

RESEARCH ARTICLE

The Relationship Between Body Image, Self-Esteem, and Sexual Function in Menopausal Women

Menopoz Dönemindeki Kadınlarda Beden Algısı, Benlik Saygısı ve Cinsel İşlev Arasındaki İlişki

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ABSTRACT

Objective: This study aimed to evaluate body image, self-esteem, and sexual function in women during menopause.

Material and Method: A total of 73 women during menopause were included in the study. All participants completed a sociodemographic data form, the Body Image Scale (BIS), the Female Sexual Function Index (FSFI), the Menopause Rating Scale (MRS), and the Rosenberg Self-Esteem Scale (RSES).

Results: BIS scores differed significantly according to educational level, age group, and employment status, while significant differences in RSES scores were observed across age groups, educational levels, and employment status. The MRS total score was significantly higher among women with lower educational levels, those who were unemployed, and those who were sexually inactive. The FSFI total score showed significant differences based on age group and the presence of illness in the family. A moderate negative correlation was observed between the MRS total score and the BIS score, while a moderate positive correlation was found between the MRS total score and the RSES score. A strong negative correlation was observed between BIS and RSES scores. In addition, increasing age was associated with lower BIS and FSFI scores. In the multiple linear regression analyses, the MRS total score ($\beta = -0.491$) and age ($\beta = -0.220$) were identified as independent predictors of the BIS score. Menopausal symptoms ($\beta = 0.305$) were the sole independent predictor of the RSES score, whereas age ($\beta = -0.435$) was the sole independent predictor of female sexual function.

Conclusion: Menopausal symptom severity was identified as an independent predictor of body image and self-esteem, whereas age was identified as an independent predictor of body image and female sexual function.

Keywords: Menopause, Body Image, Self-Esteem, Female Sexual Function.

ÖZET

Amaç: Bu çalışmada, menopoz dönemindeki kadınlarda beden algısı, benlik saygısı ve cinsel işlevin değerlendirilmesi amaçlanmıştır.

Gereç ve Yöntem: Çalışmaya menopoz döneminde olan 73 kadın dâhil edildi. Tüm katılımcılara sosyodemografik veri formu, Beden Algısı Ölçeği (BAÖ), Kadın Cinsel İşlev İndeksi (FSFI), Menopoz Değerlendirme Ölçeği (MDÖ) ve Rosenberg Benlik Saygısı Ölçeği (RBSÖ) uygulandı.

Bulgular: BAÖ puanlarının eğitim düzeyi, yaş grubu ve çalışma durumuna göre; RBSÖ puanlarının ise yaş grubu, çalışma durumu ve eğitim düzeyine göre farklılık gösterdiği saptandı. MDÖ toplam puanı, eğitim düzeyi daha düşük olan, işsiz ve cinsel olarak aktif olmayan kadınlarda daha yüksek bulundu. FSFI toplam puanı yaş grubu ve soy geçmişinde hastalık olma durumuna göre farklılık gösterdi. MDÖ toplam puanı ile BAÖ puanı arasında orta düzeyde negatif, MDÖ toplam puanı ile RBSÖ puanı arasında ise orta düzeyde pozitif korelasyon bulundu. BAÖ ve RBSÖ puanları arasında ise güçlü düzeyde negatif korelasyon saptandı. Ayrıca, artan yaşın daha düşük BAÖ ve FSFI puanları ile ilişkili olduğu bulundu. Çoklu doğrusal regresyon analizlerinde, MDÖ toplam puanı ($\beta = -0,491$) ve yaş ($\beta = -0,220$) BAÖ puanının bağımsız belirleyicileri olarak belirlendi. Menopoz semptomları ($\beta = 0,305$) RBSÖ puanının tek bağımsız belirleyicisi olarak saptanırken, yaş ($\beta = -0,435$) kadın cinsel işlevinin tek bağımsız belirleyicisi olarak bulundu.

Sonuç: Menopoz semptom şiddetinin beden algısı ve benlik saygısının, yaşı ise beden algısı ve kadın cinsel işlevini bağımsız olarak yordadığı saptanmıştır.

Anahtar Sözcükler: Menopoz, Beden Algısı, Benlik Saygısı, Kadın Cinsel İşlevi.

Menopause is characterized by the permanent cessation of menstruation due to the depletion of the ovarian follicular reserve and is an inevitable phase of a woman's life (1). The average age of menopause falls within the 45-55 age range, and with the aging of the population and the increase in average life expectancy, the significance of menopause and its associated issues is growing (2, 3). In fact, this period, which coincides with the onset of hormonal changes, is not limited to the end of reproductive functions, but is also a transitional phase that affects a woman's entire body and emotional well-being (4). It has been shown that mood disturbances are particularly common during the postpartum period when estrogen levels fluctuate rapidly as well as during the premenopausal and postmenopausal periods. These symptoms may manifest as feelings of sadness, listlessness, mood swings, irritability, a decline in overall performance, difficulty concentrating, and forgetfulness (5, 6). In addition to symptoms such as hot flashes, vaginal dryness, and sleep disturbances, which begin with a decline in estrogen and progesterone levels, changes such as weight gain, hair loss, and alterations in body fat distribution may also occur during menopause. This transition requires a woman to adapt to the changes in her body and may adversely affect their body image (7, 8). Body image is a multidimensional construct encompassing an individual's feelings, thoughts, and evaluations regarding their body (9) and, in women, is closely related not only to physical appearance but also to perceptions of femininity, reproductive capacity, and perception of aging (10, 11). Physical changes during menopause may directly or indirectly have a negative impact on women's body image (12).

Self-esteem is conceptualized as an individual's overall sense of self-worth and personal competence, and it is influenced by various factors (13). In addition to the loss of reproductive capacity that accompanies menopause, the psychological impact of physical changes on a woman's sense of femininity, anxieties related to the aging process, and changes in social roles may also negatively affect self-esteem (14). Studies conducted during menopause have reported significant associations between depressive symptoms, increased anxiety levels, a decline in quality of life, and a decrease in self-esteem (15). Low self-esteem is associated with reduced psychological well-being, increased depressive symptoms, and difficulties in interpersonal relationships. In contrast, higher self-esteem has been associated with better adaptation to the menopausal transition and improved quality of life (16, 17).

Female sexual function is a complex system consisting of many interrelated components, such as sexual desire, arousal, lubrication and orgasm (18). While declining estrogen levels are associated with physiological changes such as vaginal atrophy, decreased lubrication, and dyspareunia, significant decreases in sexual desire, arousal, the ability to achieve orgasm, and sexual satisfaction are also common complaints during menopause (19). Sexual dysfunction is too complex to be explained by hormonal factors alone; it must be addressed within a biopsychosocial framework that incorporates body image, self-esteem, psychological well-being and sociocultural factors (20). Indeed, research shows that women who are dissatisfied with their body image develop avoidance behaviors in their sex lives, experience a decline in sexual self-confidence, and that this situation affects their relationships with their partners (21).

It appears that there are relatively few studies in the literature that address menopause from an interdisciplinary perspective. It has been hypothesized that hormonal and physical changes associated with menopause may be linked to a more negative body image, lower self-esteem, and impaired sexual function. Furthermore, this multifaceted and reciprocal interaction between body image, self-esteem, and sexual function demonstrates that the menopausal period falls within the scope of multidisciplinary care and intervention, not just that of obstetricians and gynecologists. During this process, integrating psychotherapeutic support alongside hormone replacement therapy and gynecological approaches and managing accompanying metabolic and cardiovascular risks in internal medicine practice may contribute to that women going through menopause receive comprehensive care. The aim of our study was to assess body image, self-esteem, and sexual function in menopausal women and to examine the relationships among these dimensions.

MATERIAL AND METHOD

Approval for this study was obtained from the Fırat University Ethics Committee for Non-Interventional Clinical Research (Decision No: 2024/01-27, Date:09.01.2024). The study adhered to the ethical principles of the Declaration of Helsinki.

This cross-sectional study was conducted among women who attended the Internal Medicine outpatient clinics at Fethi Sekin City Hospital between March 2024 and December 2024. Inclusion criteria included being between the ages of 40 and 65, having entered menopause naturally (at least 12 months of amenorrhea), being literate, possessing the cognitive ability to answer the questionnaires,

and being married or having an active sexual partner. Participants with a history of surgical or iatrogenic menopause; those with a known psychiatric diagnosis or currently taking psychiatric medication; those with chronic systemic diseases such as diabetes, thyroid disease, or cancer; those with a history of gynecological or urological surgery that could affect sexual function; participants without an active sexual partner or who had not engaged in sexual intercourse in the past month, as well as individuals taking medications (such as antihypertensives) that could affect sexual function-other than hormone replacement therapy-were excluded. Volunteer participants who agreed to take part in the study were informed about the purpose of the research, and written informed consent forms were obtained. The surveys were administered through face-to-face interviews, which lasted an average of 30 minutes, in a quiet setting that ensured privacy. A total of 81 patients were included in the study; however, 3 women withdrew voluntarily, and 5 women were excluded because they had not completed the scales in full.

Data Collection Tools

Socio-Demographic and Clinical Information

Form: This form, created by researchers, includes variables such as age, education attainment, marital status, employment status, body mass index (BMI), age at menopause, and duration of menopause.

Body Image Scale (BIS): Originally developed by Secord and Jourand, this scale has undergone validity and reliability studies in Turkish. Each item on the scale relates to an organ, a body part, or a bodily function. For each item, respondents assign scores ranging from 1 to 5, choosing from response options such as “I don’t like it at all,” “I don’t like it,” “I’m undecided,” “I like it,” and “I like it very much.” The total score ranges from 40 to 200 (22, 23).

Rosenberg Self-Esteem Scale (RSES): The scale consists of a total of 63 multiple-choice questions, the first 10 of which are used to measure self-esteem. In our study, we evaluated the first 10 items of the scale. Higher scores indicate higher self-esteem. A validity and reliability study has been conducted in our country (24, 25).

Menopause Rating Scale (MRS): It was developed to measure the severity of menopausal symptoms and has been adapted into Turkish. The Likert-type scale consists of a total of 11 items related to menopausal symptoms, with the following response options for each item: “0 = None,” “1 = Mild,” “2 = Moderate,” “3 = Severe,” and “4 = Very severe.” The lowest possible score is 0, and the highest is 44; a higher score on the scale indicates an increase in the severity of menopause-related symptoms (26, 27).

Female Sexual Function Scale (FSFI): Developed as a 19-item multidimensional scale to assess female sexual function, it has been adapted into Turkish.

This scale assesses sexual problems or function over the past 4 weeks. The scale’s structure includes the following subdimensions: desire, arousal, lubrication, orgasm, satisfaction, and pain. Questions 3-14 and 15-19 on the scale use a 6-point Likert scale (ranging from 0 to 5), while the other questions use a 5-point Likert scale (ranging from 1 to 5). The lowest possible score on the scale is 2, and the highest is 36 (28, 29).

Statistical Analysis

The data were analyzed using the IBM SPSS Statistics 21.0 software package. The normality of continuous variables was assessed using the Shapiro-Wilk test. Descriptive statistics were presented as mean $\pm$ standard deviation and median (minimum-maximum) for continuous variables, and as frequency and percentage for categorical variables. The Mann-Whitney U test was used to compare two independent groups, and the Kruskal-Wallis H test was used to compare more than two groups. Relationships between continuous variables were examined using Spearman’s correlation analysis. Multiple linear regression analysis was performed to identify independent predictors of scale scores; multicollinearity in the models was assessed using the variance inflation factor (VIF). A p-value of <0.05 was considered statistically significant.

RESULTS

The study included 73 women diagnosed with menopause. The participants’ mean age was 58.88 ± 9.17 years, the mean age at menopause was 49.66 ± 4.04 years, and the mean duration of menopause was 9.27 ± 8.22 years. The vast majority of the participants were married (94.5%) and lived in urban areas (93.2%); 49.3% of the participants had a high school education or higher, and 72.6% were not employed. Menopause had occurred spontaneously in 94.5% of the participants, and 68.5% reported being sexually active. Sociodemographic and clinical characteristics are presented in table 1.

Table 1. Sociodemographic and clinical characteristics of the participants (n =73).

Variables	n (%)
Marital status (Married / Single)	69 (94,5) / 4 (5,5)
Educational level (Below high school/High school or above)	37 (50,7) / 36 (49,3)
Place of residence (Rural / Urban)	5 (6,8) / 68 (93,2)
Economic status (Moderate / High)	65 (89,0) / 8 (11,0)
Employment status (Employed/Unemployed)	20 (27,4) / 53 (72,6)
Smoking status (Yes / No)	20 (27,4) / 53 (72,6)
Family history of disease (Yes / No)	10 (13,7) / 63 (86,3)
Sexual activity status (active / inactive)	50 (68,5) / 23 (31,5)
BMI category (Normal weight/Overweight /Obese)	20 (27,4) / 27 (37,0) / 26 (35,6)

The descriptive characteristics of the participants are presented in table 2.

Table 2. Descriptive characteristics of age, menopause-related variables, and scale scores.

Variables	Mean $\pm$ SD	Median (Min–Max)
Age (year)	58,88 $\pm$ 9,17	57,0 (46–85)
Age at menopause (years)	49,66 $\pm$ 4,04	50,0 (36–58)
Duration of menopause (years)	9,27 $\pm$ 8,22	7,0 (1–34)
MRS somatovegetative subscale	8,51 $\pm$ 3,20	8,0 (0–15)
MRS psychological subscale	7,89 $\pm$ 3,73	8,0 (0–16)
MRS urogenital subscale	6,71 $\pm$ 3,06	7,0 (0–12)
MRS total score	23,11 $\pm$ 8,24	24,0 (0–35)
BIS score	121,84 $\pm$ 29,22	112,0 (77–200)
RSES score	22,47 $\pm$ 5,55	22,0 (10–35)
FSFI total score	18,60 $\pm$ 9,51	21,8 (3,6–36,0)

MRS; Menopause Rating Scale, FSFI; Female Sexual Function Index, BIS; Body Image Scale, RSES; Rosenberg Self-Esteem Scale, SD; standard deviation.

The mean age was 58.88 $\pm$ 9.17 years, and the mean age at menopause was 49.66 $\pm$ 4.04 years. The mean duration of menopause was 9.27 $\pm$ 8.22 years. Regarding menopause-related symptoms, the mean

MRS total score was 23.11 $\pm$ 8.24, with mean somatovegetative, psychological, and urogenital subscale scores of 8.51 $\pm$ 3.20, 7.89 $\pm$ 3.73, and 6.71 $\pm$ 3.06, respectively. The mean BIS and RSES scores were 121.84 $\pm$ 29.22 and 22.47 $\pm$ 5.55, respectively. The mean FSFI total score was 18.60 $\pm$ 9.51, with a median of 21.8 (range, 3.6–36.0).

Comparison of Scale Scores by Independent Variables: The total score on the MRS showed significant differences based on educational level ($p < 0.001$), employment status ($p < 0.001$) and sexual activity status ($p = 0.002$); scores were higher in the groups with less than a high school education, those who were not employed and those who were sexually inactive. BIS scores differed according to educational level ($p = 0.019$), age group ($p < 0.001$), and employment status ($p = 0.001$); RSES scores differed according to age group ($p = 0.002$), employment status ($p = 0.007$), and educational level ($p = 0.016$). The FSFI total score showed significant differences based on age group ($p = 0.003$) and the presence of illness in the family ($p = 0.027$). No significant differences in scale scores were found based on smoking status, economic status, or body mass index groups (all $p > 0.05$) (Table 3).

Table 3. Comparison of scale scores by independent variables.

Variables	MSR total	BIS	RSES	FSFI total
Below high school (n =37)	26,2 $\pm$ 7,2	114,1 $\pm$ 26,9	23,8 $\pm$ 5,1	18,1 $\pm$ 10,6
High school or above (n =36)	19,9 $\pm$ 8,1	129,8 $\pm$ 29,7	21,1 $\pm$ 5,7	19,1 $\pm$ 8,4
p	<0,001	0,019	0,016	0,841
<60 year (n =45)	21,6 $\pm$ 8,8	131,9 $\pm$ 30,0	21,0 $\pm$ 5,8	21,9 $\pm$ 7,8
$\geq$ 60 year (n =28)	25,5 $\pm$ 6,8	105,6 $\pm$ 19,1	24,8 $\pm$ 4,3	13,2 $\pm$ 9,7
p	0,070	<0,001	0,002	0,003
Employed (n =20)	16,5 $\pm$ 7,6	139,7 $\pm$ 26,5	19,9 $\pm$ 4,1	22,5 $\pm$ 6,8
Unemployed (n =53)	25,6 $\pm$ 7,1	115,1 $\pm$ 27,5	23,4 $\pm$ 5,8	17,1 $\pm$ 10,0
p	<0,001	<0,001	0,007	0,150
Smokers (n =20)	24,8 $\pm$ 5,9	126,2 $\pm$ 28,3	21,8 $\pm$ 5,9	20,1 $\pm$ 9,1
Non-smokers (n =53)	22,5 $\pm$ 8,9	120,2 $\pm$ 29,7	22,7 $\pm$ 5,5	18,1 $\pm$ 9,7
p	0,465	0,447	0,280	0,769
Family history of disease (n =10)	27,3 $\pm$ 6,3	127,6 $\pm$ 22,6	21,9 $\pm$ 2,8	12,6 $\pm$ 8,7
Family history of disease (n =63)	22,4 $\pm$ 8,3	120,9 $\pm$ 30,2	22,6 $\pm$ 5,9	19,6 $\pm$ 9,3
p	0,089	0,395	0,772	0,027
Middle income (n =65)	22,9 $\pm$ 8,4	121,8 $\pm$ 30,1	22,7 $\pm$ 5,5	19,3 $\pm$ 9,3
High income (n =8)	25,1 $\pm$ 6,4	121,9 $\pm$ 22,4	20,6 $\pm$ 6,2	12,6 $\pm$ 9,5
p	0,560	0,832	0,228	0,054
Sexually active (n =50)	21,2 $\pm$ 8,3	126,7 $\pm$ 30,6	22,4 $\pm$ 6,1	—
Sexually inactive (n =23)	27,3 $\pm$ 6,6	111,3 $\pm$ 23,2	22,6 $\pm$ 4,3	—
p	0,002	0,067	0,891	—
Normal weight (n =20)	25,1 $\pm$ 8,6	125,2 $\pm$ 34,3	21,9 $\pm$ 5,3	16,1 $\pm$ 9,3
Overweight (n =27)	23,0 $\pm$ 7,7	118,7 $\pm$ 22,9	22,7 $\pm$ 4,9	18,5 $\pm$ 9,5
Obese (n =26)	21,7 $\pm$ 8,4	122,5 $\pm$ 31,6	22,6 $\pm$ 6,5	20,7 $\pm$ 9,6
p	0,324	0,981	0,863	0,346

Values are presented as mean $\pm$ standard deviation (SD). The Mann–Whitney U test was used for two-group comparisons, whereas the Kruskal–Wallis test was used for comparisons according to body mass index categories. Statistically significant p values are shown in bold. The FSFI total score was not compared according to sexual activity status, as sexual activity is an inherent component of the FSFI. MRS; Menopause Rating Scale, FSFI; Female Sexual Function Index, BIS; Body Image Scale, RSES; Rosenberg Self-Esteem Scale, SD; standard deviation.

Relationships Among Scale Scores: A moderate negative correlation was found between the total MRS score and the BIS score ($\rho = -0.528$; $p < 0.001$), whereas a moderate positive correlation was observed between the total MRS score and the RSES score ($\rho = 0.417$; $p < 0.001$). A strong negative correlation was observed between the BIS and RSES scores ($\rho = -0.666$; $p < 0.001$). Age was moderately negatively correlated with the BIS score ($\rho = -0.404$; $p < 0.001$) and weakly negatively correlated with the FSFI total score ($\rho = -0.329$; $p = 0.005$). The correlation coefficients between scale scores are presented in table 4 and figure 1A.

Table 4. Spearman correlations between scale scores and age and duration of menopause.

Variables	1	2	3	4	5
1. Age	1	–	–	–	–
2. Duration of menopause	0,829**	1	–	–	–
3. MRS total score	0,267*	0,154	1	–	–
4. BIS score	-0,404**	-0,208	-0,528**	1	–
5. RSES score	0,342**	0,162	0,417**	-0,666**	1
6. FSFI total score	-0,329**	-0,291*	-0,202	0,132	0,021

Values are presented as Spearman's correlation coefficients (ρ). $p < 0.05$; $p < 0.01$. MRS; Menopause Rating Scale, BIS; Body Image Scale, RSES; Rosenberg Self-Esteem Scale, FSFI; Female Sexual Function Index.

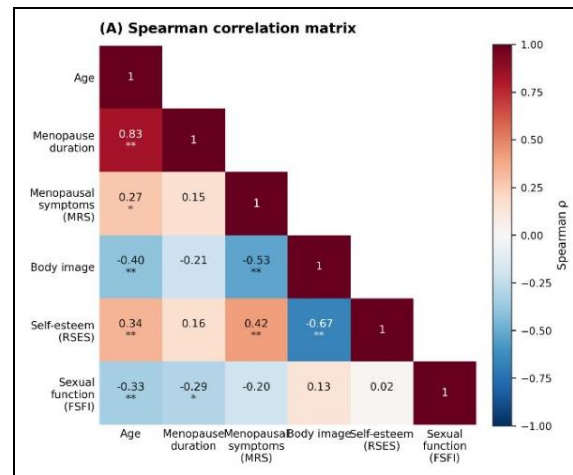


Figure 1A. Spearman correlation matrix showing the associations between scale scores, age and duration of menopause.

Independent Determinants of Scale Scores: No multicollinearity was detected in the multiple linear regression models ($VIF < 1.6$). The independent predictors of the BIS score were found to be the total MRS score ($\beta = -0.491$; $p < 0.001$) and age ($\beta = -0.220$; $p = 0.040$), and the model explained 34.5% of the variance (adjusted $R^2 = 0.345$; $p < 0.001$). The sole independent predictor of the RSES score was the MRS total score ($\beta = 0.305$; $p = 0.028$; adjusted $R^2 = 0.133$). The independent predictor of the FSFI total score was age ($\beta = -0.435$; $p < 0.001$; adjusted $R^2 = 0.228$). Details are presented in table 5 and figure 1B.

Table 5. Multiple linear regression analysis of the independent predictors of scale scores.

Independent variable	B (95% CI)	β	p
Body Image Scale (Adjusted $R^2 = 0.345$; $p < 0.001$)			
Age	-0,702 (-1,37; -0,03)	-0,220	0,040
High school or above	-2,558 (-15,93; 10,81)	-0,044	0,704
Employed	6,743 (-8,86; 22,35)	0,104	0,391
MRS total score	-1,741 (-2,58; -0,91)	-0,491	<0,001
Rosenberg Self-Esteem Scale (Adjusted $R^2 = 0.133$; $p = 0.012$)			
Age	0,072 (-0,07; 0,22)	0,119	0,330
High school or above	-0,775 (-3,70; 2,15)	-0,070	0,598
Employed	-0,637 (-4,05; 2,77)	-0,052	0,711
MRS total score	0,205 (0,02; 0,39)	0,305	0,028
Female Sexual Function Index (FSFI) total score (Adjusted $R^2 = 0.228$; $p < 0.001$)			
Age	-0,451 (-0,69; -0,21)	-0,435	<0,001
High school or above	-4,044 (-8,77; 0,68)	-0,214	0,092
Employed	3,082 (-2,43; 8,60)	0,145	0,269
MRS total score	-0,150 (-0,44; 0,15)	-0,129	0,316

B; unstandardized regression coefficient, 95% CI; 95% confidence interval, β ; standardized regression coefficient. Statistically significant p values are shown in bold. MRS; Menopause Rating Scale, BIS; Body Image Scale, RSES; Rosenberg Self-Esteem Scale, FSFI; Female Sexual Function Index.

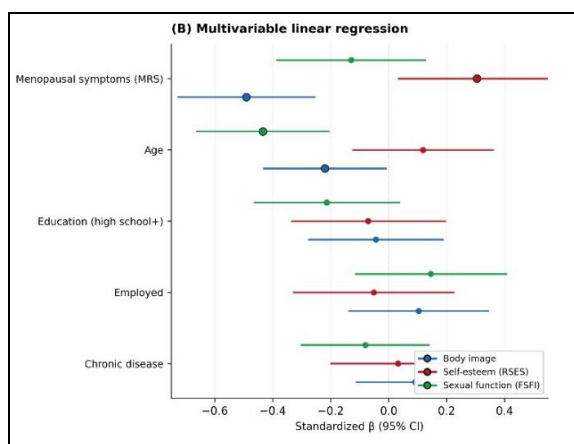


Figure 1B. Standardized β coefficients (95% confidence intervals) from multiple linear regression models for body image, self-esteem and female sexual function scores. $p < 0.05$; $p < 1.01$. MRS: Menopause Rating Scale, RSES; Rosenberg Self-Esteem Scale, FSFI; Female Sexual Function Index.

DISCUSSION

We found that an increase in the severity of menopausal symptoms was associated with a more negative body image and lower self-esteem, while advancing age was associated with a more negative body image and lower sexual function. Consistent with these findings, multivariate analyses revealed that the severity of menopausal symptoms was an independent predictor of body image and self-esteem, while age was found to independently predict body image and sexual function. These findings suggest that both the burden of menopausal symptoms and age are independently associated with psychological and sexual health during menopause. Another important finding is that there is a moderate negative association between the severity of menopausal symptoms and body image. Furthermore, in the multivariate analysis, the severity of menopausal symptoms was identified as the strongest independent predictor of body image. These findings suggest that an increase in the burden of menopausal symptoms is associated with a more negative body image.

Body image reflects how a person evaluates their body in their inner world, and over time, this perception may change depending on the individual's emotions and thoughts. These changes in perception can develop in either normal or distorted ways, depending on the person's psychological characteristics. A distorted body image may be associated with lower body satisfaction and psychological difficulties, including body dysmorphic concerns. Consequently, it can have significant effects on reduced self-esteem, the deterioration of social relationships, and life satisfaction (30-32). Our findings are consistent with the strong association between body image and self-esteem. Studies have reported an association between menopausal symptoms and negative body image. Since changes in

physical appearance during menopause, as well as shifts in perceptions of aging and fertility, may be associated with both body image and self-esteem, assessment of body image may be clinically relevant in women going through menopause (11, 33). In a study involving 271 women with moderate menopausal symptoms, place of residence, educational level, the onset of menopausal symptoms, and hormone replacement therapy were found to influence body image criticism scores, and it was demonstrated that the severity of menopausal symptoms is closely associated with depressive symptoms and body image discontent (12).

Self-esteem is one of the key constructs that reflects an individual's overall satisfaction with themselves (34, 35). In our study, we found that menopausal symptoms were the sole independent predictor of self-esteem. This finding suggests that menopausal symptoms may be associated with women's self-evaluation processes. Therefore, we can say that the decline in self-esteem during menopause may be related to the physical and psychological burden associated with menopausal symptoms. During this period, symptoms such as fatigue, hot flashes, sleep disturbances, and emotional volatility may be associated with impaired daily functioning and less positive self-perception. Previous studies have reported that low self-esteem is closely associated with depression, anxiety, and a decline in quality of life. (36, 37). In a study of 201 menopausal women, it was reported that women with more severe psychological, vasomotor, and somatic menopausal symptoms had lower self-esteem and a more negative body image (38). Our study also identified that menopausal symptoms are independent predictors of body image and self-esteem. Gümüşsoy et al. showed that women who entered menopause due to surgical reasons had lower self-esteem compared to those who entered menopause naturally (39). However, our study included only women who had entered menopause naturally. In a study involving 657 naturally postmenopausal Korean women, it

was reported that menopausal symptoms were associated with lower educational attainment, unemployment, low self-esteem, and depressive symptoms (40). In this context, managing menopausal symptoms and ensuring that women feel physically well are also important for maintaining their psychological well-being. In a study conducted in Egypt, providing self-empowerment training to women going through menopause increased their self-esteem and quality of life (41). We believe it is important to conduct similar studies taking social differences into account to better understand the mental health of women going through menopause and to provide support that promotes this kind of well-being.

Biological processes such as a decline in muscle mass, an increase in body fat, reduced skin elasticity, and urogenital atrophy that occur chronologically with advancing age may be associated with poorer body image and sexual function (42,43). Age-related physiological changes such as a decrease in libido, vaginal dryness, and reduced genital blood flow are among the primary mechanisms underlying the decline in female sexual function (44). In our study, the finding that age is an independent predictor of body image and female sexual function suggests that menopause-related changes cannot be assessed entirely independently of the physiological changes of chronological aging. In a review examining changes in sexual function during the perimenopausal period, which supports our findings, it was shown that being postmenopausal alone is not associated with female sexual dysfunction. Another study reported that psychological factors and factors related to partner relationships associated with sexual health in middle-aged women may have a stronger impact than hormonal changes associated with menopause (45,46). Our findings identify age as an independent predictor of female sexual function, indicating that sexual problems during menopause are too complex to be explained solely by hormonal changes. Our findings suggest that the association between menopausal symptoms and sexual function may be related to age and other biopsychosocial factors. Female sexual function is related to numerous factors, including hormonal changes, the relationship with a partner, cultural factors, and psychological state. For this reason, when evaluating sexual dysfunction during menopause, it is important not only to focus on menopausal symptoms but also to assess the individual holistically.

Our findings that menopausal symptoms are more severe among women with lower levels of education who are unemployed and not sexually active highlight the importance of socioeconomic and psychosocial factors during the menopausal transition. Participation in the workforce may be associated with better psychological well-being through its associations with social support, economic independence, and self-efficacy. A higher level of education

may be related to higher health literacy, which may be related to better coping with symptoms and greater access to appropriate support. Our data on socio-demographic variables indicate that the experience of menopause is associated not only with biological factors but also with social determinants. Our findings suggest that sexual function during menopause may be associated with age and other biopsychosocial factors in addition to menopausal symptoms and other biopsychosocial factors. Female sexual function is related to numerous factors, including hormonal changes, partner-related factors, cultural characteristics, and psychological well-being (47,48). For this reason, when assessing sexual dysfunction during menopause, it is important not to focus solely on menopausal symptoms but to evaluate the individual holistically.

The relationship identified in our findings between body image and self-esteem highlights the importance of psychosocial factors, in addition to somatic symptoms, during menopause. In routine clinical evaluations of menopause-related consultations, an assessment of body image and self-esteem may serve as a guide for identifying women who may require further evaluation regarding menopausal symptoms and sexual well-being. This assessment is not, on its own, a diagnostic tool or an indicator of a causal relationship; rather, it should be viewed as an approach that strengthens patient-centered communication and supports a multidisciplinary decision-making process. Studies reporting an association between the frequency and severity of menopausal symptoms and a more negative body image, as well as guidelines recommending the assessment of sexual health issues during menopause using a biopsychosocial approach, are important in this regard (33, 49). A clinic trial conducted among postmenopausal women reported improvements in body image outcomes following group cognitive-behavioral therapy

Among the study's strengths are the concurrent assessment of menopausal symptoms, body image, self-esteem, and female sexual function in women experiencing natural menopause, as well as the investigation of the independent predictors of these variables through multivariable analyses.

This study has several limitations. First, the cross-sectional study design does not allow for causal inferences regarding the relationships between menopausal symptoms, body image, self-esteem, and sexual function. Second, the study was conducted at a single center, and the sample size was relatively small. Additionally, the use of self-report scales for assessment may have led to information biases. Furthermore, certain potential confounding variables that could influence female sexual function and psychological well-being such as symptoms of depression and anxiety, the quality of marriage and partner relationships, sexual distress, physical acti-

vity, and premenopausal sexual function were not assessed.

In conclusion, when evaluating women during menopause, it may be important to consider factors beyond vasomotor and urogenital symptoms. A holistic approach encompassing body image, self-esteem, and sexual function may be considered within a multidisciplinary framework involving psychiatry, obstetrics and gynecology, and internal

medicine. Given that the number of women experiencing menopause is increasing as life expectancy rises, early identification and psychosocial evaluation of women particularly those with a high burden of menopausal symptoms along with appropriate psychoeducation and, when necessary, psychiatric support, may contribute to improving their overall well-being and quality of life.

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