserted that they would be able to cope with infertility if they did not suffer public stigma (Dhont, 2011). In the study by Anokye et al. (2017), it was put forward that social effects on infertile couples included exclusion, verbal and physical abuse, divorce, and stigma (Anokye et al., 2017). In the study by Karaca and Ünsal (2015), it was found that social pressure and stigma were highly prevalent among 118 infertile women (Karaca and Ünsal, 2015). It can be stated that infertile women more intensely felt the effects that were based on gender roles.

Women who reported that they were negatively affected due to being defined as infertile attributed negative meanings to this condition, such as crying, feeling sad, getting bored, being in low spirits, being hopeless, being defective, having a draining experience, feeling empty, not accepting infertility, and being stigmatized (Sen and Sevil, 2016). In our research, it was discerned that the mean of women's IDS scores was 46.33±15.22 points, and hence, the women had medium-level infertility distress. The finding of our research is in a similar vein to the findings of other studies in the relevant literature that were performed by using the IDS (Akyüz et al.,2008; Arslan-Özkan et al.,2014; Dağ et al., 2015; Missmer et al., 2011; Sen and Sevil, 2016; Sophia and Punitha, 2017; Yılmaz and Kavak, 2019). In light of these results, it can be considered that the reason for women to experience the negative effects of infertility more intensely than men was the denomination of the woman as the source of infertility by society, and also, the imposition of responsibility and pressure on the woman's shoulders continued.

Besides, in our research, as per the variables of women's education level, spouse's education level, and income level, statistically significant differences were identified in the means of participant women's IDS and ISS scores ($p<0.01$). In this regard, women who were primary school graduates had higher levels of infertility distress and felt more stigmatized than women who were university graduates, next, women whose spouses were primary school graduates and women whose spouses were high school graduates had higher levels of infertility distress and felt more stigmatized than women whose spouses were university graduates, and also, women who had incomes above their expenses had higher levels of infertility distress and felt more stigmatized than women who had incomes equaling their expenses. In the study by Ünal et al., it was found that women who were primary school graduates had higher levels of infertility distress than women who were high school graduates and women who were university graduates, and as the women's education levels increased, their infertility distress levels decreased (Ünal et al., 2010). In the research by Kamışlı et al. (2021), it was identified that, as infertile women's education levels increased, women experienced emotional states, such as depression, anxiety, and hopelessness, less (Kamışlı et al., 2021). In the study by Zorlu and Erbaş (2021), it was discerned that, as women's education levels increased, means of their IDS scores decreased (Zorlu and Erbaş, 2021). In the qualitative study performed by Nahar and Geest (2014) with the participation of infertile women, it was found that women who had high levels of education and resided in urban areas were less exposed to stigmatization (Nahar and van der Geest, 2014). According to these results, to resist or cope with the stigmatizing tendencies of infertility, women with higher levels of education may have wanted to exist in society as an individual beyond being just a mother.

Factors such as the responsibility imposed on the woman for fertility, social pressure exerted by family and society on the woman, the worry that the marriage would come to an end, the long duration of the infertility treatment process, and the uncertainty about the outcome of the treatment process make the woman feel hopeless. Having a high level of hope is quite important for a woman to cope with the infertility problem. In our research, as the duration of being infertile increased, women's infertility distress levels and feelings of stigma also increased. In the study by Nuri Tural and Sis Çelik, it was identified that the duration of being infertile affected means of women's IDS scores, and women who were infertile for a long period had lower levels of infertility distress than women who were infertile for a short period (Öztürk et al., 2021). It can be considered that, as the duration of being infertile increased, women's negative thoughts increased and their hopes of getting pregnant decreased, and thus, being infertile made the woman have more psychological distress.

Menarche is accepted as a turning point of adolescence that indicates the start of the reproductive cycle for women. On the other hand, as the limited number of present studies produced contradictory results on the topic, it is unclear whether there is a relationship between the age of menarche and fertility. In our research, it was

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discerned that, as the age of menarche increased, women's infertility distress levels and feelings of stigma decreased. In a study conducted to identify whether the age of menarche had a relationship with the functional ovarian reserve in later periods of life, age of menarche was found to have a statistically significant effect on the risk of diminished functional ovarian reserve in later periods of infertile women's lives. It was put forward that the start of menarche might be associated with the feature of the follicular phase and/or the follicle growth rate and this, in turn, may have led to the emergence of the risk of diminished functional ovarian reserve in later periods of life (Weghofer et al., 2013).

Stigma is a psychological attitude that is connected with a series of negative consequences. Having a high-level infertility-based stigma is associated with an increase in infertility-related psychological distress and a decrease in social support and social status. In our research, it was found that women's IDS scores had statistically significant positive relationships with scores obtained by them from the ISS and its sub-scales. According to this result, as women's overall stigma, self-devaluation, social withdrawal, public stigma, and family stigma levels increased, their infertility distress levels also increased. In the study by Küçükkaya and Kılıç (2022), it was identified that, as the infertility-based stigma increased, infertile individuals' psychological distress levels also increased (Küçükkaya and Kılıç,2022). In the study by Remennick, it was discerned that stigmatization could decrease an infertile woman's self-esteem and cause her to desocialize (Remennick, 2000). In the study by Cook and Dickens, it was stated that human beings having or experiencing the fear of stigmatization avoided having the healthcare that would be beneficial to them (Cook and Dickens, 2014). In a study performed in Ghana, it was put forward that infertile women experienced several emotional challenges such as loneliness, anxiety, depression, lack of concentration, worry, and a decrease in sexual satisfaction (Donkor and Sandall, 2007).

Conclusion and Recommendations

In our research, it was identified that women had medium-level infertility distress and felt moderately stigmatized. Besides, as women's overall stigma, self-devaluation, social withdrawal, public stigma, and family stigma levels increased, their infertility distress levels increased. Considering that giving birth to a child is accepted as one of the most significant roles of women in Turkish society, it is an expected situation that women diagnosed with infertility will have high-level anxiety, stress, depression, and feelings of loneliness, introversion, and public stigma. In light of these results, to minimize the negative effects of infertility on infertile women in the diagnosis and treatment processes, it is recommended that health workers, particularly nurses and midwives, offer the best training and consultancy services aimed at promoting social support systems, decreasing public interventions, and developing methods to cope with stress. Addressing psychological and stigmatization problems in infertility treatment phases and developing appropriate nursing and midwifery interventions will provide women with the opportunity to experience this process more healthily and will also promote the success of treatment.

Research Limitations

This research has certain limitations. The primary limitation of the research is that it was performed solely in a hospital located in the center of a province in Türkiye. Other limitations are that only the women who were literate, could have verbal communication, and volunteered to take part in the study were included in the research, and also, answers given to questions in the data collection form were based on women's statements.

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What did the study add to the literature?

- As a result of this research, it was found that women experience more stigma as the duration of infertility increases.
- It was determined that the women participating in the study were moderately affected by infertility and felt moderate stigma.

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