

ORIGINAL RESEARCH ARTICLE

The effect of health anxiety on attitudes and sexual function in women during the menopausal period

DOI: 10.29063/ajrh2026/v30i4.8

Yurdagül Günaydin^{1*}, Esmâ Kir² and Serpil Toker³

Tarsus University, Faculty of Health Sciences, Department of Nursing Mersin/Turkey¹; Yozgat Bozok University, Faculty of Health Sciences, Department of Midwifery Yozgat, Turkey²; Tokat Gaziosmanpaşa University, Faculty of Health Sciences, Department of Midwifery, Tokat/ Turkey³

*For Correspondence: Email: yurda_gul@windowslive.com

Abstract

This **descriptive cross-sectional study** aimed to examine the association between health anxiety, attitudes toward menopause, and sexual function in menopausal women. The participants' mean total scores were 38.67 ± 11.16 for the Attitudes Toward Menopause Scale (ATMS), 21.12 ± 6.63 for the Short Health Anxiety Inventory (SHAI-18), and 15.01 ± 5.50 for the Female Sexual Function Index (FSFI-6). A negative correlation was found between ATMS scores and both SHAI-18 and its "Bodily Symptom Hypersensitivity" subscale ($p < 0.05$). Additionally, a negative association was observed between SHAI-18 and FSFI-6 scores ($p < 0.05$). Regression analysis revealed that ATMS had a statistically significant effect on SHAI-18 ($p < 0.001$), with a 1-point increase in SHAI-18 associated with a 0.160-point decrease in ATMS scores. Furthermore, ATMS scores were found to explain 7% of the observed differences in SHAI-18 scores. In conclusion, increased health anxiety in menopausal women negatively affects their attitudes toward menopause, leading to psychosexual difficulties. (*Afr J Reprod Health 2026; 30 [4]:83-93*).

Keywords: Health anxiety, Menopausal attitudes, Sexual function

Résumé

Cette étude a été conçue selon un plan transversal et descriptif afin d'examiner l'impact de l'anxiété liée à la santé sur les attitudes à l'égard de la ménopause et sur la fonction sexuelle chez les femmes ménopausées. Les scores moyens totaux des participantes étaient de $38,67 \pm 11,16$ pour l'Échelle des Attitudes envers la Ménopause (ATMS), de $21,12 \pm 6,63$ pour l'Inventaire Court d'Anxiété liée à la Santé (SHAI-18) et de $15,01 \pm 5,50$ pour l'Indice de Fonction Sexuelle Féminine (FSFI-6). Une corrélation négative a été observée entre les scores ATMS et ceux du SHAI-18, y compris sa sous-échelle "Hypersensibilité aux Symptômes Physiques" ($p < 0,05$). De plus, une association négative a été constatée entre les scores SHAI-18 et FSFI-6 ($p < 0,05$). L'analyse de régression a révélé que l'ATMS avait un effet statistiquement significatif sur le SHAI-18 ($p < 0,001$), avec une augmentation d'un point du SHAI-18 associée à une diminution de 0,160 point des scores ATMS. Par ailleurs, 7 % de la variance des scores SHAI-18 s'expliquaient par les scores ATMS. En conclusion, une anxiété accrue liée à la santé chez les femmes ménopausées influence négativement leurs attitudes envers la ménopause, entraînant des difficultés psychosexuelles. (*Afr J Reprod Health 2026; 30 [4]: 83-93*).

Mots-clés: Anxiété santé, Attitudes ménopausiques, Sexualité

Introduction

Menopause represents a significant turning point in a woman's life cycle, marking the intersection of biological and psychosocial changes.¹ Although it is considered a physiological process, menopause can be perceived as a pathological condition due to symptoms such as hot flashes, night sweats, decreased libido, fatigue, anxiety, and depression.² While the decline in estrogen levels is a key determinant in the development of menopausal symptoms, the perception of menopause is also

shaped by socio-cultural, economic, and educational factors alongside the biological condition.³⁻⁵ Physical changes during menopause can be perceived as illness by some women, leading to increased health anxiety.³⁻⁶ Indeed, health anxiety is a prominent psychological factor during this period. It is defined as the perception of normal bodily sensations as threats, accompanied by persistent worry about these sensations.⁷ The physiological symptoms of menopause may trigger fear of illness in some women, adversely affecting psychological adaptation, attitudes toward menopause, and sexual

functions.⁸⁻⁹ Women's attitudes toward menopause directly shape their experiences during this period. Lack of information, cultural beliefs, age, and the value attributed to fertility can influence women's attitudes toward menopause either positively or negatively.¹⁻¹⁰ Negative attitudes toward menopause are associated with perceiving the process as threatening, increased symptom severity, and decreased coping capacity. As a result, health anxiety deepens and quality of life is significantly affected. The literature emphasizes that positive attitudes toward menopause both reduce health anxiety and help preserve sexual functioning.^{3,7,11} Sexual dysfunctions are commonly reported among women in the postmenopausal period. Problems such as decreased sexual desire, orgasmic dysfunction, and dyspareunia have been reported with prevalence rates ranging from 22 % to 85%.^{12,13,15} In addition to hormonal factors, body image, health anxiety, and attitudes toward menopause also influence the development of these dysfunctions.^{7,11} It has been reported that women experiencing high levels of health anxiety tend to associate sexuality with stress and illness, potentially increasing sexual dysfunctions such as decreased desire, difficulty with arousal, and sexual dissatisfaction.^{7,17} These difficulties can further diminish overall well-being and quality of life during the menopausal transition.

Cultural context also plays a substantial role in shaping menopausal perceptions and behaviors. In Turkey, menopause is frequently perceived as the end of femininity and sexual vitality, a belief that may weaken psychological resilience, lower self-esteem, and intensify health anxiety surrounding both bodily changes and sexual functioning.¹⁶⁻¹⁸ Moreover, many women hesitate to seek professional support due to cultural taboos or discomfort discussing sexual concerns.¹⁸ These barriers underscore the importance of examining how psychological factors, particularly health anxiety, interact with attitudes toward menopause and sexual health. The investigation was designed to determine how health anxiety affects both women's perceptions of menopause and their sexual health during the menopausal transition. The findings are expected to enhance understanding of menopause's multifaceted nature and support women in navigating this process more consciously and healthily. While the literature contains numerous

studies on menopause, comprehensive research simultaneously exploring the multidimensional relationship between health anxiety, attitudes, and sexual functions is limited.^{12,13,15-18} This study is the first of its kind in Turkey to address these variables together, filling a significant gap in the literature. It is anticipated that this unique approach will guide the development of clinical and psychoeducational intervention programs aimed at improving women's health. Accordingly, this study sought to address the following research questions;

What is the relationship between health anxiety and attitudes toward menopause in menopausal women?

How does health anxiety affect sexual function in menopausal women?

Do socio-demographic characteristics influence health anxiety, attitudes toward menopause, and sexual function scores?.

Methods

Study design

A cross-sectional and descriptive study design was applied in this research.

Setting and study period

The research was conducted with menopausal women who applied to Yozgat Bozok University Research and Application Hospital between March and September 2024.

Participants and sample

The study population comprised menopausal women presenting to Yozgat Bozok University Research and Application Hospital between March and September 2024. Participants were recruited using a convenience sampling method. Inclusion criteria required participants to be menopausal, proficient in Turkish, free from communication barriers, and willing to provide informed consent. Exclusion criteria included severe psychiatric or neurological disorders and surgical menopause. A total of 300 women meeting these criteria were enrolled. According to the post hoc power analysis performed using the G-Power 3.1.94 programme, the power of the study was 0.99, obtained by taking $\alpha = 0.05$ and $\beta = 0.95$, with an effect size of 0.19.

Data collection instruments

Data collection instruments included the Descriptive Information Form, the Attitude Toward Menopause Scale (ATMS), the Short Health Anxiety Inventory (SHAI-18), and the Female Sexual Function Index (FSFI-6).

Descriptive information form

The form was constructed by the investigators in line with the literature¹⁶⁻¹⁸ and expert recommendations.

Short health anxiety inventory (SHAI-18)

Developed by Salkovskis et al.¹⁹, the SHAI-18 aims to distinguish individuals experiencing health anxiety from those with actual physical illness but no related health concerns. Aydemir et al.²⁰ were responsible for the Turkish validation of the scale. The instrument comprises 18 items and 2 subscales, utilizing a four-point Likert-type response format. The subscales of the SHAI-18 are: “Hypersensitivity and Anxiety Toward Bodily Symptoms” (14 items) and “Negative Consequences of Illness” (4 items). Each item is answered using options: labeled from “a” to “d” and scored between 0 and 3. Scale scores span from 0 to 54, with elevated values reflecting higher levels of health anxiety. Within the Turkish adaptation, the scale demonstrated a Cronbach’s alpha of 0.91²⁰, while in the current study it was 0.77.

Attitude toward menopause scale (ATMS)

The Attitude Toward Menopause Scale (ATMS), developed by Uçanok and Bayraktar²¹, was designed to assess women’s attitudes toward menopause across various age groups. The instrument comprises 20 items, which are rated on a five-point Likert scale, including both positively and negatively worded statements. Responses to positively worded items are scored as follows: 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, and 4 = strongly agree. For negatively worded items, the scoring is reversed. Elevated scores on the scale reflect a more favorable attitude toward menopause, whereas lower scores denote a less positive or negative perspective. The scale’s midpoint, set at 40, represents the average score and serves as a reference point for interpreting women’s attitudes. In the Turkish adaptation, the scale demonstrated a Cronbach’s

alpha of 0.86, and in the present study, it yielded a reliability coefficient of 0.87, indicating robust internal consistency.

Female sexual function index (FSFI-6)

The FSFI-6 is a shortened version of the FSFI-19, originally developed to evaluate female sexual function²². The Turkish adaptation’s psychometric properties were established by Sonbahar et al.²³ The instrument covers six dimensions: desire, arousal, lubrication, orgasm, satisfaction, and pain. The questions measuring desire and satisfaction employ a five-point Likert rating (1-5), while other items utilize a six-point scale (0-5). FSFI-6 overall scores range between 2 and 30, with smaller values reflecting greater sexual impairment. In the Turkish adaptation study, Cronbach’s alpha was reported to be 0.86²³, compared to 0.85 in the current study.

Data collection

Data were obtained via face-to-face interviews arranged at the participants’ convenience. Each interview lasted about 15-20 minutes to ensure full administration of the instruments.

Ethical considerations

Approval to conduct the study was granted by the Ethics Committee for Social and Human Sciences at Yozgat Bozok University (Decision No: 12/11, dated 20.03.2024), and the hospital provided formal permission. The purpose of the study was outlined to all participants, and informed consent was collected before commencing data collection. The study followed the ethical framework outlined in the Declaration of Helsinki.

Data analysis

Analyses of the collected data were carried out with IBM SPSS Statistics Standard Concurrent User V 26 (IBM Corp., Armonk, New York, USA). Descriptive statistics were generated, and the Kolmogorov-Smirnov test examined the normality of the data. Based on the skewness coefficient, kurtosis coefficient, coefficient of variation, the variables were found to be normally distributed.²⁴ The independent samples t-test was conducted to compare two groups, whereas one-way ANOVA

was performed for comparisons among three groups. The relationships among variables were assessed using Pearson's correlation coefficient. Associations between variables were evaluated using simple linear regression, considering $p < 0.05$ as the significance level

Results

Table 1 indicates that 49% of the menopausal women had completed primary school, and all participants were married. A total of 76.3% reported having a moderate income level, 72% lived in a nuclear family, 54.7% rated their physical health as moderate, and 55% evaluated their mental health as poor. Additionally, 42.3% of the women had at least one chronic illness, and 95.3% experienced natural menopause, 69.3% had not received services from a healthcare institution regarding menopausal complaints, 50.3% had not received any information about menopause from a healthcare institution, and 79.7% reported not receiving any treatment for menopausal symptoms.

A statistically significant difference was found in menopausal women's income status, perceived physical and mental health status, and the mean ATMS scores ($p < 0.05$). These significant differences were attributed to the comparison between women with moderate and good income levels, between those perceiving their physical health as moderate versus good, and between those perceiving their mental health as poor. A statistically significant difference was observed among menopausal women's educational status, family structure, presence of chronic disease, receipt of healthcare services related to menopausal complaints, receipt of information about menopause

from healthcare institutions, and treatment for menopausal symptoms with the mean FSFI-6 scores ($p < 0.05$). These significant differences were found to stem from women who are literate or primary school graduates; those living in extended families; those with chronic diseases; those who did not receive healthcare services or information related to menopausal complaints and menopause; and those who did not receive treatment for menopausal symptoms. The analysis revealed statistically significant differences concerning menopausal women's family structure, perceived physical and mental health, presence of chronic disease, and mean SHAI-18 scores ($p < 0.05$). These significant differences were found to be associated with women living in extended families, those with chronic illnesses, individuals perceiving their physical health as moderate rather than good, and those reporting poor mental health. Table 2 shows that the mean number of miscarriages/curettages for menopausal women was 0.79 ± 0.85 . The participants had a mean age of 54.17 ± 6.13 years, and their mean duration of marriage was 30.32 ± 8.45 years. Participants reported a mean age of 22.18 ± 4.14 years for their first pregnancy and 48.43 ± 3.85 years for menopause onset. The mean ATMS score was 38.67 ± 11.16 , and the mean SHAI-18 score was 21.12 ± 6.63 . The mean hypersensitivity to bodily symptoms score was 15.54 ± 6.31 , the mean negative consequences of illness score was 5.58 ± 1.47 , and the mean FSFI-6 score was 15.01 ± 5.50 . Analysis revealed a statistically significant inverse relationship between the number of miscarriages/curettages and mean age, marital duration, SHAI-18 scores, and the Hypersensitivity to Bodily Symptoms subscale ($p < 0.05$).

Table 1: ATMS, FSFI-6, and SHAI-18 scores by socio-demographic and health characteristics in menopausal women (n=300)

Characteristics			ATMS	FSFI-6	SHAI-18
Education Status	n	%	Mean \pm SD		
Literate	43	14.3	38.79 ± 10.86	12.84 ± 5.71^a	23.67 ± 7.16
Primary school	147	49.0	37.73 ± 11.59	14.58 ± 5.52^a	20.42 ± 6.59
Secondary school	38	12.7	39.68 ± 8.97	16.29 ± 5.44^b	22.05 ± 6.57
High school	48	16.0	41.21 ± 11.53	15.81 ± 4.58^{ab}	20.65 ± 6.53
University	24	8.0	37.54 ± 11.29	17.96 ± 5.07^b	20.33 ± 5.29
Test stat.			1.024**	4.625**	2.377**
p			0.395	0.001	0.052
Income status					
Low income	7	2.3	43.29 ± 9.43^{ab}	15.00 ± 6.40	21.29 ± 8.64
Moderate income	229	76.3	37.47 ± 10.72^a	14.76 ± 5.38	21.32 ± 6.52

High income	64	21.3	42.47 ± 12.00 ^b	15.91 ± 5.77	20.41 ± 6.88
Test stat.			5.819**	1.082**	0.474**
p			0.003	0.340	0.623
Family structure					
Nuclear family	216	72.0	39.10 ± 11.33	15.54 ± 5.20	20.60 ± 6.51
Extended family	84	28.0	37.57 ± 10.70	13.65 ± 6.01	22.46 ± 6.8
Test stat.			1.064*	2.533*	-2.197*
p			0.288	0.012	0.029
Self-rated physical health					
Good	127	42.3	41.09 ± 11.04 ^a	15.06 ± 5.71	19.52 ± 6.16 ^a
Moderate	164	54.7	36.55 ± 10.36 ^b	15.04 ± 5.33	22.18 ± 6.62 ^b
Poor	9	3.0	43.22 ± 18.40 ^{ab}	13.89 ± 5.67	24.56 ± 8.85 ^{ab}
Test stat.			6.480**	0.194**	7.274**
p			0.006	0.824	0.001
Self-rated mental health					
Good	135	45.0	41.79 ± 11.95	15.24 ± 5.75	19.39 ± 6.16
Poor	165	55.0	36.12 ± 9.78	14.83 ± 5.28	22.54 ± 6.69
Test stat.			4.513*	0.638*	-4.199*
p			<0.001	0.524	<0.001
Chronic condition status					
Yes	127	42.3	37.18 ± 10.71	14.17 ± 5.88	22.86 ± 6.21
No	173	57.7	39.76 ± 11.38	15.64 ± 5.11	19.85 ± 6.66
Test stat.			-1.990*	-2.308*	3.975*
p			0.048	0.022	<0.001
Menopause type					
Natural	286	95.3	38.86 ± 11.07	15.11 ± 5.47	21.10 ± 6.61
Surgical	14	4.7	34.71 ± 12.64	13.00 ± 5.82	21.50 ± 7.32
Test stat.			1.360*	1.407*	-0.217*
p			0.175	0.160	0.828
Utilization of healthcare services due to menopausal symptoms					
Yes	92	30.7	38.41 ± 11.15	16.03 ± 4.92	21.34 ± 6.89
No	208	69.3	38.78 ± 11.19	14.56 ± 5.68	21.03 ± 6.53
Test stat.			-0.265*	2.272*	0.370*
p			0.791	0.024	0.711
Receiving menopause information from healthcare providers					
Yes	149	49.7	38.09 ± 11.09	15.81 ± 4.94	21.15 ± 6.71
No	151	50.3	39.25 ± 11.23	14.23 ± 5.90	21.09 ± 6.59
Test stat.			-0.898*	2.506*	0.080*
p			0.370	0.013	0.936
Receiving treatment for menopausal symptoms					
No	239	79.7	38.85 ± 11.34	14.70 ± 5.68 ^a	21.29 ± 6.78
Hormone replacement therapy	29	9.7	38.83 ± 10.86	16.86 ± 4.02 ^b	20.97 ± 6.29
Complementary and alternative medicine	32	10.7	37.19 ± 10.22	15.66 ± 4.95 ^{ab}	20.00 ± 5.83
Test stat.			0.315**	3.493**	0.543**
p			0.730	0.038	0.581

n: Sample size, %: Percent, ^{a-b}: Groups with the same letter are not significantly different for each variable, mean ± SD, * Independent-samples t test, **One-way ANOVA, ATMS: Attitude Toward Menopause Scale; FSFI-6: Female Sexual Function Index; SHAI-18: Short Health Anxiety Inventory

Table 2: Descriptive statistics and correlation analyses between ATMS, FSFI-6, SHAI-18, their subdimensions, and various sociodemographic factors.

Variables	Mean ± SD	1	2	3	4	5	6	7	8	9	10
1. Miscarriages/curettages	0.79 ± 0.85	-									
2. Age	54.17 ± 6.13	-0.312**	-								
3. Duration of marriage	30.32 ± 8.45	-0.342**	0.614**	-							
4. Age at first pregnancy	22.18 ± 4.14	0.213**	-0.085	-0.330**	-						
5. Age at menopause onset	48.43 ± 3.85	-0.032	0.532**	0.364**	0.020	-					
6. ATMS	38.67 ± 11.16	0.107	-0.062	-0.097	0.001	0.009	-				
7. SHAI-18	21.12 ± 6.63	-0.117*	0.150**	0.096	-0.144*	0.180**	-0.270**	-			
8. Hypersensitivity to bodily symptoms	15.54 ± 6.31	-0.145*	0.156**	0.138*	-0.172**	0.176**	-0.280**	0.976**	-		
9. Negative consequences of illness	5.58 ± 1.47	0.094	0.008	-0.159**	0.089	0.060	-0.017	0.329**	0.113	-	
10. FSFI-6	15.01 ± 5.50	-0.001	-0.312**	-0.342**	0.213**	-0.032	0.107	-0.117*	-0.145*	0.094	-

Pearson correlation coefficient was used, mean ± SD, ATMS: Attitude Toward Menopause Scale; SHAI-18: Short Health Anxiety Inventory; FSFI-6: Female Sexual Function Index, *p<0,05, **p<0.01

Table 3: The effect of the ATMS on the SHAI-18

	β^1 (%95 CI)	β^2	t	p
Constant	27.326 (24.699 / 29.953)		20.473	<0.001
ATMS	-0.160 (-0.226 / -0.095)	-0.270	-4.836	<0.001

F=23.389; $p<0.001$; $R^2=0.070$; SE of Estimate=6.400; β^1 : Non-standardized Coefficient; β^2 : Standardized Coefficient; Durbin-Watson= 1.423. ATMS: Attitude Toward Menopause Scale; SHAI-18: Short Health Anxiety Inventory

The results demonstrated a statistically meaningful association between the number of miscarriages/curettages and the mean age at first pregnancy ($p<0.05$). Additionally, significant positive associations were detected between age and the average scores for both marriage duration and age at menopause onset ($p<0.05$). A statistically meaningful positive association was observed among women's age, age at menopause onset, and the mean scores of SHAI-18 including its Hypersensitivity to Bodily Symptoms subscale ($p<0.05$). Results showed a statistically relevant negative association linking women's age, duration of marriage, and FSFI-6 mean values ($p<0.05$). A statistically meaningful negative correlation was identified linking marital duration with the mean scores of age at first pregnancy, the Negative Consequences of Illness subscale, and FSFI-6 ($p<0.05$). Moreover, analysis revealed a statistically significant negative association between the age at first pregnancy and the average scores on SHAI-18 and the Hypersensitivity to Bodily Symptoms subscale ($p<0.05$). Findings demonstrated a statistically significant inverse association between ATMS and the mean SHAI-18 scores, as well as its Hypersensitivity to Bodily Symptoms subscale ($p<0.05$). SHAI-18 was positively associated with its subscales (Hypersensitivity to Bodily Symptoms and Negative Consequences of Illness) and inversely associated with the mean FSFI-6 scores in women ($p<0.05$).

According to Table 3, in the model established for women in the menopausal period, ATMS had a statistically significant effect on SHAI-18 ($p<0.001$). An increase of one unit in SHAI-18 corresponded to a 0.160-point decrease in ATMS scores. Approximately 7% of the variance in SHAI-18 scores among women was explained by ATMS scores.

Discussion

This study examined the impact of health anxiety on attitudes toward menopause and sexual functions in women during the menopausal period, and interpreted the results in the context of current research. The average age at menopause among the women in the study was 48.43 ± 3.85 years. Globally, the age of menopause generally ranges between 40 and 50 years. In Turkey, the mean age at menopause has been reported to be between 46 and 48 years.²⁵ The age at menopause onset in this study is consistent with the literature. Although menopause is a natural process in a woman's life, in some cultures, the cessation of menstruation is perceived with negativity and uncertainty due to associations with loss of fertility, sexuality, and physical attractiveness.^{16-18,26} In this study, the mean ATMS score was found to be 38.67 ± 11.16 . These findings suggest that the sample is likely to exhibit predominantly negative attitudes toward menopause. The literature, however, reports varying findings that include both positive and negative attitudes toward menopause.^{25,27} In this study, a significant direct association was identified between women's chronological age, age at menopause, health anxiety, and hypersensitivity to bodily symptoms. This finding indicates that as the menopausal process progresses, health anxiety and heightened sensitivity to bodily sensations markedly increase in women. Therefore, the increased health anxiety and bodily hypersensitivity during menopause underscore the necessity for psychosocial interventions.

In this study, significant positive correlations were found between duration of marriage and both age at menopause onset, and hypersensitivity to bodily symptoms. Similarly, Pereira *et al.*²⁸

In their study with menopausal women, reported that relationship duration and age at menopause indirectly affect quality of life and psychological health, and that marital satisfaction and perception of menopause mediate psychological morbidity. The findings of both studies indicate that the menopausal experience is shaped not only by biological factors but also by relational and emotional contexts. These results reveal that the duration of marriage is an important social determinant in a woman's life cycle, influencing both the timing of menopause and its psychological repercussions. In the present study, women's duration of marriage and age at first pregnancy were found to be negatively associated with perceived negative consequences of illness and sexual function levels. These findings suggest that long-term marriages may lead to a decline in women's sexual function, while simultaneously reducing negative health-related expectations. These findings align with those reported by Hassanin et al.²⁹, who conducted a study in Egypt. In the aforementioned study, significant declines in sexual function scores were observed as the duration of marriage increased, particularly, increases in sexual dysfunction were reported alongside decreases in sexual satisfaction and marital happiness. Similarly, in the study by Sezgin and Punamäki³⁰, which examined the health and psychological outcomes of early marriage and adolescent pregnancy, women who married and gave birth at an early age exhibited higher levels of depression, anxiety, and somatization symptoms compared to those who married and gave birth later in life. In this context, the duration of marriage is not only influential in the timing of reproduction but also serves as an important psychosocial factor shaping women's sexuality, body image, and health-related anxieties.

The study results indicated that with increasing mean age at first pregnancy, health anxiety and bodily sensitivity scores significantly declined. This may suggest that experiencing pregnancy at a later age is associated with more balanced management of body perception and cognitive-emotional responses related to health. Our findings are consistent with those of Sharami et al.³¹, who conducted a study with women in the menopausal period. The referenced study reported a significant decrease in psychological menopausal symptoms with increasing age at first pregnancy.

Specifically, women who gave birth at a later age reported lower levels of psychological symptoms. Specifically, women who gave birth at a later age reported lower levels of psychological symptoms. Additionally, it was emphasized that earlier ages at pregnancy may have an exacerbating effect on menopausal symptoms. The common finding of both studies is that the timing of the onset of a woman's reproductive process has long-term effects not only biologically but also on psychological and somatic health. In this context, early pregnancy experience should be considered a potential risk factor for health anxiety and bodily hypersensitivity in later life. Women who perceive menopause as a positive and acceptable period scored significantly lower on health anxiety and hypersensitivity to bodily sensations. This indicates that higher scores on the attitude towards menopause scale are associated with reductions in health anxiety and bodily hypersensitivity levels. In this context, the cross-sectional study conducted by Yağcı et al.³² in the Denizli region also demonstrated that attitudes toward menopause play a decisive role in psychological health, revealing increased anxiety and depression symptoms linked to negative attitudes. This closely aligns with our findings.

In this study, increased health anxiety and bodily hypersensitivity in women were found to be associated with a decline in sexual function. This finding highlights that health anxiety is an important psychological factor affecting not only physical life but also sexual life. Similarly, Saleh et al.³³, in their study with women in the perimenopausal period, reported that increased levels of anxiety and depression were linked to significant decreases in sexual desire, arousal, and satisfaction. Furthermore, Nappi et al.³⁴ demonstrated that sexual dysfunctions observed during the early menopause stage of the menopausal transition are significantly associated not only with hormonal changes but also with increased anxiety, depressive symptoms, and relational conflicts. This study shows that health anxieties play a decisive role in sexual function during menopause by exacerbating issues such as decreased sexual desire and dissatisfaction." Menopausal interventions should be supported with holistic strategies that integrate physiological needs, psychological resilience, and relational dynamics. Our study highlights the decisive effect of health anxiety on attitudes toward menopause and sexual

function. Specifically, for each one-unit increase in health anxiety, a 0.160-unit decrease was observed in menopause attitude scores, with anxiety explaining 7% of the variance in attitudes. This finding indicates that women's bodily anxieties weaken their cognitive and emotional perceptions of menopause.^{14,35}

The study identified that health anxiety has a negative impact on sexual function. Furthermore, the association between increased health anxiety and significant declines in sexual functioning³³⁻³⁴ underscores the necessity for psychoeducational interventions targeting anxiety.

In conclusion, interventions for the menopausal period should adopt holistic strategies that address not only physiological needs but also aim to reduce health anxiety, strengthen psychological resilience, and enhance relational dynamics. This approach is expected to help women perceive menopause in a more balanced and positive way, thereby improving their quality of life.

This study has several noteworthy limitations.

The cross-sectional and descriptive design inherently limits the ability to infer causal relationships between health anxiety, attitudes toward menopause, and sexual function. Moreover, the reliance on a convenience sample from a single hospital may constrain the broader applicability of the findings. Data collection via self-reported questionnaires also introduces the potential for recall bias and social desirability effects. Finally, the influence of additional psychosocial and cultural factors on menopausal experiences was not examined and warrants exploration in future research.

Conclusion

This study demonstrates that elevated health anxiety during menopause adversely affects attitudes and sexual function, with duration of marriage and age at first pregnancy serving as key psychosocial determinants, emphasizing the urgent need for comprehensive interventions-including targeted education, counseling, relational support, and routine anxiety screening-while future research should rigorously evaluate their effectiveness using longitudinal and mixed-methods designs, accounting for the inherent limitations of the current study.

Data availability statement

The data that support the findings of this study are available on re-quest from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Conflict of interests

The authors declare there is no conflicts of interest.

Funding

None.

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References

1. Souza LACE, Reis IA and Lima AA. Climacteric symptoms and quality of life in yoga practitioners. *Explore* (NY). 2022;18(1):70-75. doi:10.1016/j.explore.2020.09.005
2. Hosseinabadi M, Khodadadi N, Tehrani H, Orooji A, Sany SBT. Sexual Function and Associated Factors in Postmenopausal Women: A Systematic Review and Meta-Analysis. *Health Sci Rep*. 2025;8(10):e71270. doi: 10.1002/hsr2.71270.
3. Zhang L, Ruan X, Cui Y and Gu M, Mueck AO. Menopausal Symptoms and Associated Social and Environmental Factors in Midlife Chinese Women. *Clin Interv Aging*. 2020;15:2195-2208.doi:10.2147/CIA.S278976
4. Lee PS and Lee CL. Prevalence of symptoms and associated factors across menopause status in Taiwanese women. *Menopause*. 2020;28(2):182-188. doi:10.1097/GME.0000000000001662
5. Santoro N, Roeca C, Peters BA and Neal-Perry G. The Menopause Transition: Signs, Symptoms, and Management Options. *J Clin Endocrinol Metab*. 2021;106(1):1-15. doi:10.1210/clinem/dgaa764
6. Alblooshi S, Taylor M and Gill N. Does menopause elevate the risk for developing depression and anxiety? Results from a systematic review. *Australas Psychiatry*. 2023;31(2):165-173. doi:10.1177/10398562231165439
7. Malaijerdi R, Amini L, Haghani H, Sadeghi Avval Shahr H. Investigating the relationship between menopausal women's health anxiety and sexual performance and attitude towards menopause. *J Educ Health Promot*. 2023;12:199. doi: 10.4103/jehp.jehp_925_22.
8. AlSwayied G, Frost R and Hamilton FL. Menopause knowledge, attitudes and experiences of women in

- Saudi Arabia: a qualitative study. *BMC Womens Health*. 2024;24(1):624. doi:10.1186/s12905-024-03456-7
9. Tavoli A, Tavoli Z, Effatpanah M and Montazeri A. Prevalence and associated risk factors for sexual dysfunction among postmenopausal women: a study from Iran. *Womens Midlife Health*. 2021;7(1):10. doi:10.1186/s40695-021-00069-0
 10. Heidari M, Ghodusi M, Rezaei P, Kabirian Abyaneh S, Sureshjani EH and Sheikhi RA. Sexual Function and Factors Affecting Menopause: A Systematic Review. *J Menopausal Med*. 2019;25(1):15-27. doi:10.6118/jmm.2019.25.1.15
 11. Nazarpour S, Simbar M, Khorrani M, Jafari Torkamani Z, Saghafi R and Alavi-Majid H. The association between sexual function and body image among postmenopausal women: a cross-sectional study. *BMC Womens Health*. 2021;21(1):403. doi:10.1186/s12905-021-01549-1
 12. Karimi FZ, Pourali L, Hasanzadeh E, Nosrati SF, Poursmaeili N and Abdollahi M. Sexual dysfunction in postmenopausal women. *Acta Med Iran*. 2021;59(12):720-5. doi:10.18502/acta.v59i12.8060
 13. Khani S, Azizi M, Elyasi F, Kamali M, Moosazadeh M. The Prevalence of Sexual Dysfunction in the Different Menopausal Stages: A Systematic Review and Meta-Analysis. *Int J Sex Health*. 2021;33(3):439-472. doi:10.1080/19317611.2021.1926039.
 14. Asmundson GJG and Taylor S. How health anxiety influences responses to viral outbreaks like COVID-19: What all decision-makers, health authorities, and health care professionals need to know. *J Anxiety Disord*. 2020;71:102211. doi:10.1016/j.janxdis.2020.102211
 15. Masliza W, Daud W, Yazid Bajuri M, Shuhaila A, Hatta S, Rohaizat Hassan M, Norzilawati MN. Sexual dysfunction among postmenopausal women. *Clin Ter*. 2014;165(2):83-89. doi:10.7471/CT.2014.1681
 16. Kavlak T and Hisar F. The impact of anxiety on sexual satisfaction in menopausal women. *Int J Human Sci*. 2017;14(3):2722-9. doi:10.14687/jhs.v14i3.4745
 17. Khalesi ZB, Jafarzadeh-Kenarsari F, Mobarrez YD and Abedinzade M. The impact of menopause on sexual function in women and their spouses. *Afr Health Sci*. 2020;20(4):1979-1984. doi:10.4314/ahs.v20i4.56
 18. Altaf F. Psychological distress and sexual dysfunction among premenopausal, perimenopausal and postmenopausal women. *J Cult Perspect*. 2024;3(1). doi:10.63672/b6yatm22
 19. Salkovskis PM, Rimes KA, Warwick HM and Clark DM. The Health Anxiety Inventory: development and validation of scales for the measurement of health anxiety and hypochondriasis. *Psychol Med*. 2002;32(5):843-853. doi:10.1017/s0033291702005822
 20. Aydemir Ö, Kırpınar İ, Satı T, Uykur B and Cengiz C. Sağlık Anksiyetesi Ölçeği'nin Türkçe için güvenilirlik ve geçerlilik çalışması. *Nöropsikiyatri Arşivi*. 2013;50:325-31. <https://www.noropsikiyatriarsivi.com/sayilar/420/buyuk/325-331.pdf>
 21. Uçanok Z and Bayraktar R. Farklı yaş gruplarındaki kadınlarda menopoza ilişkin belirtilerin, tutumların ve yaşama bakış açısının incelenmesi. *3P Dergisi Psikoloji Psikiyatri Psikofarmakoloji*. 1996;4:11-20. <https://search.trdizin.gov.tr/tr/yayin/detay/41515>
 22. Rosen R, Brown C, Heiman J, Leiblum S, Meston C, Shabsigh R, Ferguson D and D'Agostino R Jr. The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J Sex Marital Ther*. 2000;26(2):191-208. doi:10.1080/009262300278597
 23. Sonbahar AE, Culha MG and Jannini E. The validity and reliability of the Turkish version of the 6-item female sexual function index (FSFI-6) and the relationship between climacturia and female sexual dysfunction. *Int J Impot Res*. 2022;34(6):610-613. doi:10.1038/s41443-021-00463-2
 24. Tabachnick BG and Fidell LS. Using multivariate statistics. 6th ed. Boston: Pearson; 2013.
 25. Yaşar Ö and Yeyğel Ç. 45-60 yaş arası kadınlarda menopoz semptomları ve menopoz tutumu ile yaşam doyumunun incelenmesi. *IGUSABDER*. 2024;14(1):1097-1111. doi:10.38079/igusabder.1231948
 26. Jiao J, Hao J, Hou L, Luo Z, Shan S, Ding Y, Ma L, Huang Y, Ying Q, Wang F, Zhou J, Ning Y, Song P, Xu L. Age at natural menopause and associated factors with early and late menopause among Chinese women in Zhejiang province: A cross-sectional study. *PLoS One*. 2024;19(7):e0307402. doi:10.1371/journal.pone.0307402
 27. Gümüşay M and Erbil N. Kadınların menopoza özgü yaşam kalitesine menopoz tutumunun etkisi. *Ordu Üniv Hemşirelik Çalış Derg*. 2019;2(2):96-109. <https://dergipark.org.tr/tr/download/article-file/820426>
 28. Pereira MG, Bernardo AC, Fernandes I and Almeida AC. Quality of life in heterosexual menopausal women: The indirect effect of sexual and marital satisfaction, menopause representations, and psychological morbidity. *Health Care Women Int*. 2024;45(11):1235-1253. doi:10.1080/07399332.2023.2245374
 29. Hassanin AM, Kaddah AN and El-Amir MY. The relationship of close marital affairs to healthy women's sexual function: a cross-sectional retrospective study in Egypt. *Sex Med*. 2019;7(4):498-504. doi:10.1016/j.esxm.2019.08.008
 30. Sezgin AU and Punamäki RL. Impacts of early marriage and adolescent pregnancy on mental and somatic health: the role of partner violence. *Arch Womens Ment Health*. 2020 Apr;23(2):167. doi:10.1007/s00737-019-00971-7
 31. Sharami SH, Faraji Darkhaneh R, Ghanami Gashti N, Mansour-Ghanaei M and Bab Eghbal S. The association between reproductive history and menopausal symptoms: evidence from a cross-sectional survey. *BMC Womens Health*. 2022;22(1):136. doi:10.1186/s12905-022-01715-z
 32. Yağcı N, Şimşek Ş and Şenel A. The role of attitudes towards menopause and psychological symptoms of women in

- climacteric period: Denizli sample. *Turk J Public Health*. 2022;20(1):80-9. doi:10.20518/tjph.943739
33. Saleh SA, Almadani N, Mahfouz R, Nofal HA, El-Rafey DS and Seleem DA. Exploring the Intersection of Depression, Anxiety, and Sexual Health in Perimenopausal Women. *Int J Womens Health*. 2024;16:1315-1327. doi:10.2147/IJWH.S464129
34. Nappi RE, Albani F, Santamaria V, Tonani S, Magri F, Martini E, Chiovato L and Polatti F. Hormonal and psycho-relational aspects of sexual function during menopausal transition and at early menopause. *Maturitas*. 2010;67(1):78-83. doi: 10.1016/j.maturitas.2010.05.008.
35. Shorey S and Ng ED. The experiences and needs of Asian women experiencing menopausal symptoms: a meta-synthesis. *Menopause*. 2019;26(5):557-569. doi:10.1097/GME.0000000000001269.