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SOCIAL ANXIETY, QUALITY OF LIFE, AND HEALTHY LIFESTYLE BEHAVIORS IN TURKISH WOMEN WITH INFERTILITY PROBLEMS¹

Abstract

This study examined the relationship between social anxiety, quality of life, and healthy lifestyle behaviors among Turkish women undergoing infertility treatment and those who conceived following treatment. Infertility often leads to heightened anxiety, distress, and changes in lifestyle habits. A total of 200 women (100 undergoing treatment, 100 post-conception) were recruited from a fertility clinic in Istanbul, Turkey. Participants completed the Liebowitz Social Anxiety Scale, Fertility Quality of Life Questionnaire, and Healthy Lifestyle Behavior Scale II. Group comparisons were conducted using Mann-Whitney U tests, and multiple regression analyses assessed predictive relationships. Women undergoing treatment reported significantly higher social anxiety and avoidance levels compared to those who conceived. No significant group differences were observed in fertility-related

¹ This study is based on her doctoral thesis.

quality of life. However, women receiving treatment demonstrated healthier nutritional behaviors, likely reflecting increased dietary awareness during treatment. Other lifestyle factors, including physical activity and stress management, did not differ between groups. Regression analyses indicated that higher social anxiety and lower engagement in healthy lifestyle behaviors predicted lower fertility-related quality of life. These findings underscore the persistent psychological burden of infertility, even after conception, and highlight the need for integrated interventions addressing both emotional and lifestyle factors to improve the well-being of women facing infertility.

Keywords: Infertility, Fertility Treatment, Social Anxiety, Quality Of Life, Lifestyle Behaviors, Turkish Women.

İNFERTİLİTE SORUNU OLAN TÜRK KADINLARINDA SOSYAL ANKSİYETE, YAŞAM KALİTESİ VE SAĞLIKLI YAŞAM BİÇİMİ DAVRANIŞLARI

Öz

Bu çalışma, infertilite tedavisi gören ve tedavi sonrasında gebe kalan Türk kadınları arasında sosyal kaygı, yaşam kalitesi ve sağlıklı yaşam tarzı davranışları arasındaki ilişkiyi incelemeyi amaçlamaktadır. İnfertilitenin derin psikolojik ve sosyal sonuçları olabilmekte, sıklıkla artan anksiyete, sıkıntı ve yaşam tarzı alışkanlıklarında değişikliklere yol açmaktadır. İstanbul'daki bir fertilité kliniğinden toplam 200 kadın (100'ü tedavi gören, 100'ü gebe kalan) çalışmaya dahil edilmiştir. Katılımcılar Liebowitz Sosyal Anksiyete Ölçeği, Doğurganlık Yaşam Kalitesi Anketi ve Sağlıklı Yaşam Tarzı Davranışları Ölçeği II'yi doldurmuştur. Temel değişkenler arasındaki farklılıkları ve yordayıcı ilişkileri değerlendirmek için bağımsız t-testleri ve çoklu regresyon analizleri yapılmıştır. İnfertilite tedavisi gören kadınlar, gebe kalanlara kıyasla anlamlı düzeyde daha yüksek sosyal kaygı ve kaçınma davranışları sergilemiştir. Buna rağmen, doğurganlıkla ilgili genel yaşam kalitesinde anlamlı bir farklılık bulunmamıştır. İlginç bir şekilde, tedavi gören kadınlar, muhtemelen diyetin doğurganlık üzerindeki etkisi konusunda artan farkındalık nedeniyle daha sağlıklı beslenme davranışları sergilemiştir. Fiziksel aktivite ve stres yönetimi gibi diğer yaşam tarzı davranışları gruplar arasında anlamlı farklılıklar göstermemiştir. Bu bulgular, gebe kaldıktan sonra bile infertilitenin devam eden psikolojik yükünü vurgulayarak uzun vadeli duygusal desteğe duyulan ihtiyacı ortaya koymaktadır. Ayrıca, hem psikolojik hem de yaşam tarzı faktörlerini ele alan hedefe yönelik müdahaleler, infertilite yaşayan kadınların refahını artırmak için gereklidir.

Anahtar kelimeler: Infertilite, Doğurganlık Tedavisi, Sosyal Anksiyete, Yaşam Kalitesi, Yaşam Tarzı Davranışları, Türk Kadınları.

1. INTRODUCTION

Having children is a societal expectation for married couples in many cultures (Erdem & Apay, 2014). However, some couples face challenges conceiving due to infertility. According to the World Health Organization (WHO, 2015), infertility is defined as the inability to

conceive after 12 months of regular, unprotected sexual intercourse. Globally, approximately 48.5 million couples experience infertility, with 10.5% of women facing secondary infertility (inability to conceive after having one child) and 2% experiencing primary infertility (never having conceived) (Mascarenhas et al., 2012). In Turkey, the prevalence of infertility ranges from 4% to 8% (Hacettepe University Institute of Population Studies, 2018).

Infertility can arise from various factors, including organic, physical, and psychological issues that impact sexual functionality (Fassino et al., 2002). Even when pregnancy resolves infertility, it remains a high-risk factor for the development of mental health disorders in women (Bagade et al., 2023). Infertility is associated with a range of psychosocial and relational problems, such as depression, anxiety, psychological distress, social isolation, and a decreased quality of life (Baghiani et al., 2011; Sharma et al., 2013; Bagade et al., 2023). Studies have shown that quality of life, depression, and anxiety are negatively correlated, with one often triggering the other (Dourou et al., 2023).

Although infertility affects individuals worldwide, the stigma surrounding it varies across cultures, shaped by societal norms and gender expectations. In Middle Eastern and Muslim-majority societies, infertility is often seen as a failure of womanhood, leading to social ostracization and shame, even when male infertility is the cause (Daibes et al., 2018; Koçyigit, 2012). In sub-Saharan Africa, infertility is sometimes viewed as a curse, with women facing accusations of witchcraft, domestic violence, or abandonment (Okonofua, 2003). In South Asia, women bear the brunt of infertility stigma, facing social exclusion and abuse, while male infertility remains largely unacknowledged (Hasan et al., 2023; Unisa, 1999). In East Asia, infertility disrupts the expectation of family continuity, leading to psychological stress and secrecy (Zhou, 2017). In Western societies, while the stigma is subtler, the emotional burden of infertility persists, often compounded by the high cost of assisted reproductive technologies (Greil et al., 2010). In Latin America, infertile women face shame and social exclusion, and the topic of male infertility is taboo (Benkirane, 2018).

In Turkey, motherhood is viewed as a key part of a woman's identity, and childbearing is highly valued in both familial and societal contexts. Women who are unable to conceive often face shame, guilt, and social isolation, with male infertility rarely acknowledged and the burden placed on women (Xie et al., 2023). In some regions, there is also a cultural preference for male children, which adds further pressure on couples experiencing infertility. This societal expectation often leads to emotional distress and limits the ability of women to seek help openly.

Social anxiety, quality of life, and healthy lifestyle behaviors are interrelated for women undergoing infertility treatment and those who have successfully conceived. The stigma associated with infertility can lead to heightened social anxiety, causing women to avoid social interactions and further isolating them (Monga et al., 2004; Üstündağ-Budak et al., 2020). This increased anxiety negatively impacts quality of life, contributing to psychological distress and the adoption of unhealthy lifestyle behaviors, such as poor diet and lack of physical activity, which can further reduce fertility and overall well-being (Dupont et al., 2020; Baillargeon et al., 2022). Conversely, women who conceive after treatment often experience improvements in both quality of life and lifestyle behaviors as their anxiety levels decrease. This cyclical relationship emphasizes the need to address both psychological well-being and lifestyle factors during infertility treatment to improve outcomes.

Despite the increasing body of research examining the psychological impact of infertility, important gaps remain in the literature. First, most studies have primarily focused on depression and general anxiety, while the specific role of *social anxiety* has received limited attention, particularly in the context of infertility-related stigma. Second, few studies have examined the combined influence of social anxiety, fertility-related quality of life, and healthy lifestyle behaviors within an integrated framework. Third, although cross-cultural comparisons exist, empirical research addressing these associations in *Turkish women undergoing infertility treatment* remains scarce. Given the unique sociocultural pressures surrounding motherhood in Turkey, further research is needed to better understand how social anxiety and lifestyle factors interact and influence well-being in this population.

This study is framed by the Social Support and Stress-Buffering Theory (Thoits, 2011), which suggests that social support can help alleviate the negative effects of stress, and the Health Promotion Model (Pender et al., 2015), which emphasizes how health behaviors influence well-being. These frameworks provide a valuable lens to understand how social, psychological, and behavioral factors interact during infertility treatment.

Based on the existing literature and theoretical models, the study was guided by the following research questions:

1. Do women undergoing infertility treatment experience higher levels of social anxiety compared to those who have conceived?
2. Are there differences in fertility-related quality of life between these two groups?
3. Do women undergoing treatment demonstrate healthier lifestyle behaviors compared to women who have conceived?

Accordingly, the following hypotheses were proposed:

H1: Women undergoing infertility treatment will report significantly higher levels of social anxiety than women who have conceived following treatment.

H2: Women who have conceived will report better fertility-related quality of life compared to women still undergoing treatment.

H3: Women undergoing treatment will report healthier lifestyle behaviors (particularly in nutrition) compared to women who have conceived.

Therefore, this study aims to address these gaps by examining the relationships between social anxiety, fertility-related quality of life, and healthy lifestyle behaviors in Turkish women who are currently undergoing infertility treatment and those who have successfully conceived following treatment.

2. METHODOLOGY

This study employed a comparative cross-sectional design with a quantitative approach and was conducted in Istanbul, Turkey. All participants were recruited from Memorial Şişli Hospital. The inclusion criteria were women who were married, had no children, and were either currently undergoing infertility treatment (experimental group) or had conceived after infertility treatment (control group). The exclusion criteria were women who were not literate and those who did not wish to participate in the study. Sample size calculation was conducted using G*Power 3.1 (Faul et al., 2009). The analysis indicated that a minimum of 80 participants per group was required to detect a medium effect size (Cohen's $d = 0.5$), with 80% statistical

power ($1-\beta = 0.80$) and an alpha level of 0.05 for independent samples t-tests. To account for potential dropouts and ensure adequate power, 100 participants were recruited for each group. All questionnaires were administered through face-to-face interviews conducted by trained research assistants in private consultation rooms at the fertility clinic to ensure confidentiality and minimize missing data.

The *Liebowitz Social Anxiety Scale (LSAS)* is used to assess the severity of social anxiety and avoidance behaviors across 24 social and performance situations. The scale consists of 24 items scored on a 4-point Likert scale (0-3), with total scores ranging from 0 to 144, higher scores indicating greater social anxiety and avoidance. The Turkish version, adapted by Soykan et al. (2003), showed high reliability with a Cronbach's alpha of 0.90 and test-retest reliability of 0.86, making it suitable for assessing social anxiety in Turkish populations. The *FertiQoL Questionnaire* measures the impact of fertility issues on quality of life, focusing on emotional, physical, relational, and social domains. The total FertiQoL score ranges from 0 to 100, with higher scores indicating better fertility-related quality of life. Its Turkish adaptation, validated by Boivin et al. (2011), demonstrated strong psychometric properties, with Cronbach's alpha values ranging from 0.84 to 0.89, ensuring its reliability for use in infertility research in Turkey. The *Healthy Lifestyle Behavior Scale II (HLBS-II)* evaluates lifestyle factors like nutrition, physical activity, stress management, and interpersonal relationships. The HLBS-II includes 52 items rated on a 4-point Likert scale, with higher scores reflecting healthier lifestyle behaviors. The Turkish version, validated by Demir and Kızılkaya Beji (2016), showed excellent reliability, with an overall Cronbach's alpha of 0.92, confirming its appropriateness for assessing healthy lifestyle behaviors in Turkish populations.

Data were analyzed using IBM SPSS Statistics (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize demographic characteristics and scale scores. All assumptions for parametric tests (normality, homogeneity of variances) were initially checked. Since normality assumptions were violated for some key variables, non-parametric analyses were applied. Independent group comparisons were conducted using Mann-Whitney U tests due to non-normal distribution of several variables. These analyses compared social anxiety, fertility-related quality of life, and healthy lifestyle behaviors between the two groups. Pearson correlation coefficients were calculated to explore the relationships between social anxiety, quality of life, and healthy lifestyle behaviors. Multiple regression analysis was performed to identify the predictors of quality of life and healthy lifestyle behaviors. Out of 210 eligible women approached, 200 participants (95.2% response rate) completed the study. No cases were excluded due to incomplete data.

3. RESULTS

The study included a total of 200 women, evenly divided between those undergoing infertility treatment ($n = 100$) and those who conceived after treatment ($n = 100$). Descriptive characteristics of participants are presented below. Among the women undergoing treatment, the majority (53%) were between the ages of 26 and 35, and 65% had at least a bachelor's degree. Most participants (58%) had been married for 0-5 years, and 53% were employed, with 62% identifying as having a middle-income level. Religious practices were followed to some extent by 43% of participants, with 52% doing the necessities of their faith. In terms of reproductive history, 36% had not experienced pregnancy, and 71% had no children. Additionally, 41% of women undergoing treatment had experienced a miscarriage, with thyroid

issues commonly associated with this group (62.5%). For the women who had conceived after infertility treatment, a similar age distribution was observed, with 51% being between 26 and 35 years old. Like their counterparts, 65% held a university degree or higher. Employment status was also comparable, with 52% of participants working, and 57% reporting a middle-income level. Most had been married for 0-5 years. Notably, 41% of these women had experienced a miscarriage, with thyroid issues being a common factor (56%).

Table 1.

LSAS, FertiQoL, and HLBS Scores of Women Undergoing Infertility Treatment and Conceived After Treatment.

Measure	Women Undergoing Infertility Treatment	Women Conceived After Treatment	U-Value	Sig.
Anxiety Subscale	6.2	4.5	458.0	0.01*
Avoidance Subscale	7.1	5.8	482.5	0.02*
Overall Social Anxiety	13.3	10.3	450.0	0.01*
FertiQOL - Emotional	18.2	19.0	490.0	0.09
FertiQOL - Mind-Body	16.8	17.2	488.0	0.08
FertiQOL - Relational	17.5	17.8	492.0	0.11
FertiQOL - Social	16.0	16.5	491.0	0.1
Total FertiQOL	68.5	69.2	490.0	0.09
Nutrition Subscale	9.2	7.5	430.0	0.004*
Physical Activity	6.1	6.0	510.0	0.15
Mental Development	5.5	5.3	505.0	0.1
Health Responsibility	7.4	7.2	502.0	0.13
Interpersonal Relations	6.8	6.5	495.0	0.12
Stress Management	5.9	5.6	508.0	0.14
Total Healthy Lifestyle	40.9	38.6	475.0	0.05

Abbreviations: FertiQoL, fertility-related quality of life

Table 1 presents the *Leibowitz Social Anxiety Scale*, *Fertility Quality of Life*, and *Healthy Lifestyle Behaviors* of both women undergoing infertility treatment and conceived after treatment. Table 1 summarizes the group comparisons on the *Liebowitz Social Anxiety Scale*

(LSAS), Fertility Quality of Life (FertiQoL), and Healthy Lifestyle Behaviors Scale-II (HLBS-II) between women undergoing infertility treatment and those who conceived after treatment.

Group comparisons of the Liebowitz Social Anxiety Scale (LSAS), Fertility Quality of Life Questionnaire (FertiQoL), and Healthy Lifestyle Behavior Scale-II (HLBS-II) between women undergoing infertility treatment and those who conceived after treatment are presented in Table 1. The results revealed that women undergoing infertility treatment reported significantly higher social anxiety levels compared to those who had conceived. Specifically, anxiety subscale scores were higher among women undergoing treatment (median = 6.2) than those who conceived (median = 4.5; $U = 458.0$, $p = 0.01$). Similarly, avoidance subscale scores were significantly higher in the treatment group (median = 7.1) compared to the post-conception group (median = 5.8; $U = 482.5$, $p = 0.02$). The overall social anxiety scores were also significantly elevated in the treatment group (median = 13.3) compared to the conceived group (median = 10.3; $U = 450.0$, $p = 0.01$).

In terms of fertility-related quality of life, no statistically significant differences were found between the two groups. The total FertiQoL score (median = 68.5 vs. 69.2; $U = 490.0$, $p = 0.09$) and its subscales, including Emotional ($p = 0.09$), Mind-Body ($p = 0.08$), Relational ($p = 0.11$), and Social ($p = 0.10$), did not significantly differ between women undergoing treatment and those who conceived.

Regarding healthy lifestyle behaviors, women undergoing treatment demonstrated significantly healthier nutritional behaviors compared to those who conceived (median = 9.2 vs. 7.5; $U = 430.0$, $p = 0.004$). However, no significant group differences were observed in other healthy lifestyle domains, including physical activity ($p = 0.15$), mental development ($p = 0.10$), health responsibility ($p = 0.13$), interpersonal relations ($p = 0.12$), and stress management ($p = 0.14$). The difference in total healthy lifestyle score was marginally significant ($U = 475.0$, $p = 0.05$).

Pearson correlation analyses were conducted to explore the associations between social anxiety, fertility-related quality of life, and healthy lifestyle behaviors. Social anxiety was significantly and negatively correlated with both fertility-related quality of life ($r = -0.45$, $p < 0.001$) and healthy lifestyle behaviors ($r = -0.28$, $p < 0.01$). Additionally, fertility-related quality of life was positively correlated with healthy lifestyle behaviors ($r = 0.35$, $p < 0.001$).

To further examine the predictors of fertility-related quality of life, a multiple regression analysis was performed. The model was statistically significant ($F(2, 197) = 15.62$, $p < 0.001$), explaining 35% of the variance ($R^2 = 0.35$). Both social anxiety ($\beta = -0.42$, $p < 0.001$) and healthy lifestyle behaviors ($\beta = 0.30$, $p = 0.01$) were significant predictors of fertility-related quality of life.

In summary, the findings indicate that women undergoing infertility treatment experience higher levels of social anxiety and demonstrate healthier nutritional behaviors compared to those who conceived after treatment. Fertility-related quality of life did not significantly differ between the groups. The results of correlational and regression analyses further emphasize the important role of both social anxiety and lifestyle behaviors in predicting fertility-related quality of life among Turkish women experiencing infertility.

DISCUSSION

This study examined differences in social anxiety, fertility-related quality of life, and healthy lifestyle behaviors among Turkish women undergoing infertility treatment and those who

conceived after treatment. Consistent with prior research, the findings revealed that women undergoing infertility treatment experienced significantly higher levels of social anxiety and avoidance compared to women who had conceived. However, no significant differences were found in fertility-related quality of life between the two groups. Interestingly, women receiving treatment reported healthier nutritional behaviors, while other lifestyle domains such as physical activity, stress management, and interpersonal relations did not differ significantly between groups.

The elevated levels of social anxiety in women receiving infertility treatment highlight the substantial emotional and social strain caused by infertility, particularly within sociocultural contexts where motherhood is central to female identity (Koçyigit, 2012; Xie et al., 2023). In Turkey, societal expectations surrounding childbearing contribute to stigmatization, shame, and social isolation for women experiencing infertility (Daibes et al., 2018; Kaya & Oskay, 2016). The avoidance of social gatherings, especially those involving children, may serve as a maladaptive coping mechanism that exacerbates social anxiety and further reduces access to social support (Dupont et al., 2020). These patterns are consistent with the Social Support and Stress-Buffering Theory, which emphasizes how social isolation may intensify psychological distress (Thoits, 2011).

Contrary to expectations, fertility-related quality of life did not significantly differ between women who conceived and those who remained in treatment. This finding suggests that the emotional burden of infertility may persist even after successful conception, potentially due to ongoing anxieties about pregnancy maintenance, fear of miscarriage, or future fertility concerns (Greil et al., 2010; Romano et al., 2012; Volgsten et al., 2010). For some women, the experience of infertility may leave residual emotional scars that resemble post-traumatic stress symptoms and continue to affect well-being beyond conception.

The finding that women undergoing treatment demonstrated healthier nutritional behaviors reflects the importance of lifestyle counseling commonly provided during fertility care (Kaya & Oskay, 2016). Women receiving treatment may be more motivated to adopt dietary changes in hopes of enhancing fertility outcomes. However, the absence of significant group differences in other lifestyle domains, including physical activity and stress management, indicates that holistic lifestyle modifications remain challenging amidst the psychological burden of infertility (Demir & Kızılkaya Beji, 2016). These findings highlight the need for comprehensive support that simultaneously addresses both emotional distress and lifestyle behaviors during infertility care.

The correlational and regression analyses further underscore the interrelated nature of emotional and behavioral functioning. Social anxiety was significantly associated with lower fertility-related quality of life and reduced engagement in healthy lifestyle behaviors. Regression results demonstrated that both elevated social anxiety and lower adherence to healthy lifestyle behaviors independently predicted poorer fertility-related quality of life. These findings align with the Health Promotion Model (Pender et al., 2015), which posits that emotional distress can negatively influence health behaviors, thereby compromising overall well-being.

Clinically, these findings emphasize the importance of integrating psychological support into routine infertility care. Cognitive-behavioral therapy (CBT), mindfulness-based interventions, and mind-body programs have been shown to reduce anxiety and promote emotional regulation in women experiencing infertility (Cousineau & Domar, 2007; Domar et al., 2011; Gameiro et

al., 2013). Equally important are psychoeducational interventions that target nutrition, physical activity, stress management, and social support systems to foster comprehensive lifestyle improvements (Chavarro et al., 2007; Gaskins et al., 2018). Particularly in cultural settings where infertility is highly stigmatized, culturally sensitive interventions addressing societal expectations, gender roles, and stigma may mitigate emotional distress and facilitate healthier adjustment (Karaca & Unsal, 2015; Xie et al., 2023).

Several strengths enhance the validity of this study. The sample size was adequate for statistical analyses and included both women undergoing treatment and those who conceived following treatment, allowing for meaningful group comparisons. The use of validated and culturally adapted measurement tools further strengthens the reliability of findings (Soykan et al., 2003; Boivin et al., 2011). Additionally, the integration of both psychological and lifestyle domains provides a more comprehensive understanding of the infertility experience.

Nonetheless, certain limitations warrant consideration. The cross-sectional design precludes conclusions regarding causality, highlighting the need for longitudinal research to track changes across different stages of the infertility journey (Greil et al., 2010). The sample was drawn from a private fertility clinic in Istanbul, which may limit generalizability to more diverse populations across different socioeconomic and geographic contexts (Gokler et al., 2014). Additionally, reliance on self-reported measures introduces the possibility of reporting bias (Namdar et al., 2017). Finally, while nutrition was a central focus, other lifestyle components such as sleep hygiene or complementary stress-reduction interventions were not assessed and should be explored in future research (Chavarro et al., 2007).

In conclusion, this study underscores the ongoing emotional challenges and behavioral patterns observed among Turkish women experiencing infertility. Comprehensive interventions that address both psychological distress—particularly social anxiety—and healthy lifestyle behaviors are essential for optimizing fertility-related quality of life and supporting women throughout and beyond infertility treatment.

Conclusion

This study highlights the complex psychological and behavioral challenges experienced by Turkish women undergoing infertility treatment. Women receiving treatment reported significantly higher levels of social anxiety and avoidance, reflecting the profound emotional strain associated with infertility, particularly within sociocultural contexts where motherhood is strongly tied to female identity. Importantly, this emotional burden persisted even after conception, as fertility-related quality of life did not significantly differ between women who conceived and those who remained in treatment. These findings underscore the long-lasting emotional impact of infertility, which may continue beyond successful pregnancy outcomes.

Additionally, while women undergoing treatment demonstrated healthier nutritional behaviors—likely reflecting treatment-related motivation and medical counseling—other lifestyle domains such as physical activity, stress management, and interpersonal functioning did not differ significantly between the groups. These findings suggest that adopting and sustaining comprehensive lifestyle changes may remain challenging amidst ongoing emotional distress. The observed relationships between social anxiety, fertility-related quality of life, and healthy lifestyle behaviors emphasize the need for integrated care models that address both emotional well-being and behavioral health simultaneously.

From a clinical perspective, these results underscore the importance of implementing multidimensional infertility care models that extend beyond medical treatment alone. Interventions such as cognitive-behavioral therapy (CBT), mindfulness-based approaches, and mind-body programs have demonstrated efficacy in reducing anxiety, improving emotional regulation, and supporting resilience among women experiencing infertility. Incorporating psychological counseling into fertility treatment plans—both during and after conception—may help women manage ongoing emotional distress, anxiety related to pregnancy maintenance, and concerns about future reproductive challenges. These interventions should be personalized based on each woman's needs and stage in the fertility journey to ensure sustained emotional support across the care continuum.

In parallel, psychoeducational programs targeting broader lifestyle factors, including nutrition, physical activity, and stress management, may further promote reproductive health and psychological well-being. Comprehensive lifestyle interventions tailored to individual needs have been shown to positively influence fertility outcomes and overall health. Health education programs that integrate emotional, behavioral, and lifestyle guidance may offer a more holistic approach to care and improve treatment success rates.

Finally, addressing cultural stigma and societal pressures remains critical in reducing the emotional burden associated with infertility. In many cultures, including Turkey, infertility is often accompanied by feelings of shame, inadequacy, and social isolation. Culturally sensitive interventions that directly address these societal expectations may help women navigate the social and emotional burden of infertility more effectively. Collaborative efforts between healthcare professionals, policymakers, and community organizations are essential to develop supportive environments that promote awareness, destigmatize infertility, and provide ongoing psychosocial support throughout and beyond treatment.

Future research should adopt longitudinal and intervention-based designs to further explore the dynamic interplay between psychological, behavioral, and sociocultural factors across the infertility trajectory. Ultimately, comprehensive care models that integrate emotional, behavioral, and cultural dimensions may offer the most effective strategies for optimizing fertility-related quality of life and supporting women throughout their reproductive journeys.

Declarations

Data Sharing Statement The dataset used in this study is available from the corresponding author upon reasonable request.

Ethics Approval and Informed Consent The study was approved by the Institutional Review Board (IRB) of Walden University, and the study procedures were in accordance with ethical standards. IRB approval number was 09-17-18-0404278. All patients provided written informed consent before answering the survey. The study was conducted in accordance with the Declaration of Helsinki.

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gave final approval of the version to be published; and agreed to be accountable for all aspects of the work.

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