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## Comparison of women's beliefs regarding hot flashes based on their type of menopause

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### Abstract

**Aim:** The study was conducted to compare women's beliefs regarding hot flashes based on their type of going through menopause and determine the affecting factors.

**Method:** The study was conducted on women going through the menopausal period who were admitted to Kars Harakani State Hospital polyclinics between July 2020-February 2021. The study included 303 women (189 surgical menopause + 114 natural menopause). Number, percentage, chi-square, variance analysis were used in the data evaluation.

**Results:** When considering that the introductory characteristics of groups were similar and the comparison of their HFBS scores, it was found that the difference between the psychological perception sub-dimension average scores only was statistically significant ( $p < 0.05$ ).

**Conclusion:** It was determined that women in both groups had similar beliefs regarding hot flashes (except for psychological perception), and women had a moderate level of negative beliefs.

**Keywords:** Menopause, hot flashes, vasomotor change

### Introduction

The World Health Organization (WHO) defines menopause as the period where women do not have menstruation for a year due to the decrease in estrogen hormone level based on the cessation of ovarian function [1]. While the age of menopause, which changes depending on societies, is 51 in the world, this rate is accepted between 45-55 in the world and 47 in Turkey. The menopause age in developing countries is earlier compared to the developed countries [2, 3]. In Turkey, the life expectancy at birth, which was 75.3 years for men in the 2013-2015 period, increased to 75.9 years in 2017-2019, and for women, it increased from 80.7 years to 81.3 years [4]. Therefore, about half of women's life processes are expected to be spent with menopause and its problems. Menopause is a period where women experience hormonal changes as well as changes in self-perception in their private and professional lives. These physiological and psychosocial changes, which occur in parallel with estrogen deficiency in the menopausal period, are experienced in different severeness and duration and negatively affect mental health. In this period, late-period health problems such as osteoporosis, osteoporotic fractures, cardiovascular diseases, urogenital symptoms can be seen as well as early-period health problems such as hot flashes, sweating, sleep-deprivation, tiredness, and tension. At the same time, it is stated that women's concerns about aging, losing their fertility, changes in body image, health problems combine with symbolic meanings, affecting the life quality [5].

According to the study results, it was found that the most common and complained problem in women in the menopause period is vasomotor symptoms [6-10]. The symptoms of vasomotor changes, whose mechanism has not been fully enlightened yet, are generally "blushing", "hot flashes", "night sweating". All these three symptoms are called "hot flashes" [11, 12]. Hot flashes are characteristics symptoms of the menopause period and their prevalence varies between 60-85% [13-16]. Hot flashes start at the top of the chest and spread to the neck and head, this is accompanied by blushing, then sweating and chills can be seen. During the symptoms, a change in the arterial blood pressure is not observed. These symptoms may last from a few seconds to a few hours. Each woman experiences these subjective complaints at different severities, perceives them differently, and develops a coping mechanism in this regard [17]. A study by Hunder and Liao stated that women who experienced hot flashes reported various emotional reactions in connection with their thoughts. In the related study, the concerns experienced in the social context led to social anxiety and embarrassment, while cognitive reactions regarding

coping and controllability resulted in boredom and helplessness. On the contrary, women who reported calm or bearable thoughts during hot flashes experienced less emotional distress [18].

The woman in the climacteric period should know about the health problems that may occur in this period, take precautions, or learn to cope with these for her to have a life that is physically, mentally, and socially full of goodness. She needs support, information, and advice for this. The general goals of the midwife in menopause care are to ensure the ability of woman and her family to perceive the menopausal period as a natural phase of life, correction of the wrong beliefs and perceptions regarding this period, her coping with the physical, emotional, and social problems [11, 12]. The present study was planned from following this idea. The study aimed to compare women's beliefs regarding hot flashes based on their form of going through menopause and determine the affecting factors.

## 2. Materials and methods

**2.1 Type of the Study:** This study is cross-sectional and descriptive type.

**2.2 Place and Properties of the Study** The study was conducted on women going through the menopausal period who were admitted to Kars Harakani State Hospital polyclinics between July 2020-February 2021. The hospital concerned was chosen as it was a district hospital and due to its patient density. The hospital provides service to women of all socio-economic statuses.

**2.3 The Universe and Sample of the Study:** The universe of the study included women in the menopausal period who were admitted to Kars Harakani State Hospital for any reason. In the study, all women who were admitted to the hospital and agreed to participate in the study were included without choosing a sample. As the universe was not known in the study, 383 women (191 surgical menopause + 192 natural menopause) were planned to be included in the study by the formula used in situations where the universe is not known. Between the stated dates, 189 women who went through menopause naturally due to the Covid 19 pandemic and 114 women who went through menopause surgically were included in the study. As the institution stopped data collection due to the Covid 19 pandemic during the data collection process, the sample size calculated was not reached. In this study, matching groups was attempted by taking into account both sample size and socio-demographic characteristics.

### Criteria for inclusion in the study

Being in menopause,  
Being at least primary school graduate,  
Not having any chronic diseases,  
Not having a psychiatric history,

**2.4 Data Collection Tools and Properties:** An 18-item introductory information form prepared by the researchers and The Hot Flashes Belief Scale (Sis Çelik and Pasinlioğlu 2015) was used in data collection.

**2.5 Introductory Information Form:** The information form prepared by the researchers consisted of 18 items questioning the introductory characteristics (gender, marital status, education, place of residence, etc.) of women.

**The Hot Flashes Belief Scale:** The scale was developed by

Rendall *et al.* [19] in 2008 to measure women's beliefs about hot flashes. Each of the 27 items in Hot Flashes Belief Scale, whose Turkish validity and reliability study was performed by Sis Çelik and Pasinlioğlu [17], was graded in 6-point Likert type ranging from "I completely disagree" (0 points) and "I fully agree" (5 points). The items numbered 2, 4, 5, 11, 15, 18, 25 in the scale were coded reversely. The scale items were rated between 0-5 points. The overall score of the scale ranged from 0-135, and the high score indicated negative belief. The Cronbach's alpha coefficient of the scale was 0.90, its sub-dimensions Cronbach's alpha coefficient was between 0.76-0.88. The scale consisted of 3 sub-dimensions. In the study, the total Cronbach's alpha was 0.93, Social perception was 0.90, Psychological perception was 0.85, and coping perception was 0.87. The scale had no cut point [17].

**The 1st sub-dimension:** Sub-dimension of women's beliefs about themselves in the social context (social perception): These items were 1, 7, 8, 9, 10, 13, 14, 16, 17, 20, 21, 23.

**The 2nd sub-dimension:** Women's beliefs about themselves in the psychological context (Psychological perception): These items were 3, 6, 12, 19, 24, 26, 27.

**The 3rd sub-dimension.** Sub-dimension of beliefs about coping with hot flashes and night sweating (coping perception): These items were 2, 4, 5, 11, 15, 18, 22, 25 [17].

## 2.6 Data Collection

Data were collected using the face-to-face interviewing method in an empty room in the hospital after polyclinic services were provided to women. A separate room was preferred for women to answer questions comfortably. Data were collected in approximately 5-10 minutes.

## 2.7 Evaluation of Data

Statistical Package for the Social Sciences (SPSS) 22.0 was used in data analysis and evaluation, and proper analysis was performed by using the package program. The results were evaluated between a confidence interval of 95%, and the significance was evaluated at the level of  $p < 0.05$ . In the evaluation of the data, percentage distributions, chi-square, t-test were used in independent groups.

**2.8 Ethical Aspect of the Study:** Approval dated 21.05.2020 and numbered 19 was obtained from the Atatürk University Ethics Committee, and application permission was obtained from Kars Harakani State Hospital before starting the study.

The following ethical principles were fulfilled before data collection to protect the right of women included in the study: "Informed Consent" principle, "by explaining the aim of the study, *Privacy*, and protection of the privacy" principle by stating that the obtained information would be kept in private, "the principle of respect for autonomy" by including those who volunteered to participate in the study. Additionally, the questions of pregnant women were answered, and information on the subject was provided after the application of the survey.

## 3. Results

It was determined that of the women who went through menopause naturally, 48.7% was 52 and above, 63.0% was primary school graduate, 83.6% was married, 89.4% was unemployed, spouses of 42.9% were secondary school graduates, 64.6% lived in an elementary family, 72.5% had middle-income perception, 54.5% had negative menopause

perception, 47.1% went through menopause after 48, and 47.6% had been in menopause for longer than 5 years. It was determined that of the women who went through menopause surgically, 45.6% was 52 and above, 56.1% was primary school graduate, 86.0% was married, 93.9% was unemployed, spouses of 36.0% were secondary school graduates, 73.7% lived in an elementary family, 71.9% had middle-income perception, 80.7% had negative menopause perception, 36.8% went through menopause between ages of 42-47, and 24.6% had been in menopause for less than 5 years. It was observed that groups were similar in terms of introductory characteristics.

Table 2 shows the comparison of the HFBS average scores of groups. It was determined that women who went through

menopause naturally received  $20.66 \pm 6.37$  from the HFBS's social perception sub-dimension,  $21.84 \pm 6.88$  from the psychological perception sub-dimension,  $17.21 \pm 8.85$  from the coping sub-dimension, and  $59.73 \pm 14.18$  from the total scale score. It was determined that women who went through menopause surgically received  $19.72 \pm 5.55$  from the HFBS's social perception sub-dimension,  $18.47 \pm 7.43$  from the psychological perception sub-dimension,  $17.53 \pm 6.88$  from the coping sub-dimension, and  $55.73 \pm 11.52$  from the total scale score. When looking at the comparison of the HFBS average scores of the groups, it was found that only the difference between the psychological perception sub-dimension average score was statistically significant.

**Table 1:** Comparison of the introductory characteristics of the groups

Characteristics	Natural (n=189)		Surgical (n=114)		Test and p-value
	n	%	n	%	
<b>Age</b>					
40-45	42	22.2	25	21.9	X <sup>2</sup> =0.40 p=0.81
46-51	55	29.1	37	32.5	
52 and older	92	48.7	52	45.6	
<b>Education status</b>					
Primary School	119	63.0	64	56.1	X <sup>2</sup> =2.08 p=0.35
Secondary School	41	21.7	33	28.9	
High School	29	15.3	17	14.9	
<b>Marital status</b>					
Married	158	83.6	98	86.0	X <sup>2</sup> =0.30 p=0.58
Single (widowed, divorced)	31	16.4	16	14.0	
<b>Employment Status</b>					
Employed	20	10.6	7	6.1	X <sup>2</sup> =1.72 p=0.18
Unemployed	169	89.4	107	93.9	
<b>Educational Status of the spouse</b>					
Primary School	48	25.4	22	19.3	X <sup>2</sup> =6.74 p=0.08
Secondary School	81	42.9	41	36.0	
High School	35	18.5	24	21.1	
University	25	13.2	27	23.7	
<b>Family type</b>					
Elementary Family	122	64.6	84	73.7	X <sup>2</sup> =2.72 p=0.09
Extended Family	67	35.4	30	26.3	
<b>Perception of income status</b>					
Bad	30	15.9	11	9.6	X <sup>2</sup> =4.34 p=0.11
Middle	137	72.5	82	71.9	
Good	22	11.6	21	18.4	
<b>Perception of the menopausal period</b>					
Positive	86	45.5	22	19.3	X <sup>2</sup> =21.28 p=0.001
Negative	103	54.5	92	80.7	
<b>Age of going through menopause</b>					
30-35	13	6.9	9	7.9	X <sup>2</sup> =5.18 p=0.15
36-41	28	14.8	24	21.1	
42-47	59	31.2	42	36.8	
48 and older	89	47.1	39	34.2	
<b>The menopausal stage</b>					
Premenopausal	18	9.5	10	8.8	X <sup>2</sup> =1.91 p=0.59
Perimenopausal	31	16.4	26	22.8	
<5 years of postmenopausal	50	26.5	28	24.6	
≥5 years postmenopausal	90	47.6	50	43.	
<b>Smoking status</b>					
Yes	45	23.8	36	31.6	X <sup>2</sup> =2.19 p=0.13
No	144	76.2	78	68.4	
<b>Regular exercise status</b>					
Yes	14	7.4	14	12.3	X <sup>2</sup> =2.01 p=0.15
No	175	92.6	100	87.7	
<b>Status of receiving information about the menopause period</b>					
Received	38	20.1	32	28.1	X <sup>2</sup> =2.53 p=0.28
Did Not Receive	105	55.6	57	50.0	
Partly received	46	24.3	21.9	21.9	

**Table 2:** Comparison of the HFBS score averages of groups

HFBS	Groups		Test and p-value
	Natural	Surgical	
	$\bar{X} \pm SS$	$\bar{X} \pm SS$	
Social perception	20.66±6.37	19.72±5.55	t=0.67, p=0.50
Psychological perception	21.84±6.88	18.47±7.43	t=4.01, <b>p=0.001</b>
Coping perception	17.21±8.85	17.53±6.88	t=0.32, p=0.74
<b>Scale Total</b>	59.73±14.18	55.73±11.52	t=1.45, p=0.14

#### 4. Discussion

The score averages of all sub-dimensions of the HFBS and total scale of women included in the study were compared, it was determined that women in both groups had similar beliefs about hot flashes (except psychological perception), and women had a moderate level of negative belief ( $p>0.05$ , Table 2). Similar to the result of the study, in a study by Sis Çelik and Pasinlioğlu [17], the pre-test score averages of women in the experimental and control groups who were included in the scope of the study were similar. The study found that the psychological perceptions of women who went through menopause naturally were worse than those who went through menopause surgically, and the difference between the score averages of groups was significant. Given that women who went through menopause naturally may have experienced longer premenopausal symptoms than women who went through menopause surgically, it can be assumed that such a perception occurred. The study conducted by Ergöl and Eroğlu, [20] Tortumluoğlu, and Erci, [21] Ayers *et al.* [22] on women in the climacteric period found that women were in a negative attitude towards menopause. The results of the present study are similar to the literature. A study by Ayers *et al.* [22] reported that one of the reasons for negative attitudes towards menopause was menopausal complaints. In the present study, the reason for women's negative beliefs about hot flashes may be the severeness of the hot flash complaint, creating a social-psychological discomfort. The climacteric period, along with the complaints seen during this period, is also affected by women's attitudes towards menopause. It was found that individuals with positive attitudes towards menopause spent the climacteric period more comfortably. It was found that negative beliefs in societies with negative beliefs hindered coping with menopausal complaints. Additionally, it was reported that negative beliefs led to a more severe perception of complaints; therefore, the complaints were observed at a higher rate in studies conducted in societies with such beliefs [21-24]. A study by Hunder and Liao stated that women who experienced hot flashes reported various emotional reactions in connection with their thoughts. In the related study, concerns regarding personality in social context during hot flashes ("can someone see me?") led to social anxiety and embarrassment feelings while cognitive reactions ("will this ever end?") about coping and controllability resulted in boredom and helplessness. On the contrary, women who reported calm or bearable thoughts ("this situation will pass") during hot flashes experienced less emotional distress [18].

#### 4.1 Recommendations and Conclusion

It was determined that women in both groups had similar beliefs regarding hot flashes (except for psychological perception), and women had a moderate level of negative beliefs. The psychological perception was more negative in women who went through menopause naturally.

Training can be provided to eliminate the negative feelings of women about hot flashes. Additionally, alternative coping methods, nonpharmacological methods, and different occupations can be recommended by health professionals to

women in the menopausal period. It may also be suggested that the study be conducted again with different sample sizes in different regions.

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