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RESEARCH ARTICLE / ARAŞTIRMA YAZISI

Examining the Levels of Distress Tolerance and Intolerance of Uncertainty for Women Receiving Infertility Treatment

İnfertilite Tedavisi Gören Kadınların Sıkıntıyı Tolere Etme ile Belirsizliğe Tahammülsüzlük Düzeylerinin İncelenmesi

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Abstract:

During infertility treatment, prospective mothers are often confronted with negative experiences such as stress, distress, anxiety, depression, and uncertainty. It is believed that the ability to tolerate distress and endure the uncertainties caused by treatment plays a crucial role in achieving successful outcomes. Therefore, the aim of this study is to examine the levels of intolerance of uncertainty and distress tolerance in women undergoing infertility treatment. This is a cross-sectional, comparative study conducted through purposive sampling. A total of 287 women receiving infertility treatment participated in the study. The Intolerance of Uncertainty Scale and the Distress Tolerance Scale were used in data collection. The results of the study revealed that as age increases, the level of intolerance of uncertainty increases ($p<0,001$). Additionally, a significant difference was found between the women's level of education and their distress tolerance levels ($p<0,05$). The research also identified a low but statistically significant positive correlation between the Regulation subdimension of Distress Tolerance and the Prospective Anxiety subdimension of Intolerance of Uncertainty ($p<0.05$). Since infertility is a difficult, exhausting, stressful, and uncertain treatment process, couples and especially women experience a heightened sense of "uncertainty." Consequently, it can be concluded that as women age and are unable to experience motherhood, their intolerance toward the uncertain process increases with each treatment attempt.

Keywords: Infertility; Distress tolerance; Intolerance of uncertainty; In vitro fertilization (IVF) treatment.

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Öz:

İnfertilite tedavisi sırasında anne adayları stres, sıkıntı, kaygı, depresyon ve belirsizlik gibi olumsuz deneyimlerle karşı karşıya kalmaktadır. İnfertilite tedavisi sırasında sıkıntıyı tolere edebilmenin ve tedavinin neden olduğu belirsizliklere katlanmanın tedavinin başarılı bir şekilde sonuçlanması için büyük önem taşıdığına inanılmaktadır. Bu nedenle, bu çalışmanın amacı infertilite tedavisi gören kadınlarda belirsizliğe tahammülsüzlük ve sıkıntıyı tolere etme düzeyini incelemektir. Bu, amaçlı örnekleme ile kesitsel, karşılaştırmalı bir çalışmadır. Çalışmaya infertilite tedavisi gören 287 kadın dahil edilmiştir. Çalışmada Belirsizliğe Tahammülsüzlük Ölçeği ve Sıkıntıya Tolerans Ölçeği kullanılmıştır. Bu çalışma sonucunda yaş arttıkça belirsizliğe tahammülsüzlük düzeyinin arttığı ($p<0,001$) ve kadınların eğitim düzeyleri ile sıkıntıya tahammül düzeyleri arasında anlamlı bir fark olduğu tespit edilmiştir ($p<0,05$). Araştırmada, Sıkıntıya Tolerans alt boyutlarından Düzenleme alt boyutu ile Belirsizliğe Tahammülsüzlük alt boyutlarından İleriye Dönük Kaygı alt boyutu arasında pozitif yönde düşük düzeyde anlamlı bir ilişki olduğu tespit edilmiştir ($p<0,05$). İnfertilite zor, yorucu, stresli ve garantisi olmayan bir tedavi süreci olduğu için çiftler ve özellikle kadınlar "belirsizliği" yoğun olarak hissetmektedir. Sonuç olarak kadınlarda ilerleyen yaşla birlikte annelik yaşanamadığı için belirsiz sürece tahammülsüzlüğün her denemede arttığı söylenebilir.

Anahtar Kelimeler: İnfertilite; Sıkıntıyı tolere etme; Belirsizliğe tahammülsüzlük; Tüp bebek tedavisi.

Introduction

Infertility, which has become increasingly prevalent in recent years and affects approximately 20% of married couples, can be defined as the inability to conceive after one year of unprotected sexual intercourse (Mirblouk et al., 2015). Infertility, presenting as a sudden and unexpected life crisis, is a condition that is unforeseen, potentially unexplained, takes a long time to diagnose, causes intense stress, and challenges coping mechanisms (Taşcı et al., 2008). According to estimates by the World Health Organization, infertility affects between 60 to 80 million couples worldwide (Kara et al., 2016). Globally, the infertility rate is estimated to range between 8–12%, while in Turkey, this rate is between 10–20% among married couples (Taşcı et al., 2008). In other words, approximately one in ten women globally, and one in six married women in Turkey, experience this issue (Topdemir Koçyiğit, 2012).

The concept of uncertainty is defined as not knowing the outcome of an event or a particular behavior (Sarı, 2007), and it is generally associated with feelings of worry, anxiety, and fear. This is because, by nature, humans desire to be certain about their future and to secure their tomorrow. Therefore, if there is uncertainty in the person's life, this situation creates negative effects on both psychological well-being and subjective well-being. When the literature is examined, it is observed that these effects are generally defined by the concept of intolerance (Saricam et al., 2014). Intolerance of uncertainty is described as the tendency to respond negatively, emotionally, cognitively, and behaviorally to uncertain situations and events (Buhr & Dugas, 2006). Uncertainty is one of the primary concerns for infertile women. Various factors contributing to uncertainty, especially following a failed in vitro fertilization (IVF) attempt, lead to anxiety until the next treatment cycle, and this negative emotional state can have psychoneurological effects on the infertile woman.

Infertility treatment is a demanding process that lacks a guaranteed outcome and consumes a significant amount of time, as well as imposing substantial economic, psychological, and physical burdens on the individual. After an unsuccessful IVF attempt, women often experience intense emotional distress and relational changes, accompanied by profound feelings of loss and grief regarding their hope of conception. During this period, women are overwhelmed by uncertainty, distress, guilt, and a strong desire to become pregnant (Kim et al., 2014). Infertility may lead to feelings of guilt, aggression, anxiety, obsession, and psychosomatic complaints. The stressful experience of infertility is associated with a wide range of existential, physical, emotional, interpersonal, and marital stressors. The infertility experience may result in psychological issues, divorce, and economic problems for couples (Solati et al., 2016).

In individuals undergoing infertility treatment, increasing levels of psychological distress, depression, and anxiety may affect hormonal and immunological functioning, which in turn continues to be a concern by negatively impacting the success rates of in vitro fertilization (IVF) treatment. IVF failure can also lead to psychological distress in the subsequent period (Pash et al., 2012). In a meta-analysis conducted by Matthiesen et al. (2011), which included 31 longitudinal studies, psychological distress levels in women were examined before and after IVF treatment. It was found that anxiety and depression levels increased by 10% to 25% in women whose IVF treatment had failed. When people face difficulties in life, they attempt to alleviate their distress by employing various coping strategies. However, not every individual can cope with or tolerate distress in the same way. Distress tolerance, which can be regarded as a form of psychological resilience, is generally defined as the ability to endure and experience negative psychological states (Akın et al., 2014). During infertility treatment, the ability to tolerate this distressing condition and to endure the uncertainties inherent in the treatment process is considered to be of great importance for a successful outcome. In this context, the present study aims to determine the levels of intolerance of uncertainty and distress tolerance among women undergoing infertility treatment.

Method

Research Design

This study is a cross-sectional, comparative study employing purposive sampling. The independent variable of the research is infertility, while the dependent variables are intolerance of uncertainty and distress tolerance.

Data Collection Process and Ethics

Ethical approval for the implementation of the study was obtained from the Clinical Research Ethics Committee of Ondokuz Mayıs University (Approval Date and Number: 02.12.2016 – B.30.2.ODM.0.20.08/565). Women who met the inclusion criteria were reached through social media groups. In IVF treatment support groups on social media, an announcement regarding the study was shared with the permission of the group administrators. The announcement included a link for individuals who voluntarily wished to participate in the study. The link directed participants to the informed consent form, followed by demographic questions and the research scales, and informed consent was obtained.

Population and Sample

The sample of the study consists of 287 women who were members of the "Tüp Bebek Cider" (IVF Support) group on social media and voluntarily agreed to participate in the research.

Data Collection Tools

The data of the study were collected using the "Personal Information Form", "Intolerance of Uncertainty Scale" and "Distress Tolerance Scale".

Personal Information Form: This form was prepared by the researcher based on a review of relevant literature. It includes questions on participants' sociodemographic characteristics such as age, occupation, and educational level, as well as infertility diagnosis and treatment-related information.

Intolerance of Uncertainty Scale: This 12-item self-report scale was developed by Carleton, et al. (2007) to assess individuals' intolerance of uncertainty. The Turkish adaptation and reliability-validity study were conducted by Sarıçam et al. in 2014. The Cronbach's alpha coefficient was calculated as 0.88 for the overall scale, 0.84 for the prospective anxiety subdimension, and 0.77 for the inhibitory anxiety subdimension.

Distress Tolerance Scale: Developed by Simons and Gaher in 2005, this 15-item, 5-point Likert-type scale measures individuals' ability to tolerate distress and is based on self-report. It consists of four subdimensions. The Turkish adaptation, reliability and validity study were conducted by Akın et al. in 2015. The Cronbach's alpha coefficient was found to be 0.82 for the entire scale, 0.62 for the Tolerance subdimension, 0.66 for the Absorption subdimension, 0.71 for the Appraisal subdimension, and 0.61 for the Regulation subdimension.

Data Analysis

The data obtained in the study were analyzed using the SPSS for Windows 22.0 statistical software package.

Findings

The socio-demographic distribution of the infertile women who participated in the study was analyzed using frequency and percentage analyses. Whether the levels of intolerance of uncertainty and distress tolerance significantly differed by age was tested using ANOVA analysis. The socio-demographic characteristics of the women undergoing infertility treatment (n=287) are presented in Table 1 and Table 2.

Table 1. *Distribution of the Infertile Women Participating in the Study According to Their Socio-Demographic Characteristics*

Educational Background	**n**	**%**	**Occupation**	**n**	**%**
Primary School	17	5,9	Public and Private Sector (medium and high level)	41	14,3
Middle School	27	9,4	Professional Occupation	33	11,5
High school	113	39,4	Self-Employed	12	4,2
University	113	39,4	Laborer	45	15,6
Postgraduate	17	5,9	Homemaker	156	54,4
Income Level	**n**	**%**	**Place of Residence**	**n**	**%**
Low Income	163	56,9	Metropolitan Area	179	62,4
Middle income	110	38,3	Urban Area	90	31,2
High Income	14	4,8	Rural Area	18	6,3

An examination of Table 1 reveals that among the women participating in the study, 5.9% were primary school graduates, 9.4% were secondary school graduates, 39.4% were high school graduates, and 39.4% were university graduates. While 56.9% of the participants had a low income level, 38.3% reported a moderate income. Additionally, 14.3% of the women were employed in the public and private sectors, 11.5% had professional occupations, and 54.4% were identified as homemakers.

Table 2 *Distribution of the Infertile Women Participating in the Study Based on Causes and Types of Infertility, Treatment Experiences, Perceived Social Support, and Duration of the Problem*

Cause Of Infertility	**n**	**%**	**Type Of Infertility**	**n**	**%**
Female-related	165	57,5	Primary	251	87,5
Male-related	44	15,3	Secondary	36	12,5
Both partners	78	27,2			
Insemination Attempts	**n**	**%**	**IVF Attempts**	**n**	**%**
Once	57	19,9	Once	73	25,4
Twice	49	17,1	Twice	48	16,7
Three times	30	10,5	Three times	34	11,8
Four times	2	0,7	Four times	18	6,3
Five times or more	5	1,7	Five times or more	16	5,4
Source of Social Support	**n**	**%**	**Duration of the Problem**	**n**	**%**
Spouse	224	78,0	Less than one year	8	2,8
Spouse's family	68	23,7	One to two years	57	19,9
Own family	165	57,5	Three to five years	102	35,5
Friends	107	37,3	Six to ten years	81	28,2
No support	28	9,8	Eleven years or more	39	13,.6

In Table 2, when participants were asked about the source of their infertility problem, 57.5% of the women stated that the infertility issue originated from themselves, 44% reported that it originated from their partners, and 27.2% indicated that both they and their partners had infertility-related issues. Regarding the type of infertility, 87.5% of the women reported experiencing primary infertility, while 12.5% experienced secondary infertility. When examining the participants' treatment experiences, it was found that 49.9% (n = 143) had undergone intrauterine insemination (IUI), and 65.6% (n = 189) had undergone in vitro fertilization (IVF). In terms of the duration of infertility, 2.8% of the women had been experiencing infertility for less than one year, 19.9% for 1–2 years, 35.5% for 3–5 years, 28.2% for 6–10 years, and 13.6% for eleven years or more.

Table 3 *Arithmetic Means and Standard Deviations of Total and Subdimension Scores of the Intolerance of Uncertainty Scale and Subdimension Scores of the Distress Tolerance Scale by Age in Women Undergoing Infertility Treatment*

	21-25 (n=38)		**26-30 (n=76)**		**31-35 (n=97)**		**36-40 (n=50)**		**41-45 (n=26)**	
Intolerance to Uncertainty Scale	**X**	**sd**	**X**	**sd**	**X**	**sd**	**X**	**sd**	**X**	**sd**
Total Score of Intolerance of Uncertainty	37,026	9,1577	41,328	10,531	38,8763	12,15461	47,6600	8,7145	49,3846	8,3574
Prospective Anxiety	21,684	5,5658	23,907	5.8882	22,7526	6,7762	27,84	5,1124	29,23	4,9421
Impleding Anxiety	15,342	4,5694	17,421	5,8498	16,123	5,8135	19,82	4,1388	20,15	3,6297
	21-25 (n=38)		**26-30 (n=76)**		**31-35 (n=97)**		**36-40 (n=50)**		**41-45 (n=26)**	
Distress Tolerance Scale	**X**	**sd**	**X**	**sd**	**X**	**sd**	**X**	**sd**	**X**	**sd**
Tolerance	7,473	1,9691	8,144	2,1460	8,360	2,3102	7,700	2,3668	7,423	1,8798
Absorption	5,710	2,8655	6,118	2,1460	6,082	3,1080	5,480	2,2336	5,115	1,3364
Appraisal	14,394	4,3591	15,276	5,0770	15,649	5,6495	13,920	5,1223	13,769	3,3383
Regulation	5,394	2,5313	6,065	2,3513	5,804	2,5439	5,680	2,6606	5,538	1,8596

Table 4. *ANOVA Results for the Subdimension Scores of the Intolerance of Uncertainty Scale and the Distress Tolerance Scale by Age in Women Undergoing Infertility Treatment*

Scales		Source of Variance	Sum of squares	Sd	Mean Squares	F	P
Intolerance of Uncertainty Scale	Total Score of Intolerance of Uncertainty	Intergroup	4924,249	4	1231,062	11,173	,000**
		Intragroup	31071,639	282	110,183		
		Total	35995,889	286			
	Prospective Anxiety Sub-Dimension Score	Intergroup	1760,330	4	440,082	12,354	,000**
		Intragroup	10045,963	282	35,624		
		Total	11806,293	286			
	Inhibitory Anxiety Sub-Dimension Score	Intergroup	808,749	4	202,187	7,355	,000**
		Intragroup	7752,359	282	27,491		
		Total	8561,108	286			
Distress Tolerance Scale	Tolerance	Intergroup	37,845	4	9,461	1,956	,101
		Intragroup	1364,099	282	4,837		
		Total	1401,944	286			
	Absorption	Intergroup	32,333	4	8,083	1,171	,324
		Intragroup	1946,224	282	6,902		
		Total	1978,557	286			
	Appraisal	Intergroup	156,168	4	39,042	1,516	,198
		Intragroup	7264,654	282	25,761		
		Total	7420,822	286			
	Regulation	Intergroup	13,909	4	3,477	,575	,681
		Intragroup	1706,370	282	6,051		
		Total	1720,279	286			

***p<0.001: p>0.05*

According to Table 3, when the total scores of the Intolerance of Uncertainty Scale were examined by age, the average scores increased from the 21–25 age group to the 26–30 age group, then decreased from the 26–30 age group to the 31–35 group. A subsequent increase in average scores was observed in the 36–40 age group. When the subdimension scores of the Distress Tolerance Scale Tolerance, Absorption, Appraisal, and Regulation were analyzed by age among women undergoing infertility treatment, all subdimension scores increased from the 21–25 age group to the 26–30 age group. In the 31–35 age group, all subdimension scores continued to show a slight increase, except for a decrease of about one point in both the Absorption and Regulation subdimensions. Starting from the 36–40 age group, scores in all subdimensions began to decline, and this downward trend continued into the 41–45 age group.

The ANOVA results presented in Table 4 indicate that there is a statistically significant difference between the age groups of women undergoing infertility treatment and their total scores on the Intolerance of Uncertainty Scale, including both the Prospective Anxiety and Inhibitory Anxiety subdimensions (p< .001). A Post hoc (LSD) test conducted to determine the source of this difference revealed a significant difference between women aged 21–25 (X= 37.02) and those aged 36–40 (X=47.66) and 41–45 (X=49.38). These results suggest that as the age of women receiving infertility treatment increases, their total scores on Intolerance of Uncertainty, Prospective Anxiety, and Inhibitory Anxiety also increase. However, no statistically significant difference was found between the age groups in terms of the Distress Tolerance Scale subdimensions Tolerance, Absorption, Appraisal, and Regulation (p>.05).

Table 5. *ANOVA Results for the Subscale Scores of the Intolerance of Uncertainty Scale and the Distress Tolerance Scale According to Educational Levels of Women Undergoing Infertility Treatment*

Scales		Source of Variance	Sum of squares	Sd	Mean Squares	F	P
Intolerance of Uncertainty Scale	Total Score of Intolerance of Uncertainty	Intergroup	973,096	4	243,274	1,959	,101
		Intragroup	35022,793	282	124,194		
		Total	35995,889	286			
	Prospective Anxiety Sub-Dimension Score	Intergroup	295,797	4	73,949	1,812	,127
		Intragroup	11510,496	282	40,817		
		Total	11806,293	286			
	Inhibitory Anxiety Sub-Dimension Score	Intergroup	197,766	4	49,442	1,667	,158
		Intragroup	7752,359	282	29,657		
		Total	8561,108	286			
Distress Tolerance Scale	Tolerance	Intergroup	53,126	4	13,282	2,777	,027*
		Intragroup	1348,818	282	4,783		
		Total	1401,944	286			
	Absorption	Intergroup	48,426	4	12,106	1,769	,135
		Intragroup	1930,132	282	6,844		
		Total	1978,557	286			
	Appraisal	Intergroup	238,438	4	59,609	2,340	,055
		Intragroup	7182,384	282	5,469		
		Total	7420,822	286			
	Regulation	Intergroup	23,778	4	5,944	,988	,414
		Intragroup	1696,501	282	6,016		
		Total	1720,279	286			

**p<0,05: p>0,05*

According to the ANOVA results presented in Table 5, there is no statistically significant difference between the education levels of women undergoing infertility treatment and their total scores on the Intolerance of Uncertainty Scale, including the Prospective Anxiety and Inhibitory Anxiety subdimensions (p>.05). However, the ANOVA results indicate a statistically significant difference between education levels and the Tolerance subdimension of the Distress Tolerance Scale (p< .05). No significant differences were found for the Appraisal, Absorption, and Regulation subdimension scores in relation to education level (p >.05). The Post hoc (LSD) test conducted to identify the source of the difference in the Tolerance subdimension revealed a significant difference between primary school graduates (X= 6.94) and university graduates (X=8.44). These findings suggest that as the education level increases, women's ability to tolerate distress also improves

Table 6: Pearson Correlation Analysis Results Regarding Intolerance of Uncertainty and Distress Tolerance Levels of Women Undergoing Infertility Treatment

	Prospective Anxiety	P	Inhibitory Anxiety	P
Tolerance	0,118	0,62	0,61	0,212
Absorption	0,085	0,132	0,63	0,207
Appraisal	0,117	0,63	0,034	0,328
Regulation	0,142	0,32*	,040	0,302

**p<0,05; p>0,05*

As shown in Table 6, the results of the Pearson correlation coefficient indicate that only a low-level, statistically significant positive correlation was found between the Regulation subdimension of the Distress Tolerance scale and the Prospective Anxiety subdimension of the Intolerance of Uncertainty scale ($r=0.142$, $p=0.032$; $p< 0.05$). No significant correlations were found between the other subdimensions of the two scales ($p >0.05$).

Discussion

In this study, which examined the levels of distress tolerance and intolerance of uncertainty in women undergoing infertility treatment, it was found that as the age of women receiving in vitro fertilization (IVF) treatment increased, their levels of intolerance of uncertainty also increased. One of the key factors that plays a significant role in fertility is the age of the woman (Soto & Copperman, 2011). As women age, both the production of high quality eggs and the likelihood of conception decrease (Arıcı, 2018), which explains the increasing levels of uncertainty intolerance among older participants in this study. Advancing age is directly associated with a significant decline in healthy reproductive cells and may signal the onset of menopause. This implies a progressively diminishing and hopeless possibility of motherhood for infertile women. Given that infertility is a challenging, exhausting, stressful, and uncertain treatment process, it can be said that women, especially with increasing age, experience a heightened sense of uncertainty and thus a growing intolerance toward the unpredictable nature of each new treatment attempt. Contrary to the findings of this study, two studies conducted with different populations reported no significant difference in intolerance of uncertainty across age groups (Belge, 2019; Kilit et al., 2020). In this study, no significant difference was found between the distress tolerance levels of infertile women and their age.

In the study, a significant difference was found between the education levels of the participants and the Tolerance subdimension scores of the Distress Tolerance Scale. In other words, it was observed that as the education level of women undergoing infertility treatment increased, their ability to tolerate distress also improved. This finding suggests that women with higher educational attainment are more capable of coping effectively with the challenges and difficulties they encounter during the treatment process. Similarly, in a study conducted by Akyüz et al. (2008), a significant relationship was found between women's education levels and the degree to which they were affected by infertility. As education levels increased, the psychological impact of infertility decreased. It was concluded that being educated helps enhance women's coping abilities in relation to infertility. Likewise, in the study by Ünal et al. (2010), it was found that women who had completed only primary education were more negatively affected by infertility than those who were high school or university graduates, and that the level of impact decreased as education increased. Karaca and Ünsal (2015) also found that infertile women with lower education levels had higher stress levels compared to those with higher education. Yılmaz et al. (2020) reported that women who were illiterate had significantly higher infertility distress scores than those who were high school graduates or had higher education. Eroğlu and Temiz (2020) found that women with only middle school education experienced higher stress levels than those with higher levels of education. In the study by Dağ et al. (2015), it was found that women who developed negative coping strategies in response to infertility had higher levels of infertility related distress compared to those who employed positive coping strategies. In contrast, no significant difference was found between education level and scores on the Intolerance of Uncertainty Scale. Based on this finding, it can be said that there is no meaningful relationship between infertile women's educational background and their intolerance of uncertainty.

In the literature, no studies were found that directly examined the significance of the duration of infertility in relation to levels of intolerance of uncertainty and distress tolerance in infertile individuals. In a study by Turan and Beydağ (2022), it was found that as women's intolerance of uncertainty increased, their psychological well-being decreased. This result suggests that treatment processes filled with uncertainty psychologically exhaust women and lead them to feel less satisfied with their psychological state. Contrary to our study, Okuducu and Yorulmaz (2020) found that individuals with a longer duration of infertility had a lower quality of life. Similarly, Keskin and Babacan Gümüş (2014) concluded that there was a significant relationship between the duration of treatment and the level of hopelessness in infertile women. According to the study, no significant change in hopelessness levels was observed during the first two years of infertility; however, hopelessness scores decreased between years three and five, and then began to rise again after six years. This study also found a low-level but statistically significant positive correlation between the Prospective Anxiety subdimension of Intolerance of Uncertainty and the Regulation subdimension of the Distress Tolerance Scale. This finding indicates that as women's prospective anxiety related to uncertainty increases, they may engage in greater self-regulation in managing their distress.

As a final word, the findings of this study indicate that as the age of infertile women increases, their levels of uncertainty also increase, while their levels of distress tolerance tend to decrease, although not significantly. Infertility, which is far from being a simple gynecological condition, negatively affects women biologically, psychologically, and socially (Sezgin & Hocaoğlu, 2014), and is described in the literature as a critical life crisis (Özçelik et al., 2007).

Conclusion

In this study, the levels of distress tolerance and intolerance of uncertainty among women undergoing infertility treatment were examined. While fertile couples often learn they are expecting a child without any effort or even awareness of the conception process, most couples experiencing infertility have struggled for years to fulfill their desire to become parents. These individuals, psychologically and economically exhausted, emotionally worn down by uncertainty, and feeling inadequate in social contexts pursue treatment based only on possibilities (as cited in Keskin & Babacan Gümüş, 2014). Infertility treatment, which includes medical monitoring, hormone therapy, and various assisted reproductive techniques, is a highly challenging process for couples and especially for women socially, economically, and psychologically. In some cases, intensive infertility treatment may exacerbate patient risk factors and make the transition to parenthood even more difficult (Öztürk Serter & Aral, 2024).

In conclusion, intolerance of uncertainty and an inability to tolerate distress can be identified as two critical risk factors that negatively affect the psychological well-being of women during infertility treatment by increasing stress and potentially decreasing the likelihood of treatment success. Advancing age represents another risk factor that further reduces the chances of successful treatment and conception. Conversely, being educated appears to facilitate the development and implementation of effective coping strategies, enabling women to better endure the medical, psychological, and social challenges of the infertility treatment process, thus improving their tolerance for uncertainty and ability to manage distress.

Suggestions

Considering the issues caused by infertility and the findings obtained from this study, it is suggested that evaluating the psychosocial problems and levels of distress experienced by women undergoing infertility treatment may enhance treatment success and overall quality of life for individuals facing infertility. Including psychosocial support professionals as part of the treatment team may help couples, especially women, develop strategies to cope with negative emotions such as uncertainty, stress, hopelessness, helplessness, stigma, and loneliness throughout the treatment process. Based on the results of this study, future research is recommended to further investigate levels of intolerance of uncertainty and distress tolerance, as was done here. These variables could also be examined in relation to other psychological and demographic factors. Additionally, qualitative studies exploring how infertile couples manage uncertainty and distress may inform the development of tailored psychoeducational programs. The participation of couples in such programs could be encouraged to better address their needs. In line with the findings of this study, it is recommended that the physical and mental health of couples, particularly prospective mothers, be supported both during and after the infertility treatment process, including throughout pregnancy if achieved.

Many studies in the literature have found that factors such as education level, duration of marriage, and employment status are associated with infertility (Yanıkkerem et al., 2008; Ünal et al., 2010; Kırca & Pasinlioğlu, 2013). In this study, no significant differences were identified among these factors, which may be due to the relatively uneven distribution of participants across groups in terms of levels of intolerance of uncertainty and distress tolerance. Therefore, future studies are recommended to ensure group balance and/or to include larger and more diverse populations in the analysis.

In addition to the challenges of the treatment process, infertile couples often struggle to maintain their marriages while facing various social pressures; such as the frequent mention of childbearing in social settings, societal disapproval, the tendency to blame the woman, stigmatization, and exclusion. In this context, it is recommended to develop programs offering marital and family counseling for infertile couples. Moreover, negative societal attitudes toward infertility lead some couples to feel the need to keep their treatment process private. Therefore, new scientific studies focusing on the attitudes and perceptions of individuals who are not experiencing infertility are needed. Increasing public awareness of infertility as a social issue is also considered essential.

Declarations

Ethical approval was obtained from the Clinical Research Ethics Committee of Ondokuz Mayıs University, Samsun, Türkiye (02.12.2016, Protocol No. 0.20.08/565).

Consent for Publication

Not applicable.

Availability for Data and Materials

Not applicable.

Competing Interests

The author declares that there is no conflict of interest.

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Authors' Contributions

GÖS proposed and conducted the main idea of the study. GÖS contributed to data collection. GÖS and SBÇ carried out the data analyses and contributed to the interpretation of the findings. GÖS and SBÇ contributed significantly to writing the introduction and discussion sections of the article. All authors have read and approved the final version of the manuscript.

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