

The Effect of Menopause Symptoms on Female Genital Self-Perception in Postmenopausal Women

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Abstract

Objective: This study aimed to investigate the effects of menopausal symptoms on Female Genital Self-Perception (FGSP) in postmenopausal women.

Methods: This descriptive and relationship-seeking study was conducted with women aged 40 and above who applied to the Family Medicine Outpatient Clinic of a tertiary hospital between June and December 2022, who have not had a menstrual period for at least 12 months, and who met the inclusion criteria. The Patient Information Form, The Menopause Rating Scale (MRS), Vulvovaginal Symptom Questionnaire (VSQ), and the Female Genital Self-Image Scale (FGSIS) were used to obtain the data.

Results: The mean age of 203 women included in the study was 57.53 ± 6.70 . The total mean scores obtained from the scales was 15.40 ± 7.7 for MRS, 3.75 ± 3.96 for VSQ, and 18.99 ± 4.34 for FGSIS. An inverse and statistically significant relationship were found between MRS and VSQ total and sub-dimension scores and FGSIS scores ($p:0.001$ for all). A significant relationship was found between FGSIS score and body mass index and parity ($r:-0.154$, $p:0.028$ and $r:-0.258$, $p:0.001$). University graduates, those who had regular gynecological examinations, and people with a very good perception of general health status had significantly higher FGSIS scores ($p:0.001$ for all).

Conclusion: According to the scale scores, the FGSP of postmenopausal women was moderate and negatively affected by the increase in menopausal symptoms. Obesity, an increase in the number of parities, low education level, and poor health perception were the factors that negatively affected FGSP.

Keywords: Female Genitalia, Post Menopause, Self-Perception

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INTRODUCTION

With the onset of the menopausal period, symptoms such as vaginal atrophy and hot flashes that occur because of hormonal changes, and the termination of reproductive ability affect women biopsychosocially (1-3). Self-perception, which is a concept that includes women's thoughts, feelings, and perceptions about their bodies, may deteriorate over time (4).

Female genital self-perception (FGSP), which is an extension of self-perception, expresses the attitude and perception that a woman develops regarding her genital organs (5). FGSP, which is directly related to sexual functions, experiences, and satisfaction, may vary in different periods of life (6-9). It was found to be better overall in the younger age group (10-12). An increase in FGSP has been associated with an increase in sexual function and quality of sexual life (13).

It is also important because it is related to health behavior in women as well as sexual function (5,14). As a matter of fact, it has been observed that women who have negative perceptions about their sexual organs postpone their regular gynecological examinations (14-16).

With our current knowledge, a limited number of studies investigating FGSP in postmenopausal women have been found (11,17). In the postmenopausal period, FGSP might be adversely affected due to anatomical

and functional changes related to menopause in the urogenital system, dissatisfaction with the appearance of the genital organs, and sexual dysfunction (17). Considering that the average life expectancy and therefore the years spent in the postmenopausal period is prolonged, it is necessary to increase the awareness of both women and health professionals (18).

The aim of this study was to examine the effects of menopausal symptoms on female genital self-perception in postmenopausal women.

METHODS

Study design

This was a single-centered, prospective, descriptive, and relationship-seeking study. It was conducted with individuals who applied to the Family Medicine Outpatient Clinic of a tertiary hospital between 01.06.2022 and 08.12.2022.

Power analysis was performed with the help of the G*Power 3.1 software program, based on literature data (19). It was determined that 150 women should be included in the sample with 95% power, a 5% margin of error, and an effect size of 0.264. 203 participants were included in the study.

Sample Selection Criteria

Women aged 40 and over who had not had a menstrual period for at least 12 months, who did not have a serious pathology in the genitourinary system, who did not use

medications that could cause urinary symptoms, and who agreed to participate were included in the study.

Those under the age of 40, those who have menstruated in the last 12 months, serious pathology in the genitourinary system (cancerous or precancerous lesion, lichen sclerosis, infection diseases, sexual trauma, history of previous surgery), those who use drugs that may cause urinary symptoms (diuretics, antipsychotics, antidepressants, antispasmodics), those who have communication difficulties and those who were illiterate were excluded from the study.

Data Collecting Tools

Patient Information Form, the Menopause Rating Scale (MRS), the Vulvovaginal Symptom Questionnaire (VSQ) and The Female Genital Self-Image Scale (FGSIS) were used to obtain the data.

Patient Information Form

The sociodemographic, general medical, obstetric, and gynecological characteristics of the participants were questioned with the Patient Information Form prepared by us.

The Menopause Rating Scale

Schneider et al. developed The Menopause Rating Scale in 1992 and adapted into English in 1996 (20, 21). The Turkish validity and reliability study was conducted by Can Gürkan in 2005. MRS, consists of 11 items, and 3 sub-

dimensions: somatic complaints, psychological complaints, and urogenital complaints. A score between 0 and 44 can be obtained from the scale, and high score indicates the severity of the complaints. The Cronbach's alpha coefficient for the whole scale is 0.84 (22). In this study Cronbach's alpha was found 0.807.

The Vulvovaginal Symptom Questionnaire

Erekson et al. developed The Vulvovaginal Symptom Questionnaire in 2013 (23). VSQ was adapted into Turkish by Tekin et al. in 2022. It consists of 21 items and 4 sub-dimensions which assess symptoms, the impact on emotions, the impact on life and the impact on sexual life. A total score between 0 and 21 can be obtained from the scale. High scores indicate that vulvovaginal symptoms have a greater effect on the relevant sub-dimension. Cronbach's alpha coefficient was 0.822 in sexually active and 0.873 in passive individuals (24). In this study Cronbach's alpha was found 0.879.

The Female Genital Self-Image Scale

The Female Genital Self-Image Scale (FGSIS) was developed by Herbenick et al. in 2010 (5). The Turkish validity and reliability study was conducted in 2019 by Kaya et al. A total score between 7 and 28 can be obtained from this 7-item scale. Higher scores indicate a more positive genital self-perception. Cronbach's alpha coefficient was found to be 0.818 in the

Turkish version (25). In this study Cronbach's alpha was found 0.767.

Ethical approval

Ethical permission to perform this study was obtained from the University of Health Sciences Turkey, Gaziosmanpaşa Training and Research Hospital Local Ethics Committee (Approval No:87; Date:25.05.2022). The study was conducted under the principles of the Declaration of Helsinki. All participants included in the study were informed in detail. Necessary permissions were obtained.

Statistical Analysis

IBM SPSS Statistics v.22 program was used for statistical analysis. According to Kolmogorov-Smirnov and Shapiro-Wilks tests, it was determined that the parameters did not show normal distribution. Descriptive statistical methods (mean, standard deviation, median, frequency and Interquartile Range (IQR)) were used to evaluate the study data. Since the parameters do not have a normal distribution, the Kruskal Wallis test (post hoc Dunn's test) was used for comparison of parameters between more than two groups. The Mann Whitney U test was used for comparisons between two groups. Spearman's rho correlation test was used to examine the relationships between parameters. Significance was evaluated at the $p < 0.05$ level.

RESULTS

This study was conducted with 203 female participants aging between 42 to 80 years. The distribution of sociodemographic, medical, obstetric, and gynecological characteristics of the participants is given in Table-1.

In Table-2, descriptive statistics of the scores obtained from the scales are presented. The total mean scores obtained from the scales were 15.40 ± 7.70 for MRS and 3.75 ± 3.96 for VSQ. According to these results, the participants' general and vulvovaginal menopause symptoms were evaluated as moderate to low. The FGSIS total score was 18.99 ± 4.34 , and the participants were considered to have moderate FGSP.

In Table-3, the correlation between the sub-dimension and total scores of the scales was examined. An inverse and significant relationship was found between MRS and VSQ total and sub-dimension scores and FGSIS scores ($p:0.001$ for all).

A significant inverse relationship was found between FGSIS score and BMI and parity ($r: -0.154$, $p:0.028$ and $r: -0.258$, $p:0.001$). However, no relationship was found between FGSIS score and age.

The evaluation of the sub-dimensions and total scores obtained from the scales according to the various characteristics of the participants is presented in Table-4. Accordingly, the MRS total scores were statistically significantly higher in those with low income, those with a

history of gynecological disease, and those with a negative general health perception (p:0.013; p:0,001; p:0.001, respectively). VSQ total scores were statistically significantly higher in those who are married, those with a history of gynecological disease, and those who have an

active sexual life (p:0.001; p:0.002; p:0,001; respectively). University graduates, those who went to regular gynecological examinations, and those who had a very good perception of general health had significantly higher FGSIS scores (p:0.001 for all).

Table-1. Distribution of various characteristics of the participants (n=203)

		Min-Max	Mean±SD
Age (years)		42-80	57.53±6.70
BMI (kg/m ²)		18.96-48.18	29.28±5.27
		Min-Max	Median (IQR)
Total number of pregnancies (n=197)		1-12	4 (2)
Age at menopause		27-58	47 (8)
Menopause duration		1-45	10 (12)
		n	%
Education level	Literate	35	17.2
	Primary school	111	54.7
	Middle school	26	12.8
	High school	20	9.9
	University	11	5.4
Marital status	Single	3	1.5
	Widow	56	27.6
	Married	144	70.9
Income level	Low	84	41.4
	Middle	106	52.2
	High	13	6.4
Chronic disease	No	52	25.6
	Yes	151	74.4
Weight status according to BMI	Normal	52	25.6
	Overweight	66	32.5
	Obese	85	41.9
How to go through menopause	Natural menopause	172	84.7
	Surgical menopause	31	15.3
History of gynecological disease	No	92	45.3
	Yes	111	54.7
Active sexual life	No	73	36
	Yes	130	64
Regular gynecological examination	No	148	72.9
	Yes	55	27.1
General perception of health	Very good	17	8.4
	Good	59	29.1
	Moderate	100	49.3
	Weak	18	8.9
	Very weak	9	4.4

Data presented as n (%), min max, Mean±SD of the participants. BMI: Body Mass Index.

Table-2. Descriptive statistics of the total and sub-dimension scores of the scales

	Min-Max	Mean±SD	Median	IQR	Cronbach's alpha
MRS					
MRS Total score	0-35	15.40±7.70	15	11	0.807
Somatic complaints	0-7	2.70±1.88	3	3	0.517
Psychological complaints	0-23	9.58±5.04	9	7	0.763
Urogenital complaints	0-10	3.12±2.50	3	4	0.562
VSQ					
VSQ total score	0-19	3.75±3.96	2	5	0.879
Symptoms subscale	0-7	1.49±1.70	1	2	0.697
Emotions subscale	0-4	0.72±1.15	0	1	0.760
Life impact subscale	0-4	0.31±0.81	0	0	0.762
Sexual impact subscale	0-6	1.24±1.46	1	1	0.833
FGSIS	8-28	18.99±4.34	19	6	0.767

Data presented as n (%), min max, Mean±SD, median and IQR of the participants.

FGSIS: Female Genital Self-Image Scale, IQR: Interquartile Range, MRS: Menopause Rating Scale, VSQ: Vulvovaginal Symptom Questionnaire.

Table-3. The correlation of the sub-dimensions and total scores of the scales

	MRS Total	MRS-S	MRS-P	MRS-U	VSQ Total	VSQ-S	VSQ-E	VSQ-LI	VSQ-SI	FGSIS
MRS Total	r 1									
	p .									
MRS-S	r 0.683	1								
	p 0.001*	.								
MRS-P	r 0.925	0.518	1							
	p 0.001*	0.001*	.							
MRS-U	r 0.633	0.272	0.406	1						
	p 0.001*	0.001*	0.001*	.						
VSQ Total	r 0.380	0.246	0.276	0.454	1					
	p 0.001*	0.001*	0.001*	0.001*	.					
VSQ-S	r 0.338	0.218	0.254	0.382	0.888	1				
	p 0.001*	0.002*	0.001*	0.001*	0.001*	.				
VSQ-E	r 0.344	0.186	0.286	0.330	0.760	0.627	1			
	p 0.001*	0.008*	0.001*	0.001*	0.001*	0.001*	.			
VSQ-LI	r 0.281	0.169	0.226	0.266	0.568	0.527	0.580	1		
	p 0.001*	0.016*	0.001*	0.001*	0.001*	0.001*	0.001*	.		
VSQ-SI	r 0.161	0.130	0.067	0.311	0.562	0.251	0.272	0.119	1	
	p 0.022*	0.065	0.339	0.001*	0.001*	0.001*	0.001*	0.090	.	
FGSIS	r -0.445	-0.236	-0.389	-0.409	-0.313	-0.286	-0.310	-0.233	-0.074	1
	p 0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.001*	0.291	.

*Spearman's rho correlation test * $p < 0.05$

FGSIS: Female Genital Self-Image Scale, MRS: Menopause Rating Scale, MRS-P: Psychological, MRS-S: Somatic, MRS-U: Urogenital, VSQ: Vulvovaginal Questionnaire, VSQ-E: Emotions, VSQ-LI: Life impact, VSQ-SI: Sexual impact, VSQ-S: Symptoms.

Table-4. Evaluation of the sub-dimension and total scores of the scales according to the various characteristics of the participants

		MRS Total	VSQ Total	FGSIS total
		Median (IQR)	Median (IQR)	Median (IQR)
Education level	Literate	17 (15)	2 (5)	18 (6)
	Primary sch.	14 (9)	2 (4)	18 (6)
	Middle sch.	14 (6.75)	3 (7)	18.5 (8)
	High sch.	17 (14.25)	2 (6.75)	20 (8.5)
	University	13 (8)	1 (3)	24 (6)
	¹ p	0.366	0.462	0.001*
Marital status	Single	15 (-) **	3 (-) **	22 (-) **
	Widow	14.5 (13.5)	2 (3)	19 (5.75)
	Married	15 (10.75)	3 (7)	19 (6)
	¹ p	0.945	0.001*	0.221
Income status	Low	16 (10)	3 (4.75)	19 (5.75)
	Middle	14.5 (13)	2 (5)	18 (6)
	High	9 (9)	1 (3)	21 (5.5)
	¹ p	0.013*	0.291	0.259
Chronic disease	No	15 (7.75)	2 (3.75)	19 (6.5)
	Yes	15 (11)	2 (5)	19 (6)
	² p	0.980	0.686	0.165
Groups by BMI	Normal	15 (11.5)	2.5 (4)	20.5 (6)
	Overweight	15 (8.25)	2 (4.25)	19 (5.5)
	Obese	14 (11.5)	3 (5)	18 (6)
	¹ p	0.849	0.221	0.072
How to go through menopause	Natural	15 (11)	2 (5)	19 (6)
	Surgery	16 (12)	2 (3)	18 (6)
	² p	0.692	0.638	0.744
History of gynecological disease	No	13 (9)	2 (2)	19.5 (6)
	Yes	16 (13)	3 (7)	18 (5)
	² p	0.001*	0.002*	0.171
Continuing sexual life	No	15 (13)	2 (3.5)	19 (6)
	Yes	14 (9.25)	3 (6)	19 (6)
	² p	0.603	0.001*	0.143
Regular gynecological examination	No	15 (11)	2 (4)	18 (6)
	Yes	14 (9)	3 (6)	21 (6)
	p	0.620	0.238	0.001²
General perception of health	Very good	7 (11.5)	1 (3.5)	23 (9.5)
	Good	11 (8)	2 (3)	20 (5)
	Moderate	16 (9)	2 (4.75)	19 (5)
	Weak	23.5 (11.75)	5 (7.5)	16 (6.25)
	Very weak	24 (7)	2 (12)	15 (4)
	¹ p	0.001¹*	0.116	0.001¹*

¹Kruskal Wallis Test. ²Mann Whitney U Test. * $p < 0.05$

**IQR could not be calculated since the number of singles was 3 and there was no 75.P value.

BMI: Body Mass Index, FGSIS: Female Genital Self-Image Scale, IQR: Interquartile Range MRS: Menopause Rating Scale, VSQ: Vulvovaginal Symptom Questionnaire.

DISCUSSION

In this study examining the effects of menopausal symptoms on genital self-perception in postmenopausal women, general and vulvovaginal symptoms of menopause were reported as moderate-low levels, and genital self-perception was found to be moderate. As the effect of the symptoms of menopause increased, FGSP was negatively affected.

The genital self-perception expresses the attitude and perception that the women develop due to her genital organs (6). Many studies examine the FGSP and carry out with people of different ages and characteristics (4,10-12,26).

In a study examining the genital self-perception and sexual response in men and women, FGSP levels were found to be high. Positive FGSP was associated with positive feelings about the body and increased sexual satisfaction in women (10). In another study examining the relationship between FGSP levels and sexual distress, nearly half of the participants were young women, and most of them were positive towards FGSP (11). In a study in which women who regularly do sports were subjected, the relationship between sexual function and FGSP was evaluated, and FGSP levels of all participants were found to be quite high (27).

In the postmenopausal period, the discomfort caused by vulvovaginal symptoms negatively affects women's emotions and self-confidence

and can negatively affect both women and their partners sexually. Country-specific or cultural differences regarding women's perceptions of sexuality in the postmenopausal period and the impact of menopausal symptoms have been previously reported (28). Namely, the data from the CLOSER survey in South Africa has shown that almost half of the post-menopausal women are upset that their bodies are not 'working' the way they used to, a third no longer find themselves sexually attractive and almost a quarter feel like 'less of a woman'. (29). Similar results were obtained when the CLOSER study was conducted in Europe and North America (30-32). A limited number of studies have been found examining directly "the concept of FGSP" in postmenopausal women. In a randomized controlled study, FGSP was found to be low in postmenopausal women (17).

The FGSP levels of postmenopausal women were found to be moderate in our study. When compared to the literature, it was observed that the FGSP levels of younger women were lower. However, as menopausal symptoms increased, FGSP decreased in the participants. Considering that the various symptoms that begin to appear with menopause negatively affect women's physical and mental health, as well as their sexual health, it is an expected result that genital self-perception will also be negatively affected.

Age is an important factor in the change of FGSP in different periods of life (9). In the

thesis study by Çamlıca, in which examine the genital perception in women between the ages of 19-49, it was found that FGSP decreased as age increased (12). According to Rowen et al., on the other hand, as the age of women decreases, FGSP decreases (26). In the study of Ayar et al. among women aged 21-49 years, no correlation was observed between age increase and FGSP (4). Similarly, in a thesis study examining FGSP in sexually active women, no relationship was found between age and FGSP (33).

In our study, no relationship was found between the age of the participants, the age at which they entered menopause, and the years that passed in menopause and FGSP. In most studies in the literature, it was observed that the inclusion rate of postmenopausal women was low. Hence, it is thought that evaluations should be made on postmenopausal women in future studies.

In previous studies, it was shown that as the socioeconomic level improves, the FGSP is also positively affected. Indeed, Ayar et al. reported that as the level of education and income increases, the FGSP increases significantly, and those who take an active role in business life had a more positive FGSP (4). Similarly, Rowen et al. reported less genital dissatisfaction in women with higher education (26). Rouzi et al., on the other hand, observed a positive and significant relationship between education level and FGSP, but did not find a

relationship between employment status and FGSP (34).

Consistent with the literature, in our study, while FGSP was better in women with higher education levels and working women, no relationship was found between income status and FGSP.

Sexual health status directly affects genital self-perception. As a matter of fact, there are studies in the literature showing that FGSP is lower in women with genital diseases (9,12, 33, 35-37). A positive FGSP is generally associated with women's positive feelings about their bodies and increased sexual satisfaction (10). Even in women with vulvar disease, it was reported that FGSP changes positively as sexual functions improve (37). FGSP levels were found to be lower in premenopausal women with dyspareunia than in those without dyspareunia (38).

Although there is no statistically significant difference according to Table 4, FGSP was lower in patients with a history of genital disease. A negative perception of their health status also led to lower FGSP, which was consistent with the literature. It is an expected result that these conditions, which may cause changes in the genital organs and sexual functions of women, negatively affect FGSP.

But surprisingly, no significant difference was found between women who had an active sexual life and those who did not. It is thought

that this result may have been reached differently from the literature since the variables such as frequency were not questioned when evaluating sexual activity in our study. Because in our society sharing the details of “sexual activity” is relatively undesirable.

CONCLUSION

In conclusion, FGSP of postmenopausal women was moderate and negatively affected by the increase in menopausal symptoms. High education level, good perception of health status, and low BMI were the factors that increased FGSP. In the postmenopausal period, women should be evaluated for improvement of FGSP. Physicians' awareness of increasing women's genital self-perceptions should be increased, and information should be provided on this issue.

Ethics Committee Approval: Ethics committee approval was received for this study from Gaziosmanpaşa Trainig and Research Hospital, Clinical Research Ethics Committee of Health Sciences University (Approval No:87; Date:25.05.2022).

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