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The Relationship between the Attitudes towards Menopause and Sexual Functions among Women in the Climacteric Period, Turkey

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ABSTRACT

Background & aim: An investigation of the attitudes towards menopause is considered to help to understand the menopausal period better in order to plan more comprehensive health promotion approaches. This study aimed to investigate the relationship between the attitudes towards menopause and sexual functions among women in the climacteric period.

Methods: This cross-sectional study was conducted between the 1st May 2019 and the 1st January 2020 in Turkey. The study was completed with 153 women in climadteric period, who were selected using the simple random sampling method. Data were collected through the socio-demographic questionnaire, the Attitude towards Menopause Questionnaire (ATMQ), and the Female Sexual Function Index (FSFI). Data analysis was done using descriptive statistics, independent t-test, and Pearson correlation test.

Results: The mean scores of ATMQ and FSFI were found 34.39±12.30 and 20.05±9.18, respectively. The ATMQ indicated positive, and significant relationship with all FSFI sub-scales and total scores ($p<0.05$).A significant difference was found between the FSFI scores and age, age at first marriage, presence of a chronic disease, duration of the marriage, number of births, number of pregnancies, and the features of the menopausal period ($p<0.05$); however, these variables did not indicate significant relationships with the ATMQ scores ($p>0.05$).

Conclusion: The results showed that two-thirds of the participating women had negative attitudes towards menopause, and increased negative attitudes of women affected their sexual functions, negatively. It is recommended to design health promotion programs and counseling services to promote positive attitude towards menopause in women in the climacteric period.

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Introduction

The climacteric period refers to the life period after the sexual maturity period (1). The climacteric period including the premenopausal, perimenopausal, and postmenopausal periods continues until old age. Cessation of menstruation is the most important phenomenon in this period which involves biological, psychological, and social changes (1). The World Health Organization (WHO) defines menopause as "the permanent cessation of menstruation resulting from loss of ovarian follicular activity" (2). Although the age of menopause demonstrates differences according to geographical regions and race, it generally happens between the ages of 45 and 54 (3, 4). TNSA 2018 data in Turkey report that 45,1% of the women aged 48-49 have menopause (5). The menopausal period includes a decrease in

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estrogen levels due to depletion of follicle reserves, and the FSH and LH levels demonstrate an above-average increase (3). Due to lack of estrogen, menopausal women experience several physical and psychological changes, which causes some problems such as muscle and joint pain, headache, hot flashes, sleep problems, depression, decrease in sexual desire, and stress incontinence (6).

According to the definition of the WHO, sexuality is the integration of the somatic, emotional, intellectual and social aspects of sexual being, in ways that are positively enriching and that enhance personality, communication and love. Sexuality-related problems lead to psychological and social problems by causing impairments in these components (7). Problems experienced in the menopausal period (loss of libido, dyspareunia, etc.) are affected by many factors ranging from individual characteristics to severe decrease in estrogen and androgen release and internal and interpersonal factors (8). In the climacteric period, sexual functions are affected by physiological changes, middle-age-related difficulties, cultural characteristics, vasomotor, cardiovascular, musculoskeletal, digestive, urogenital system, and mood changes with menopause (9). In addition to the investigation of physical changes, making a comprehensive evaluation of the menopausal period and understanding it well requires the analysis of women's individual perceptions and psychological, social, and cultural views. Factors affecting women's positive or negative attitudes towards menopause include the frequency and severity of the symptoms, points of view in life, perceptions about aging, personality traits, marriage relationships, and cultural features (10-12). A review of the studies in the literature shows that many studies aimed to investigate the relationship between attitudes towards menopause and menopausal complaints (13, 12, 14) or quality of life (12), but the studies on the relationship between menopausal attitudes and sexual functions are limited in number in Turkey (11).

In the menopausal period, women's sexual function is affected at varying levels. Changes in physiology and body image in the menopausal period affect sexual life negatively. Cultural norms play a critical role in this situation. The social status changing with menopause has different effects in different societies. In some societies, the lack of fear of getting pregnant and taking care of children provides the opportunity for women to be more socially free and sexually active. On the other hand, in societies where fertility or attractiveness are given more priority, the self-esteem that women lose affects their sexual life negatively. Hence, attitudes towards menopause could be perceived positively or negatively by women depending on cultural beliefs, values, and attitudes (11). As a result, differences in attitudes towards menopause may affect sexual functions at different levels.

An investigation of the attitudes towards menopause is considered to help to understand the menopausal period better and have a more comprehensive approach to sexuality beyond physiological changes. A better understanding of this period, by helping nurses and midwives to plan and conduct education and consultancy services, could contribute to the protection, maintenance, and improvement of women's health. Therefore, this study aims to investigate the relationship between the attitudes towards menopause and sexual functions among women in the climacteric period.

Materials and Methods

This study utilized a descriptive and cross-sectional design. Ethical clearance was obtained from the Faculty of Medicine Ethics Committee of the Cukurova University (Date: 05.01.2019; Permission no: 2019/87). The study was conducted in a public hospital in Adana between the 1st of May 2019 and the 1st of January 2020. The target population of the study included women who sought treatment in the Obstetrics and Gynecology Clinic. The number of women who visited the polyclinic was 513 between the 1st of May and 1st of June 2019. The number of women in the climacteric period was 247 women who applied these polyclinics. For the sample calculation, the study conducted by Gümüşay and Erbil (2019) was taken as a reference for the attitude rate towards menopause (12). When the population of the study is considered to consist of 247 women who were in the climacteric period, a minimum of 137 women could be included in the study

using the simple random sampling method for a known population. The sample was increased by 10% considering the potential data loss. The study was completed with 153 women who met the inclusion criteria and agreed to participate in the study (15).

The sample size formula is presented below.

$$n = N .t .t .p.q / d.d . (N-1) + t.t.p.q$$

N n=247.1,96.1,96.0,72.0,28/0,05.0,05.(247-1)+1,96.1,96.0,72.0,28=137

t: 1.96 (Table value)
p: 0,72 (The incidence of the investigated issue)
q: 0,28 (Frequency of absence of the investigated issue)
d: 0.05 (Sampling error)

The inclusion criteria were being aged between 45 and 65, being in the menopausal period, having an active sexual life, and having a partner. The exclusion criteria were being pregnant and having a regular menstrual cycle.

In the data collection process, the researchers visited the polyclinic three times a week. During these days, the women who came to the polyclinic for any reason and met the inclusion criteria were informed about the purpose of the study. Those who agreed to participate in the study were administered the questionnaires after their examination. The participants were invited to a predetermined place where they could feel comfortable while filling in the questionnaires. The administration of the questionnaires took about 5-7 minutes.

Data were collected through the Socio-demographic Form, the Attitudes towards Menopause Questionnaire (ATMQ), and the Female Sexual Function Index (FSFI).

The Socio-demographic Form was prepared by the researchers in line with the literature and composed of 24 questions about socio-demographic, obstetric, and menopause-related features.

The Attitudes towards Menopause Questionnaire (ATMQ) was developed by Uçanok and Bayraktar (1996) to measure women's menopause experiences and attitudes after menopause. The scale is rated on a 5-point Likert scale that is composed of positive and negative statements about menopause and attitudes after menopause. The ATMQ is composed of two positive and 18 negative statements. Scoring is done reversely in negative statements. The scores to be obtained from the scale range between 0 and 80. While higher scores obtained from the scale indicate positive attitudes, lower scores indicate negative attitudes. Scores over the average point (40 points) indicate more positive attitudes. The internal consistency coefficient was reported 0.86 for the whole scale (16). This study found Cronbach's alpha value as 0.88.

The Female Sexual Function Index (FSFI) is a multidimensional, 19-item interview form that was developed to evaluate the fundamental aspects of sexual functions including desire, arousal, lubrication, orgasm, satisfaction, and pain. The scale was developed by Rosen et al. (2000), and its Turkish reliability and validity were performed by Aygin and Aslan (2005) (17, 18). Sexual function is evaluated in six dimensions that include desire (1, 2), arousal (3, 4, 5, 6), lubrication (7, 8, 9, 10), orgasm (11, 12, 13), satisfaction (14, 15, 16), and pain in sexual relationship (17, 18, 19). The scale score is calculated by summing the responses given to that dimension and multiplying the factor score of that dimension. The scores to be obtained from the scale range between 2 and 36. Higher scores indicate better sexual functions. The FSFI cut-off point indicating sexual dysfunction is reported to be 26,55. Aygin and Aslan (2005) reported Cronbach's alpha coefficient as 0,95 (18). This study found Cronbach's alpha coefficient as 0.96.

Data were analyzed in Statistical Package for the Social Sciences 20.0 (SPSS) using descriptive and parametric statistical analysis methods. Descriptive analyses were performed to identify the socio-demographic, obstetric, and menopause-related features. These analyses were determined as frequencies and percentages.

Whether the data distributed normally was determined using the Shapiro-Wilk W test. Data were found to distribute normally as the significance level was $p>0.05$. Comparison of the dependent and independent variables was analyzed using the Independent t-test to assess the difference between the means of the two groups. Pearson correlation test was utilized to

determine the relationship between ATMQ and FSFI. Statistical significance was accepted $p<0.05$.

Ethics committee approval was obtained from XXX University Medical Faculty, Non-invasive Clinical Studies Ethics Committee (05.01.2019/87). Written permission was obtained from the hospital for the implementation phase. Both verbal and written consent parts of the study indicated that participation was on a voluntary basis, participants could withdraw from the study any time they wanted, and their identity would be kept confidential. The names of the institutions where the study was conducted were not written, study data and the participants' identities were kept confidential, and the study complied with the Declaration of Helsinki.

Results

While the average age of the women was found 49.07±3.25, the average age of the partners was found 53.75 ±4.81. The average age at first marriage was 18.86±3.26, and the average duration of marriage was 30.60±6.20 years. The women and their partners had primary-secondary school education levels on average, and the majority of them had a nuclear family.

Table1. Descriptive Characteristics of the Participants

Variable	N (%)
Age	
45-48	74 (48.4)
49-61	79 (51.6)
Age of the Partner	
43-53	72 (47.1)
54-68	81 (52.9)
Education Level	
Literate	37 (24.2)
Primary school	53 (34.6)
Middle School	35 (22.9)
High school	22 (14.4)
University	6 (3.9)
Education Level of the Partner	
Literate	30 (19.6)
Primary school	36 (23.5)
Middle School	41 (26.8)
High school	36 (23.5)
University	10 (6.5)
Family type	
Nuclear family	120 (78.4)
Extended	33 (21.6)
Working or not	
Working	21 (13.7)
Not working	132 (86.3)
Partner's working or not	
Working	104 (32.0)
Not working	49 (68.0)
Having a chronic disease	
Yes	33 (21.6)
No	120 (78.4)
Partner's having a chronic disease	
Yes	44 (28.8)
No	109 (71.2)
Seeking help for sexual problems	
Yes	76 (49.7)
No	77 (50.3)
Menopausal Period	
Premenopausal	86 (56.2)
Post-menopausal	67 (43.8)
Age at first marriage	
18 and below	68 (44.4)
19 and above	85 (55.6)
Duration of the marriage	
≤ 30 years	80 (52.3)
≥ 31 years	73 (47.7)
Number of pregnancies	
1-3	67 (43.8)
4 and more	86 (56.2)
Number of births	
1-3	96 (62.7)
4 and more	57 (37.3)

It was found that 13.7% of women and 32% of men had a wage-earning job, and 21.6% of women and 28.8% of partners had a chronic disease. Approximately half of the participants sought treatment for sexual problems. Of all the women, 43.8% were in the postmenopausal period. All the participants had menopause through natural processes. While the average number of births was 3.73, the average number of pregnancies was 3.79 (Table 1).

The average FSFI total mean score was 20.05±9.18, and 67.3% of the women had a total score that is below the FSFI cut-off point. ATMQ total mean score of the participants was 34.39±12.30, and 69.9% of them had an ATMQ score that was below the cut-off point (Table 2).

A significant difference was detected between age, age at first marriage, presence of a chronic disease, duration of the marriage, number of births, number of pregnancies, characteristics of

the menopausal period, and FSFI scores (p<0.05).

Table 2. ATMQ and FSFI Scale total and sub-scale scores

Scale and Sub-scales	Mean±SD	Min-Max
ATMQ Total	34.39 ± 12.30	5 - 60
FSFI Total	20.05 ± 9.18	2.0 - 29.10
FSFI Sub-scales		
Desire	3.26 ± 1.26	1.2 - 5.4
Arousal	2.89 ± 1.47	0 - 5.1
Lubrication	3.47 ± 1.79	0 - 5.4
Orgasm	3.47 ± 1.79	0 - 6
Satisfaction	3.62 ± 1.72	0.8 - 6
Pain	3.66 ± 2.15	0 - 6

ATMQ: Attitudes Towards Menopause Questionnaire, **FSFI:** Female Sexual Function Index

While sexual functions decreased significantly with the increase in age, duration of the marriage, number of births, number of pregnancies, and progress in the menopausal period; they were found to increase with the increase in the age at first marriage (p>0.05) (Table 3). On the other hand, none of these variables were found to have significant relationships with menopausal attitudes (p>0.05) (Table 3).

Table 3. Comparison of the ATMQ and FSFI scale scores according to the descriptive features

Variables	N (153)	FSFI		ATMQ		
		Mean±SD	Min-Max	Mean±SD	Min-Max	*p*
Age						
45-48	74	23.61±5.80	3.20-28.40	34.14±12.27	8-55	**p^1<0.001**
49-61	79	16.72±10.46	2.00-29.10	34.63±12.40	8-60	p^2=0.232
Age at first marriage						
18 and below	68	17.64±10.37	2.00-29.10	34.54±12.112	5-55	**p^1=0.003**
19 and above	85	21.97±7.641	2.00-28.40	34.27±12.526	8-60	p^2=0.892
Having a chronic disease						
Yes	33	12.48±9.99	2.00-25.50	33.12±12.77	5-60	**p^1=<0.001**
No	120	22.13±7.79	2.00-29.10	34.74±12.20	8-55	p^2=0.505
Partner's having a chronic disease						
Yes	44	13.06±10.06	2.00-28.70	34.14±13.85	5-60	**p^1=<0.001**
No	109	22.87±8.10	2.00-29.10	34.50±11.68	8-55	p^2=0.871
Duration of the marriage						
≤30	80	22.88±7.04	2.00-28.40	33.58±12.70	8-55	**p^1=<0.001**
≥31	73	16.95±10.25	2.00-29.10	35.29±11.87	5-60	p^2=0.392
Number of births						
1-3	96	21.18±7.70	2.00-27.80	33.96±12.22	5-60	**p^1=0.048**
4 and more	57	18.14±11.06	2.00-29.10	35.12±12.51	5-55	p^2=0.573
Number of pregnancies						
1-3	67	21,91±7,21	2.00-28.40	33.34±11.78	5-60	**p^1=0.026**
4 and more	86	18.60±10.27	2.00-29.10	35.21±12.70	5-55	p^2=0.354
Menopausal period						
Premenopausal	86	24.40±4.77	2.00-29.10	32.98±12.03	8-55	**p^1=<0.001**
Postmenopausal	67	14.47±10.42	2.00-28.70	36.21±12.49	5.-60	p^2=0.107

Independent t test, ATMQ: Attitudes Towards Menopause Questionnaire, FSFI: Female Sexual Function Index

p^1: statistical significance FSFI

p[2]: statistical significance for ATMQ

The relationship between the ATMQ and FSFI scales with each other was assessed using Pearson correlation. The relationship between the FSFI total score and sub-scale scores and the ATMQ demonstrated changes according to the menopausal period. The scales were found to have no relationships in the perimenopausal period. On the other hand, in the postmenopausal period, all the FSFI sub-scales and total scores and the ATMQ had positive, medium-level and significant relationships ($p<0.05$).

Sexual function was found to improve as the menopausal attitudes improved particularly in the postmenopausal period (Table 4).

Table 4. Correlation of the ATMQ and FSFI Scales according to the Participants' Menopausal Period

		FSFI Sub-scales						
		Desire	**Arousal**	**Lubrication**	**Orgasm**	**Satisfaction**	**Pain**	**Total**
Premenopausal ATMQ	r	-0.054	-0.198	0.076	0.030	0.178	0.205	0.076
(n:86)	p	0.619	0.068	0.484	0.782	0.101	0.058	0.488
Postmenopausal ATMQ	r	0.337	0.245	0.298	0.236	0.323	0.286	0.311
(n:67)	p	**0.005**	**0.046**	**0.014**	**0.055**	**0.008**	**0.019**	**0.010**

Pearson correlation

ATMQ: Attitudes Towards Menopause Questionnaire, FSFI: Female Sexual Function Index

Discussion

The findings of this study, which aimed to investigate the relationship between the attitudes towards menopause and sexual functions among women in the climacteric period, are discussed in line with the current literature. Since menopausal attitudes of women are considered to be one of the important factors affecting sexual functions, this study provides valuable contributions to the literature because it is the first study that evaluated the menopause-related attitudes of women in the climacteric period using ATMQ and their sexual functions using FSFI.

The ratio of Female Sexual Dysfunction (FSD) was found 67.3% in this study. Studies conducted in our country reported the ratio of sexual dysfunction between 52.5% and 86.4% (4, 9, 19, 20). Studies in other countries reported the sexual dysfunction ratios as 52.8% in Egypt (21), between 13.3% and 79.3% in Brazil (22), 62.1% in Mexico (23), 69.73% in Poland (24), and 70.88% in Spain (25). The FSD rates determined in our study are similar to the ratios in the national and international literature.

An analysis of the FSFI sub-scales showed that the women experienced problems in the arousal, desire, lubrication, and orgasm sub-scales respectively. This study also found that the most frequently experienced problems were arousal, sexual desire, lubrication, and orgasm problems respectively, which is in line with other studies in the literature (4, 19, 26, 27). Although the most frequently experienced problems are similar, the rank order of the most frequently experienced problems could demonstrate differences in some studies. Pérez-Herrezuelo et al. (2020) indicated the most frequently experienced problems as desire, arousal, lubrication, and orgasm problems respectively; Dąbrowska-Galas (2019) reported the most frequently experienced problems as desire, arousal, lubrication, and orgasm problems respectively; Yanıkkerem reported the most frequently experienced problems as arousal, sexual desire, orgasm problems, and lubrication respectively (20, 24, 25).

This study found a significant difference between age and having a chronic disease variables and FSFI scores. Demographic features among the risk factors for FSD have been subject to many studies. The literature reports the increase in the FSD ratio with the increase in age (4, 19, 20, 26). Menopause is a phenomenon that happens with aging, and diseases also increase with aging. Chronic disease is one of the conditions that could affect female sexual function and lead to dysfunction in the menopausal period (28). This study found that female sexual functions were affected negatively if women or and their partners had chronic diseases. A review that investigated the factors

affecting sexual functions in menopause reported that chronic medical problems (including urinary incontinence, pelvic floor disorders, diabetes, neurological or cardiovascular disorders, etc.) affected sexual functions negatively in postmenopausal women (29). Many chronic diseases increasing with aging indirectly prevent individuals' sexual functions by affecting their self-respect and relationships. Particularly many chronic pathologies such as metabolic, neuronal, or vascular diseases or medications used for them affect sexual functions negatively by both directly affecting women who use them and causing a lack of healthy partner having a sexual desire (8). On the other hand, living conditions affect menopause-related attitudes. Gümüşay and Erbil (2019) reported that menopausal attitudes were more positive in women who did regular exercises, perceived their health as "good", and did not use medicine regularly (12). Research indicates that women's attitudes towards menopause play a role in the clinical relevance of sexual dysfunction (14). Since the presence of chronic diseases is a factor affecting sexual functions negatively, these findings in our study are somewhat expected.

This study found that postmenopausal women's sexual functions were affected significantly negatively. Sexual dysfunction was found to be 2.3 times higher in postmenopausal women compared to adult women (30). Kahyaoğlu Süt and Küçükkaya reported that the quality of sexual life decreased as the menopausal transition stage increased (3). Several studies reported that sexual functions were affected negatively by aging (4, 19, 20, 26). Increased age could be considered as a major factor for this result in the postmenopausal period.

ATMQ mean score was found 34.39±12.30 in this study, and 69.9% of the participating women were found to receive 40 points (scale cut-off point) and below. This result indicates that the majority of the participating women had negative attitudes towards menopause. Similar to the findings of the present study, Gümüşay and Erbil (2019) also reported the ratio of women who received 40 points and below as 72.1%, indicating negative menopausal attitudes in every seven women out of 10 (12). Erbil (2018) also reported that 54.1% of women had negative attitudes towards the transition to menopause (31). Erbaş and Demirel (2017) also reported negative attitudes of women at climacteric period towards menopause (11). A qualitative study conducted in Turkey reported that women generally perceived menopause negatively (32). A study conducted in Iran found that 6.3% of women had negative attitudes towards menopause, 71% were neutral, and 22.8% had positive attitudes (33). Unlike the findings of the present study, Tümer and Kartal (2018) found that women had positive attitudes towards menopause (10). Similarly, Noroozi et al. (2013) reported that 81.5% of women aged 40-45 had positive attitudes towards menopause (34). In their study conducted in Pakistan, Inayat et al. (2017) found that 46% of perimenopausal women and 76% of postmenopausal women saw menopause as a natural part of the aging process, and 46% of the participating women had positive attitudes towards menopause (13). Attitudes towards menopause are affected by many factors. A comprehensive approach to women's sexuality requires more than understanding only the physiological process. The reasons for women's negative attitudes towards menopause include loss of fertility, negative attitudes on marriage relationships due to cessation of sexuality, changes in physical appearance, and starting to get older. In addition to these, attitudes towards menopause are affected by religious beliefs, life experiences, traditions, and cultural structures. Losing fertility could be an important factor for the negative attitudes towards menopause in Turkish society where the patriarchal structure is dominant (10, 12). This characteristic of Turkish society seems to be reflected in the study findings.

Women's beliefs, attitudes, and value judgments about sexuality could cause positive or negative effects on sexual functions (8). Women's attitudes towards menopause affect their adaptation to the menopausal period and their coping with menopausal complaints (35). The literature reports that menopausal complaints are affected by attitudes towards menopause, and negative attitudes increase menopausal complaints (4, 10, 12, 14, 32). In addition, positive menopausal attitudes are

reported to have positive effects on sexual life as well (11, 36). This study found a positive, medium-level, and significant relationship between FSFI sub-scales and total scores and ATMQ in the postmenopausal period. Negative attitudes of postmenopausal women towards menopause also affect their sexual functions. Erbaş and Demir (2017) reported that menopausal attitudes had effects on sexual quality of life scores. Erenel et al. (2015) reported that sexual functions were affected more negatively in women who had negative attitudes towards menopause. Jamali et al. (2016) also stated that women had negative attitudes towards menopause, and the sexual functions of these women were also affected negatively. Marvan et al. (2017) reported that women's negative attitudes about menopause were associated with sexual desire, arousal, orgasm, and global satisfaction, and negative attitudes were associated with negative sexual functions (11, 14, 27, 36).

Since the present study included a sample only consisting of women who sought treatment in the hospital, the results cannot be generalized to the whole population. The purpose of the study was mainly to investigate the relationship between the attitudes towards menopause and sexual functions. Therefore, problems concerning menopausal complaints were ignored. However, menopausal complaints could affect sexual life. This study contributes to the limited literature on the relationship between menopausal attitudes and sexual functions. However, it is recommended that future studies should investigate the relationship between menopausal complaints, menopausal attitudes, and sexual functions in tandem.

Conclusion

The results of this study, which aimed to investigate the relationship between the attitudes towards menopause and sexual functions among women in the climacteric period, found that more than half of the women experienced sexual dysfunction; certain variables (age, having a chronic disease, age at first marriage, duration of the marriage, number of births, number of pregnancies, menopausal period) affected FSFI scores significantly; two-third of women had negative attitudes towards menopause; and sexual functions of postmenopausal women were also affected negatively with the increase in their negative attitudes towards menopause. The results of this study are considered to guide nurses and midwives in implementing education and consultancy services by contributing to understanding the menopausal period better and forming a more comprehensive point of view to sexuality, which is considered to protect, maintain, and improve women's health.

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Conflicts of interest

Authors declared no conflicts of interest.

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