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Examining the Relationship Between Menopausal Symptoms and Burnout Due to The Covid-19 Pandemic: A Cross-Sectional Study

COVID-19 Pandemisine Bağlı Tükenmişliğin Menopozal Semptomlar ile İlişkisinin İncelenmesi: Kesitsel Bir Çalışma

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ABSTRACT

Objective: In the first five years of menopause, women experience menopausal symptoms intensely. During this period, many factors affect the menopause process. This study was conducted to examine the relationship between coronavirus burnout and women's menopausal symptoms in the COVID-19 pandemic.

Material and Method: The cross-sectional descriptive study was conducted between 20 April and 30 May 2021. The sample of the study consisted of 286 women who had entered menopause and had not completed their first five years. Data were collected using the "Menopause Symptoms Evaluation Scale" and "Coronavirus Burnout Scale". The research was obtained using snowball sampling method and online questionnaires.

Results: The mean age of the women participating in the study was 51.17±4.69, the age of menopause was 48.26±4.52, It was determined that the total score average of the Coronavirus Burnout Scale was 31.16±9.04, and the total score average of the Menopausal Symptoms Assessment Scale was 23.17±6.07. Coronavirus Burnout Scale mean total score and Menopause Symptoms Evaluation Scale (r=0.212, p=0.000), Somatic Complaints Sub-Dimension (r=0.188, p=0.001) and Psychological Complaints Sub-Dimension (r=0.222, p=0.000) was found to be positively correlated with the total score.

Conclusion: It was found that the severity of corona virus-related burnout and menopausal symptoms of women during the pandemic period was above medium. It was observed that as the burnout due to the Coronavirus increased, the complaints of menopausal symptoms increased.

Keywords: *COVID-19, coronavirus, burnout, menopause, menopausal symptoms, pandemic*

ÖZET

Giriş: Menopoz döneminde kadınlarda özellikle ilk beş yıl semptomlar açısından en yoğun dönemdir ve bu dönemde menopoz sürecini birçok faktör etkilemektedir. Bu çalışma, COVID-19 pandemisinde koronavirüs tükenmişliği ile kadınların menopoz semptomları arasındaki ilişkiyi incelemek amacıyla yapılmıştır.

Materyal ve Metot: Kesitsel tanımlayıcı nitelikteki çalışma 20 Nisan- 30 Mayıs 2021 tarihleri arasında gerçekleştirilmiştir. Örneklemi, Türkiye'de menopoza girmiş ve menopozda beş yılını doldurmamış, araştırmaya katılmaya gönüllü 286 kadın oluşturmuştur. Veriler "Menopoz Semptomları Değerlendirme Ölçeği" ve "Koronavirüs Tükenmişlik Ölçeği" kullanılarak toplandı. Araştırma kartopu örnekleme yöntemi ve çevrimiçi anketler kullanılarak elde edilmiştir.

Bulgular: Araştırmaya katılan kadınların yaş ortalaması 51,17±4,69, menopoz yaşı 48,26±4,52 olup, Coronavirüs Tükenmişlik Ölçeği toplam puan ortalaması; 31,16±9,04, Menopoz Semptomları Değerlendirme Ölçeği ise 23,17±6,07 olduğu belirlenmiştir. Coronavirüs Tükenmişlik Ölçeği ile Menopoz Semptomları Değerlendirme Ölçeği (r=0,212, p=0,000), Somatik Şikayetler Alt Boyutu (r=0,188, p=0,001) ve Psikolojik Şikayetler Alt Boyutu (r=0,222, p=0,000) toplam puan ortalamaları arasında pozitif yönde ilişkili olduğu bulunmuştur..

Sonuç: Pandemi döneminde kadınlarda korona virüse bağlı tükenmişlik ve menopoz semptomlarının şiddetinin ortanın üzerinde olduğu belirlendi. Coronavirüs nedeniyle tükenmişlik arttıkça menopoz semptomlarına ilişkin şikayetlerin de arttığı gözlendi.

Anahtar kelimeler: *COVID-19, Koronavirüs, Tükenmişlik, Menopoz, Menopoz semptomları, Pandemi*

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INTRODUCTION

The Coronavirus disease, which emerged with the symptoms (fever, cough, shortness of breath) manifested in a group of people in Wuhan, China in December 2019, spread in a short time and affected the whole world (WHO, 2019). A pandemic was declared on 11 March 2020 due to the infectious disease called COVID-19 by the World Health Organization (WHO, 2019). The first case in Turkey was announced by the Ministry of Health on March 11, 2020. After the first case was diagnosed, numerous crucial measures were implemented. With the rapid increase in the number of cases, the focus of interest concerning COVID-19 disease in Turkey, as in the whole world, was directed towards individuals with advanced age and chronic diseases, who are at great risk with regard to mortality (Ministry of Internal Affairs, 2020). During the pandemic period, groups in need of health services and women in menopause were affected the most (Huang and Zhao, 2021; Şahin et al., 2022)

According to the WHO, menopause is the permanent cessation of menstruation and fertility due to the termination of follicular activity in the ovaries. This definition covers natural menopause. Natural menopause is the absence of menstrual bleeding for 12 months, regardless of any pathology (WHO, 2015). With the increase in average life expectancy, women spend approximately one third of their lives in the postmenopausal period (Vardar et al., 2019). Although the age at menopause varies, most women enter menopause between the ages of 45 and 55 (Ozdemir and Uysal, 2018).

Estrogen withdrawal due to the loss of ovarian functions during the menopausal period can lead to several symptoms. Animal model studies of SARS-CoV and MERS report that the age and gender difference in COVID-19 symptom severity may be associated with the protective effects of estrogen (Channappanavar et al., 2017). During menopause, muscle pain, sweating, hot flashes, sleep disturbances, reduction in breast size, sagging, vulvovaginal discharge, itching, dyspareunia, atrophy, incontinence, and appetite changes are observed (Erkin et al., 2014; Sahin, 2015; Takahashi, 2015; Roberts and Hickey, 2016; Vardar et al., 2019). Furthermore, cognitive, and psychological problems such as anxiety, depressive disorders, feeling worthless, anxiety, inability to concentrate, irritability, restlessness, difficulty in making decisions, and sexual reluctance, decrease in libido, orgasm disorders, and vaginal dryness may occur (Altuntug et al., 2016; Dincer and Oskay, 2018). Studies indicate that perimenopausal women may experience sexual and urogenital problems, sleep problems, depression, vasomotor symptoms, and their quality of life is negatively affected during the menopausal period (Erkin et al., 2014; Roberts and Sahin, 2015; Takahashi, 2015; Hickey, 2016; Vardar et al., 2019). While coping with menopausal symptoms in women, the feeling of burnout caused by the pandemic process related to the COVID-19 pandemic period may negatively affect the symptoms (Huang and Zhao, 2021; Şahin et al., 2022).

Studies conducted during the COVID-19 pandemic have shown that adult males have more serious complications than females because of the estrogen hormone in women (Scully et al., 2020). One study found that male mortality was higher in 37 of 38 countries. It has been observed that the symptoms of the disease are much more severe in women who have had COVID-19 after the menopause, when the estrogen hormone is withdrawn (Ding et al., 2020). After the first year of amenorrhea, in which menopausal symptoms are most common, and up to five years following it, various restrictions, difficulties in accessing health services, and psychological problems were added to women during the pandemic period (Costeira et al., 2020; Jahan 2020). However, research on perimenopausal women during the COVID-19 pandemic is limited. Studies on burnout and menopausal complaints related to COVID-19 during menopause have not been found in the national and international literature.

MATERIAL and METHOD

This cross-sectional descriptive study was conducted to examine the relationship between coronavirus burnout and women's menopausal symptoms during the COVID-19 pandemic. For this purpose, answers to the following questions were sought.

- What is the prevalence of Coronavirus burnout in menopausal women?
- What is the severity of menopause symptoms in menopausal women?
- Does the level of Coronavirus burnout in menopausal women affect the severity of menopausal symptoms?

Sample

The population of the study consisted of women who have entered menopause and have not completed their first five menopausal years in Turkey. The G-Power program was used to determine the minimum sample size in the study. In the study, type I error level of 5% and type II error level of 20% were considered and the required minimum sample size was found to be 278 with a working power of 80%. Data were collected between 20 April-30 May 2021 and 286 women were reached.

Inclusion criteria for sampling; amenorrhea history of at least one year and at most five years, being literate, no previously diagnosed psychiatric disorder, no loss of death encountered or divorce within the last two years, volunteering to participate in the research.

Exclusion criteria for sampling; amenorrhea history of more than five years.

Data Collection Tools and Method

Internet-based survey technique, one of the electronic survey types, was used for data collection. Data collection tools were created by one of the researchers (F.Ş.B.) through "Google forms". The first page of the forms included items containing sample selection criteria. Participants who were not eligible for sample selection could not proceed to the next page. The information was based on the statements of the participants. The prepared forms were digitally transmitted to the women through the links created by the researchers. At the beginning of the study, women who met the inclusion criteria were informed about the content and purpose of the study in a short text before the online survey. A voluntary consent form was obtained online from those who volunteered to participate in the study. After consent was obtained, participants could see the questions. In total, the administration process of each questionnaire took approximately 8-10 minutes.

Data Collection Tools

Data were obtained by using the "Questionnaire Form", "Menopausal Symptoms Evaluation Scale (MSES)" and "Coronavirus Burnout Scale".

Questionnaire Form; was created by researchers via scanning the literature (Celik and Pasinlioglu, 2013; Celik and Pasinlioglu, 2014). In this Questionnaire Form there are a total of 23 questions, including 10 questions on socio-demographic characteristics, eight questions on obstetric and gynecological characteristics, and five questions on COVID-19.

Menopausal Symptoms Evaluation Scale (MSES); was developed in German language by Schneider, Heinemann et al. (Schneider et al. 2000) and was later adapted into English. The Turkish validity and reliability of the scale was conducted by Can Gurkan et al. (Can Gurkan, 2005). For each of the 11 items, there are "0=None", "1=Mild", "2=Moderate", "3=Severe" and "4=Very Severe" statements. The lowest possible score is 0 (asymptomatic) and the highest score is 44 (severe symptomatic). The scale has 3 sub-dimensions. These sub-dimensions are 1- Somatic complaints sub-dimension, 2- Psychological complaints sub-dimension, 3- Urogenital complaints sub-dimension. An increase in the total score obtained from the scale means an increase in symptom severity. The Cronbach's alpha reliability coefficient, in which the consistency and item homogeneity of the responses to all items of the scale were examined, was 0.84. For subgroups, the Cronbach's alpha value was 0.65 for somatic symptoms, 0.79 for psychological symptoms, and 0.72 for urogenital symptoms. In this study, Cronbach's alpha reliability coefficient was 0.74.

Coronavirus Burnout Scale; This scale, developed by Yildirim and Solmaz (2020), consists of 10 questions in total and has no sub-dimensions. There is no reversed item in the scale and the total score is calculated by adding the scores from each item. As the score obtained from the scale increases, the level of burnout increases, while a low score indicates less burnout. Cronbach's alpha reliability coefficient was reported to be 0.71. In this study, Cronbach's alpha reliability coefficient was 0.93.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS-24.0) program was used while evaluating the findings obtained in the study. Descriptive statistical analyzes were obtained with frequency, percentage, mean (X), standard deviation, and min-max values. Whether the data were suitable for normal distribution was evaluated with the Kolmogorov-Smirnov test of normality. The Mann Whitney U test was used in the evaluations between the two groups, and the Kruskal Wallis test was used in the evaluations between more than two groups, to compare the COVID-19 Burnout Scale and Menopause Symptoms Evaluation Scale scores and their descriptive features. Post-hoc test was used to determine the group that caused the difference. Results were evaluated using a 95% confidence interval representing the 0.05 significance level ($p<0.05$). The relationship between continuous variables was evaluated by using Spearman correlation analysis.

Ethical Considerations

Written permission was obtained from the developers of the scale for the use of the Menopause Symptoms Assessment Scale and the Coronavirus Burnout Scale. In the data collection process with online questionnaires, firstly, necessary information about the study was given on the first page, and if they agreed to participate in the study, they were asked to mark the statement "I approve to participate in the study". It was stated that participation of women in the study was on a voluntary basis. The woman who completed the form online was deemed to have accepted to participate in the study. It was stated that no fee will be charged and/or no fee will be paid to the women for research purposes.

RESULTS

This research was completed with 286 women who had gone through menopause and had not completed five years. Mean age 51.17±4.69, height 161.04±6.14, weight 72.43±14.36 among women participating in the study It was determined that and menopause age were 48.26±4.52. It was observed that 54.5% of the women reported that they did not have a chronic disease, 54.8% did not use drugs continuously, and 74.8% did not smoke. Total mean scores of the scales, Coronavirus Burnout Scale 31.16±9.04, MSES 23.17±6.07 (Table 1).

Table 1. Distribution of women's introductory characteristics

Variables	N	%
Marital status		
Married	220	76.9
Single	66	23.1
Educational status		
Literate	20	7.0
Primary education	92	32.2
Secondary education	50	17.5
High Scholl	124	43.4
Working status		
Working	89	311
Not working	197	68.9
Income rate		
Income less than expenses	57	19.9
Income equal to expenses	157	54.9
Income more than expenses	72	25.2
Living place		
City and District Center	270	94.4
Town and Village	16	5.6
City of residence		
Istanbul	168	58.7
Bursa	29	10.1
Adana	5	1.7
Ankara	22	7.7
Izmir	20	7.0
Trabzon	16	5.6
Tekirdağ	7	2.4
Adıyaman	10	3.5
City of residence not specified	9	3.1
Chronic Disease		
Yes	130	45.5
No	156	54.5
Continuous Drug Use		
Yes	135	47.2
No	151	52.8
Smoking		
Yes	72	25.2
No	214	74.8
Hormone Replacement Therapy		
Yes	28	9.8
No	258	90.8
Vaginal Surgery		
Yes	89	31.1
No	197	68.9
Pregnancy		
Not pregnant	38	13.3
A pregnancy	26	9.1
Two pregnancies	69	24.1
Three pregnancies	53	18.5
Four or more pregnancies	100	35
Birth		
No birth	37	12.9
A birth	49	17.1
Two births	109	38.1
Three births	54	18.9
Four or more births	37	12.9

Abort		
No abort	193	67.5
A abort	58	20.3
Two aborts	28	9.8
Three aborts	4	1.4
Four or more aborts	3	1.0
Curettage		
No curettage	202	70.6
A curettage	47	16.4
Two curettages	27	9.4
Three curettages	10	3.5
Living Child		
No living children	39	13.6
A living child	47	16.4
Two living children	113	39.5
Three living children	59	20.6
Four or more living children	28	9.8
Vaginal Birth *		
No vaginal delivery	127	44.4
A vaginal birth	38	13.3
Two vaginal births	53	18.5
Three vaginal births	37	12.9
Four or more vaginal births	31	10.8
Cesarean Birth *		
No cesarean birth	156	54.5
Birth with a cesarean section	63	22.0
Birth with two cesarean sections	61	21.3
Birth with three cesarean sections	6	2.1
COVID-19 Passing Status		
Yes	58	20.3
No	228	79.7
COVID-19 Status of Relatives		
Yes	212	74.1
No	74	25.9
COVID-19 Vaccination Status		
Yes	65	22.7
No	221	77.3
If no; don't think about doing		
Yes	180	81.45
No	41	18.55
Age (X±SD (min-max)	51.17±4.69(35.00-65.00)	
Height (X±SD (min-max)	161.04±6.14(142.00-178.00)	
Weight (X±SD (min-max)	72.43±14.36(46.00-139.00)	
Age at menopause (X±SD (min-max)	48.26±4.52(30.00-64.00)	
Coronavirus Burnout Scale Total Score (X±SD (min-max)	31.16±9.04 (10.00-50.00)	
MSES Total Score (X±SD (min-max)**	23.17±6.07 (10.00-44.00)	
MSES Somatic Complaints Sub-Dimension (X±SD (min-max)**	8.62±2.67 (2.00-16.00)	
MSES Psychological Complaints Sub-Dimension (X±SD (min-max)**	8.60±2.76 (1.00-16.00)	
MSES Urogenital Complaints Sub-Dimension (X±SD (min-max)**	5.95±2.36 (0.00-12.00)	
Total	**286**	**100**

*Multiple birth types, ** MSES: Menopausal Symptoms Evaluation Scale

In Table 2, the comparison of the socio-demographic, obstetric and COVID-19 characteristics of women and the mean scores of the Coronavirus Burnout Scale and MSES are given. It was observed that there was a significant relationship between the Coronavirus Burnout Scale total score and the state of residence of the women, hormone replacement therapy and COVID-19 vaccination status ($p<0.05$). It was determined that there was a significant relationship between the total MSES score and education status, province of residence, smoking status, number of living children and vaginal births, COVID-19 transmission, and the state of being vaccinated by the non-vaccinated ($p<0.05$; Table 2).

Table 2. Comparison of women's socio-demographic, obstetric, and COVID-19-related characteristics with the Coronavirus Burnout Scale and Menopausal Symptoms Evaluation Scale mean scores (N=286)

Variables	Coronavirus Burnout Scale Total Score X±SD (min-max)	MSES Total Score X±SD (min-max)	MSES Somatic Complaints Sub-Dimension X±SD (min-max)	MSES Psychological Complaints Sub-Dimension X±SD (min-max)	MSES Urogenital Complaints Sub-Dimension X±SD (min-max)
Educational Status					
Literate[a]	34.25±9.00(16.00-50.00)	26.85±6.59(19.00-44.00)	9.90±2.78(5.00-16.00)	10.35±2.58(6.00-16.00)	6.60±2.23(2.00-12.00)
Primary school[b]	31.56±10.00(10.00-50.00)	24.02±6.50(13.00-44.00)	8.90±2.83(3.00-16.00)	9.38±2.95(3.00-16.00)	5.73±2.42(1.00-12.00)
Middle school[c]	31.12±9.18(10.00-50.00)	23.46±5.72(12.00-38.00)	8.94±2.67(3.00-14.00)	7.82±2.38(1.00-13.00)	6.70±2.47(0.00-12.00)
Higher education[d]	30.38±8.19(10.00-47.00)	21.84±5.47(10.00-36.00)	8.08±2.42(2.00-13.00)	8.07±2.54(3.00-15.00)	5.70±2.22(1.00-12.00)
X^2 / KW**	2.837	12.005	9.857	20.397	12.373
p	0.417	***0.007***	***0.020***	***0.000***	***0.006***
		a>b***	***a.b.c.d******	***a>b>d>c******	***a>b; c>d******
Living city					
Istanbul	31.02±9.06(10.00-50.00)	22.91±5.58(11.00-44.00)	8.53±2.49(3.00-16.00)	8.56±2.69(1.00-16.00)	5.82±2.30(0.00-12.00)
Bursa	28.82±6.55(14.00-40.00)	22.44±6.63(10.00-37.00)	8.31±2.97(2.00-16.00)	8.06±2.97(3.00-13.00)	6.06±2.61(1.00-12.00)
Adana	41.00±3.93(36.00-47.00)	28.40±5.68(19.00-34.00)	10.60±2.60(7.00-14.00)	11.20±2.86(8.00-15.00)	6.60±2.30(4.00-9.00)
Ankara	30.68±9.44(16.00-50.00)	23.36±7.68(13.00-44.00)	8.50±3.00(5.00-16.00)	8.72±3.01(3.00-16.00)	6.13±2.74(2.00-12.00)
Izmir	29.00±7.39(10.00-40.00)	25.55±5.36(14.00-35.00)	9.20±2.19(5.00-13.00)	9.55±2.41(5.00-14.00)	6.80±2.70(2.00-12.00)
Trabzon	32.37±7.19(18.00-42.00)	23.81±3.93(17.00-29.00)	9.56±2.18(5.00-14.00)	8.68±1.77(5.00-11.00)	5.56±2.03(2.00-11.00)
Tekirdağ	32.85±10.65(17.00-46.00)	20.71±4.46(16.00-29.00)	6.85±2.73(3.00-11.00)	7.14±1.77(5.00-10.00)	6.71±.75(6.00-8.00)
Adıyaman	30.40±9.66(16.00-50.00)	17.90±4.45(12.00-26.00)	6.60±1.95(4.00-10.00)	6.80±2.14(4.00-11.00)	4.50±1.26(3.00-6.00)
Not specified by living	39.22±14.80(12.00-50.00)	28.55±9.81(15.00-41.00)	11.11±3.95(6.00-16.00)	10.33±4.21(4.00-14.00)	7.11±2.52(4.00-11.00)
X^2 / KW**	17.229	21.708	19.831	16.950	11.439
p	***0.028***	***0.005***	***0.011***	***0.031***	0.178
Hormone Replacement Therapy					
Yes					
No					
U*	35.39±10.27(14.00-50.00)	23.82±5.13(14.00-34.00)	9.03±2.16(4.00-12.00)	9.21±2.54(3.00-13.00)	5.57±2.30(1.00-10.00)
p	30.70±8.80(10.00-50.00)	23.10±6.17(10.00-44.00)	8.57±2.71(2.00-16.00)	8.54±2.78(1.00-16.00)	5.99±2.36(0.00-12.00)
	2639.500	3223.500	3087.500	2885.500	3253.500
	0.019	0.349	0.204	0.078	0.384

Smoking					
Yes	32.23±9.16(10.00-50.00)	24.51±6.37(10.00-44.00)	8.87±2.78(2.00-16.00)	9.11±3.01(3.00-16.00)	6.52±2.25(1.00-12.00)
No	30.80±8.99(10.00-50.00)	22.72±5.92(12.00-44.00)	8.53±2.63(3.00-16.00)	8.43±2.65(1.00-16.00)	5.76±2.37(0.00-12.00)
U*	6989.000	6460.000	7178.000	6684.000	6172.000
p	0.238	***0.040***	0.383	0.091	***0.011***
Pregnancy					
Not pregnant	31.89±9.24(10.00-50.00)	22.15±5.27(13.00-33.00)	8.44±2.23(3.00-13.00)	8.07±2.57(1.00-12.00)	5.63±2.36(1.00-10.00)
A pregnancy	28.96±8.04(14.00-48.00)	24.46±5.45(11.00-36.00)	9.11±2.67(3.00-13.00)	9.11±2.47(3.00-13.00)	6.23±2.79(1.00-12.00)
Two pregnancies	30.33±8.82(10.00-47.00)	22.31±5.77(10.00-38.00)	7.86±2.47(2.00-14.00)	8.60±2.67(3.00-15.00)	5.86±2.24(1.00-12.00)
Three pregnancies	31.03±8.37(10.00-50.00)	23.62±5.89(12.00-41.00)	8.92±2.73(4.00-16.00)	8.35±2.85(3.00-15.00)	6.33±2.31(2.00-12.00
Four or more pregnancies	32.10±9.70(10.00-50.00)	23.59±6.75(12.00-44.00)	8.92±2.84(3.00-16.00)	8.81±2.92(3.00-16.00)	5.86±2.36(0.00-12.00)
X^2/ **KW****	3.200	3.870	7.370	3.795	1.715
p	0.424	0.525	0.118	0.434	0.788
Birth					
No birth	31.97±9.35(10.00-50.00)	22.13±5.34(13.00-33.00)	8.45±2.26(3.00-13.00)	8.08±2.60(1.00-12.00)	5.59±2.38(1.00-10.00)
A birth	29.30±7.72(14.00-48.00)	23.00±5.46(10.00-36.00)	8.57±2.77(2.00-13.00)	8.34±2.65(3.00-13.00)	6.08±2.46(1.00-12.00)
Two births	30.98±8.74(10.00-50.00)	22.23±5.96(12.00-39.00)	8.07±2.41(3.00-14.00)	8.44±2.69(3.00-15.00)	5.73±2.43(0.00-12.00)
Three births	31.44±9.98(10.00-50.00)	24.79±6.58(15.00-44.00)	9.33±3.00(5.00-16.00	9.00±3.00(5.00-16.00)	6.46±2.21(2.00-12.00)
Four or more births	32.94±9.77(16.00-50.00)	24.86±6.52(16.00-44.00)	9.43±2.80(4.00-16.00)	9.37±2.83(3.00-16.00)	6.05±2.15(2.00-12.00)
X^2/ **KW****	3.272	7.543	8.664	3.996	3.437
p	0.513	0.110	0.070	0.407	0.488
Abort					
No abort	30.66±8.59(10.00-50.00)	23.05±5.55(11.00-41.00)	8.45±2.50(3.00-16.00)	8.67±2.58(1.00-16.00)	5.93±2.28(1.00-12.00)
A abort	31.24±9.44(10.00-50.00)	23.24±6.96(10.00-44.00)	8.94±3.01(2.00-16.00)	8.29±3.21(3.00-16.00)	6.00±2.45(1.00-12.00)
Two aborts	34.25±9.95(16.00-50.00)	23.21±7.70(12.00-44.00)	9.07±3.07(3.00-16.00)	8.32±2.82(4.00-16.00)	5.82±2.94(0.00-12.00)
Three aborts	27.00±12.56(14.00-44.00)	25.75±5.37(19.00-32.00)	8.50±1.73(7.00-11.00)	10.50±3.31(6.00-14.00)	6.75±1.25(5.00-8.00)
Four or more aborts	38.66±13.05(24.00-49.00)	26.00±7.00(19.00-33.00)	9.00±3.60(5.00-12.00)	10.33±3.21(8.00-14.00)	6.66±.57(6.00-7.00)
X^2/ **KW****	5.184	1.738	1.494	4.782	1.546
p	0.269	0.784	0.828	0.310	0.818
Living Child					
No living children[a]	32.00±9.31(10.00-50.00)	22.17±5.22(13.00-33.00)	8.51±2.29(3.00-13.00)	8.05±2.54(1.00-12.00)	5.61±2.32(1.00-10.00)
A living child[b]	29.14±7.65(14.00-48.00)	22.97±5.54(10.00-36.00)	8.53±2.78(2.00-13.00)	8.29±2.67(3.00-13.00)	6.14±2.60(1.00-12.00)
Two living children[c]	30.87±8.53(10.00-50.00)	22.19±5.89(12.00-39.00)	8.07±2.44(3.00-14.00)	8.45±2.64(3.00-15.00)	5.69±2.34(0.00-12.00)
Three living children[d]	31.89±10.24(10.00-50.00)	25.81±6.86(15.00-44.00)	9.69±2.91(5.00-16.00)	9.44±3.08(5.00-16.00)	6.67±2.33(2.00-12.00)
Four or more living children[e]	33.00±10.05(16.00-50.00)	23.32±5.73(16.00-37.00)	8.89±2.78(4.00-16.00)	8.78±2.75(3.00-14.00)	5.64±1.83(2.00-9.00)
X^2/ **KW****	3.759	11.479	10.769	4.591	6.606
p	0.440	***0.022***	***0.029***	0.332	0.158
		d>c*	***d>c****		
Vaginal Birth					

No vaginal birth[a]	30.59±8.94(10.00-50.00)	21.77±5.31(10.00-38.00)	8.35±2.41(2.00-14.00)	7.80±2.48(1.00-13.00)	5.61±2.36(0.00-12.00)
A vaginal birth[b]	30.23±8.77(10.00-48.00)	24.15±5.43(13.00-36.00)	8.39±2.78(3.00-13.00)	9.52±2.31(6.00-13.00)	6.28±2.26(2.00-12.00)
Two vaginal births[c]	31.39±8.14(10.00-47.00)	23.20±6.12(13.00-39.00)	8.33±2.51(3.00-15.00)	8.96±2.86(4.00-16.00)	5.90±2.30(2.00-12.00)
Three vaginal births[d]	32.45±10.62(15.00-50.00)	26.13±7.39(15.00-44.00)	9.67±3.10(5.00-16.00)	9.51±3.06(5.00-16.00)	6.94±2.57(3.00-12.00)
Four or more vaginal births[e]	32.83±9.57(16.00-50.00)	24.20±6.73(16.00-44.00)	9.10±2.94(4.00-16.00)	9.26±2.97(3.00-16.00)	5.83±2.08(2.00-12.00)
X^2/ KW**	2.404	12.079	5.652	17.880	7.189
p	0.662	***0.017***	0.227	***0.001***	0.126
		b>a***		***b>a******	
Cesarean Birth					
No cesarean delivery[a]	32.23±8.90(10.00-50.00)	23.78±6.46(13.00-44.00)	8.74±2.74(3.00-16.00)	8.96±2.85(1.00-16.00)	6.07±2.43(1.00-12.00)
Birth with a cesarean section[b]	29.33±9.04(10.00-50.00)	23.46±5.61(10.00-35.00)	8.79±2.65(2.00-15.00)	8.60±2.80(3.00-16.00)	6.09±2.22(1.00-12.00)
Birth with two cesarean sections[c]	30.52±9.26(10.00-50.00)	21.50±5.28(12.00-38.00)	8.09±2.46(3.00-14.00)	7.90±2.31(3.00-13.00)	5.50±2.36(0.00-12.00)
Birth with three cesarean sections[d]	29.00±8.53(17.00-40.00)	21.33±5.64(12.00-27.00)	9.00±2.96(5.00-12.00)	6.50±2.42(4.00-11.00)	5.83±1.72(3.00-8.00)
X^2/ KW	4.620	6.652	3.206	10.286	2.375
p	0.202	.084	0.361	***0.016***	0.498
				a.b.c.d***	
COVID-19 Passing Status					
Yes	32.74±9.33(10.00-50.00)	24.70±6.05(13.00-44.00)	9.00±2.98(3.00-16.00)	9.12±2.70(4.00-16.00)	6.58±2.07(1.00-12.00)
No	30.76±8.94(10.00-50.00)	22.78±6.03(10.00-44.00)	8.52±2.58(2.00-16.00)	8.47±2.76(1.00-16.00)	5.79±2.40(0.00-12.00)
U*	5945.000	5344.000	5961.500	5781.500	5180.000
p	0.235	***0.024***	0.244	0.137	***0.010***
COVID-19 Status of Relatives					
Yes	31.02±9.21(10.00-50.00)	23.40±5.95(11.00-44.00)	8.61±2.57(3.00-16.00)	8.81±2.68(1.00-16.00)	5.97±2.37(0.00-12.00)
No	31.55±8.60(10.00-50.00)	22.54±6.42(10.00-41.00)	8.64±2.95(2.00-16.00)	8.01±2.93(3.00-16.00)	5.90±2.33(1.00-11.00)
U*	7611.500	7181.500	7725.500	6329.500	7763.500
p	0.704	0.279	0.846	***0.013***	0.895
COVID-19 Vaccination Status					
Yes	29.01±7.97(10.00-50.00)	22.26±5.42(12.00-34.00)	8.40±2.50(3.00-15.00)	8.04±2.80(1.00-14.00)	5.81±2.18(1.00-11.00)
No	31.79±9.26(10.00-50.00)	23.44±6.24(10.00-44.00)	8.68±2.71(2.00-16.00)	8.77±2.73(3.00-16.00)	5.99±2.41(0.00-12.00)
U*	5826.500	6478.000	6694.000	6069.500	7041.500
p	***0.021***	0.229	0.401	0.056	0.808
If no; don't think about doing					
Yes	31.49±8.98(10.00-50.00)	22.92±5.71(11.00-44.00)	8.53±2.62(3.00-16.00)	8.54±2.54(3.00-16.00)	5.85±2.21(1.00-12.00)
No	33.12±10.41(14.00-50.00)	25.73±7.83(10.00-44.00)	9.34±3.05(2.00-16.00)	9.78±3.30(3.00-16.00)	6.60±3.09(0.00-12.00)
U*	3436.000	2891.000	3092.500	2915.500	3035.500
p	0.491	***0.030***	0.103	***0.035***	0.074

*Mann Whitney U ** Kruskal Wills *** Post Hoc

In Table 3 shows the Coronavirus Burnout Scale mean total score and MSES, Somatic Complaints and Psychological Complaints Sub-Dimension was found to be positively correlated with the total score. MSES total score and Somatic Complaints, Psychological Complaints, Urogenital Complaints Sub-Dimension was found to be positively correlated with height and negatively correlated at the border. Somatic Complaints Sub-Dimension total score and Psychological Complaints, Urogenital Complaints Sub-Dimension were positive, height and a negative correlation was found ($p<0.05$; Table 3).

Table 3: The correlation of women's COVID-19 Burnout Scale, Menopause Symptoms Rating Scale scores and continuous variables (N=286)

Variables		CoronavirusBurnout Scale Total Score	MSES	MSES Somatic Complaints Sub-Dimension	MSES Psychological Complaints Sub-Dimension	MSES Urogenital Complaints Sub-Dimension	Age	Weight	Height	Age at Meno pause
CoronavirusBurnout Scale Total Score	**r**	1.000	-	-	-	-	-	-	-	-
	p	.	-	-	-	-	-	-	-	-
MSES	**r**	.212**	1.000	-	-	-	-	-	-	-
	p	***.000***	.	-	-	-	-	-	-	-
MSES Somatic Complaints Sub-Dimension	**r**	.188**	.764**	1.000	-	-	-	-	-	-
	p	***.001***	***.000***	**.**	-	-	-	-	-	-
MSES Psychological Complaints Sub-Dimension	**r**	.222**	.765**	.382**	1.000	-	-	-	-	-
	p	***.000***	***.000***	***.000***	**.**	-	-	-	-	-
MSES Urogenital Complaints Sub-Dimension	**r**	.100	.726**	.365**	.364**	1.000	-	-	-	-
	p	.091	***.000***	***.000***	***.000***	.	-	-	-	-
Age	**r**	.104	.030	.026	.029	.024	1.000	-	-	-
	p	.078	.613	.661	.619	.683	.	-	-	-
Weight	**r**	-.020	.115	.127*	.081	.070	.052	1.000	-	-
	p	.740	.053	***.032***	.169	.238	.385	.	-	-
Height	**r**	-.062	-.165**	-.126*	-.183**	-.053	-.040	.248**	1.000	-
	p	.295	***.005***	.034	***.002***	.372	.500	***.000***	.	-
Age at Menopause	**r**	.095	.086	.056	.084	.051	.864**	.010	-.070	1.000
	p	.108	.148	.344	.156	.392	***.000***	.867	.240	.

*Sperman Correlation

DISCUSSION

This study was conducted to examine the relationship between coronavirus burnout and women's menopausal symptoms in the COVID-19 pandemic. In this study, it was determined that the severity of coronavirus-related burnout and menopausal symptoms in women during the pandemic period was above average. It was observed that as burnout due to coronavirus increased, complaints about menopausal symptoms also increased.

In studies examining the obligations to use masks, changes in daily routine and curfews with restrictions during the pandemic period, it was found that stress, anxiety, burnout, fear and frustration increased due to these situations (Talaee et al., 2020; Yıldırım and Solmaz, 2020). In the research findings, it was observed that the average score of the Coronavirus Burnout Scale was above the average and burnout was high in women during the coronavirus pandemic process. It was noted that there was a significant relationship between the total score of the Coronavirus Burnout Scale and the province where women lived and their COVID-19 vaccination status. It was determined that the women participating in the study live in big cities where the number of coronavirus cases is high (Ministry of Health, 2021). The relationship between coronavirus burnout and province of residence suggests that there are more restrictions in provinces with a high number of cases, which may be associated with an increase in anxiety and burnout.

Although menopausal symptoms are not life-threatening, they negatively affect quality of life (Erkin et al., 2014; Abay and Kaplan, 2015). According to the findings of the study, the average scores of the participants from the scales are above the average of the MSES total score and sub-dimensions. This shows that the severity of menopause-related symptoms of women during the pandemic process is high. In a study, it was reported that menopausal symptoms increased in women during the pandemic period (Şahin et al., 2022). Similarly, another study reported high rates of menopausal symptoms during the COVID-19 pandemic (Ak Sözer et al., 2022). It was observed that the mean total score of the scale obtained from the study had higher averages than the studies conducted using MSES before the pandemic (Çelik and Pasinlioğlu, 2014; Yüksel et al., 2017; Özdemir and Uysal, 2019). According to the research findings, it was observed that menopausal symptoms increased during the pandemic period.

Menopause is a process that affects many aspects of women's life. Perspectives and attitudes towards this process can vary significantly from culture to culture (Gumusay and Erbil, 2019). In this study, it was seen that there was a significant relationship between the educational status of women and MSES and all sub-dimensions, and that the literate-only women had significantly higher scores than all other groups. Gumusay and Erbil (2019) reported that the mean MSES score of illiterate women was significantly higher than other education levels of literate/primary school graduates except middle school. In another study, it was reported that there is a significant relationship between education status and menopausal symptoms (Celik and Pasinlioglu, 2014). In a study, although menopause was described as a natural process by women, it was reported that the perception of menopause shows differences in socio-economic scale in terms of culture and education (Citak, 2020). It is seen that the findings of the research and the literature are similar.

Changes experienced by a menopausal woman due to environmental factors may lead to problems with adaptation to menopause. Compulsory changes in lifestyle habits resulting from quarantine, such as changes in interpersonal relationships, dietary habits, exercise, or sexuality during menopause, may cause exacerbation of menopausal symptoms and reduction in health-related quality of life (Coronado et al., 2021). A strong positive correlation was found between the Coronavirus Burnout Scale and the Menopause Rating Scale and its sub-dimensions total scores. In a study conducted with a cohort of 2430 women aged 40-70 during the COVID-19 pandemic, it was reported that reduction in health-related quality of life and resilience increased susceptibility to depression during the menopausal transition (Coronado et al., 2021). There are no studies in the literature that associate the level of burnout due to COVID-19 with menopausal symptoms. However, it is reported that increased perceived stress due to COVID-19 increases menopausal symptoms (Ak Sözer et al., 2022; Garcia de leon et al., 2023).

Strengths and Limitations of the Study:

Data were obtained through online questionnaires and self-report method. Therefore, some items were left unanswered because the women could not fully understand some questions or did not receive professional help. The strengths of the study are that it was carried out with women who have spent a certain period during the pandemic period, especially at a certain period when the menopausal symptoms were most severe, as well as the fact that it constitutes a Turkish sample with regard to symptom severity in the pandemic for menopausal women who especially need support and care.

Conclusion

This study concluded that the women's burnout associated with the coronavirus and the mean total scale scores of severity of menopausal symptoms amidst the pandemic was higher than moderate level. It was observed that as the burnout due to the Coronavirus increased, the complaints of menopause symptoms increased. Restrictions, isolation, social and daily life changes brought by the pandemic, as well as difficulties in accessing health services arising from restrictions have affected all segments of society. However, no

research has been found in the literature on the impact of the pandemic on symptoms related to menopause, especially during the transition to menopause. It may be recommended to conduct further similar studies in different racial and ethnic groups and in larger cohorts. In this period, the need for midwife support increases for women who are deprived of health services.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

Ethical approval was obtained from an ethics committee within the scope of the study (Date: 29/04/2021 Ethics committee no: 81).

Author contributions

Conceptualization FSB; Data curation FSB, Formal analysis FSB, NG; Funding acquisition; Investigation FSB, Methodology FSB, NG; Project administration NG; Resources FSB, NG; Software FSB; Supervision NG; Validation FSB, NG; Visualization FSB, NG; Roles/Writing - original draft FSB; Writing - review and editing NG

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