# Emotional, Sexual and Sleep Behavior in Climacteric Women from a City in Southern Brazil

## Comportamento Emocional, Sexual e de Sono em Mulheres Climatéricas de um Município do Sul do Brasil

## Comportamiento Emocional, Sexual y de Sueño en Mujeres Climatéricas de una Ciudad del Sur de Brasil

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**Abstract**

Introduction: Menopause is not a disease, but it can trigger signs and symptoms that need control and evaluation, to ensure a better quality of life in old age. In this study, we aimed to evaluate the factors associated with emotional, sexual, and sleep behavior during the climacteric/menopause period. Method: 204 women between 40 and 65 years old participated. Three instruments were used: sociodemographic and health questionnaire, Stunkard's Silhouette Scale and Menopause Rating Scale (MRS). Results: Statistical differences were found between marital status and depression, anxiety, sleep problems, and physical/mental exhaustion. A greater number of children was associated with sleep problems, depressed mood, and irritability. Discussion and Conclusion: Knowing the changes triggered by ovarian failure, which characterizes climacteric/menopause, promotes knowledge and prepares women to assertively understand the physiological, behavioral, and emotional aspects of this phase of life. The results of this study can provide information to guide interventions and health programs aimed at climacteric/menopausal women. These initiatives aim to improve not only your emotional and sexual health and sleep patterns, but also provide a smoother and more successful transition into this phase.

*Keywords:* menopause, anxiety, depression, sexual problems, sleep problems

**Resumo**

Introdução: A menopausa não é doença, mas pode desencadear sinais e sintomas que necessitam de controle e avaliação, para garantir uma melhor qualidade de vida no envelhecimento. O objetivo deste estudo foi avaliar os fatores associados ao comportamento emocional, sexual e de sono no período do climatério/menopausa. Método: Participaram 204 mulheres entre 40 e 65 anos. Foram utilizados três instrumentos: questionário sociodemográfico e de saúde, Escala de Silhuetas de Stunkard e Menopause Rating Scale (MRS). Resultados: Foram identificadas diferenças estatísticas entre o estado civil e ânimo depressivo, ansiedade, problemas de sono e esgotamento físico/mental. Maior número de filhos foi associado com problemas de sono, ânimo depressivo e irritabilidade. Discussão e Conclusão: Conhecer as alterações desencadeadas pela falência ovariana, que caracteriza o climatério/menopausa, promove o conhecimento e prepara as mulheres para compreenderem de forma assertiva os aspectos fisiológicos, comportamentais e emocionais dessa fase da vida. Os resultados deste estudo podem fornecer informações para orientar intervenções e programas de saúde direcionados a mulheres no climatério/menopausa. Essas iniciativas visam aprimorar não apenas sua saúde emocional, sexual e padrões de sono, mas também proporcionar uma transição mais tranquila e bem-sucedida para esta fase.

*Palavras-chave:* menopausa, ansiedade, depressão, problemas sexuais, problemas de sono

**Resumen**

Introducción: La menopausia no es una enfermedad, pero puede desencadenar signos y síntomas que requieren control y evaluación, para asegurar una mejor calidad de vida en el envejecimiento. El objetivo de este estudio fue evaluar los factores asociados con el comportamiento emocional, sexual y del sueño en el período de climaterio/menopausia. Método: Participaron 204 mujeres entre 40 y 65 años. Se utilizaron tres instrumentos: cuestionario sociodemográfico y de salud, Escala de Siluetas de Stunkard y Menopause Rating Scale (MRS). Resultados: Se identificaron diferencias estadísticas entre estado civil y estado de ánimo depresivo, ansiedad, problemas de sueño y agotamiento físico/mental. Un mayor número de hijos se asoció con problemas de sueño, estado de ánimo deprimido e irritabilidad. Discusión y Conclusión: Conocer los cambios desencadenados por la insuficiencia ovárica, que caracteriza el climatérico/menopausia, promueve el conocimiento y prepara a la mujer para comprender asertivamente

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los aspectos fisiológicos, conductuales y emocionales de esta fase de la vida. Los resultados de este estudio pueden proporcionar información para guiar intervenciones y programas de salud dirigidos a mujeres climatéricas/menopáusicas. Estas iniciativas tienen como objetivo mejorar no sólo su salud emocional y sexual y sus patrones de sueño, sino también proporcionar una transición más suave y exitosa a esta fase.
*Palabras clave:* menopausia, ansiedad, depresión, problemas sexuales, problemas de sueño

## Introduction

The natural biological cycle of a woman goes through several stages throughout life. The secretion of androgenic hormones by the ovaries, under pituitary stimulation, determines the different periods of the female biological cycle, and brings with it important physiological conditions that can influence on quality of life. Climacteric is the transition period between the reproductive and non-reproductive phases and menopause is characterized after a year without menstruating (Antunes et al., 2003).

The depletion of ovarian follicles leads to a progressive estrogen deficiency, a decrease in its secretion, resulting from ovarian failure. Estrogen acts on different cells and actively participates in cellular metabolism and in the central nervous system, acting in the synthesis, release and metabolism of some neurotransmitters such as serotonin, dopamine, noradrenaline acetylcholine and the enzyme monoamine oxidase (MAO). Thus, estrogen deficiency can trigger changes in mood, cognition, memory and sleep quality (Rosa e Silva & Sá, 2006; Shepherd, 2001).

Changes triggered by climacteric/menopause can compromise quality of life and directly influence women's perception of aging. During this period, the most prevalent symptoms are hot flashes, nervousness, urogenital problems, fatigue, forgetfulness, depression, melancholy, insomnia, osteoporosis and cardiovascular diseases (Moraes & Schneid, 2015).

Changes in women's emotional behavior are often associated with hormonal changes that occur during reproductive events. The transition to menopause constitutes a window of vulnerability in which physical and emotional discomforts can significantly contribute to a deterioration in the quality of life. In addition, this period coincides with important events in a woman's life that, even if not directly related to menopause, can contribute to the worsening of symptoms and a decline in the quality of life. Among the social factors that can affect the climacteric women's lives are the departure of children from home, care for elderly parents, physiological changes in the body, loss of relatives and friends and a new perspective on sexuality and relationships (Chagas et al., 2020; Selbac et al., 2018). Thus, in the climacteric phase, there are different symptoms that can occur depending on cultural, physical, social and demographic aspects (Soares & Zitek, 2008; Vieira et al., 2018).

A transition to menopause constitutes a window of vulnerability in which physical and emotional discomforts can significantly contribute to a deterioration in the quality of life. Additionally, this period coincides with significant events in a woman's life that, even if not directly related to menopause, can contribute to the worsening of symptoms and a decline in the quality of life.

A population-based exploratory survey was conducted in a metropolitan region in southeastern Brazil, involving 749 women aged between 45 and 60 years. The intensity of menopausal symptoms was considered severe and was related to a wide range of factors, such as the presence of chronic diseases, a greater number of pregnancies, the use of hormonal therapy and having a self-perceived worse health status. Understanding and controlling these

factors can assist in reducing menopausal symptoms and provide data for identifying groups that require increased attention from healthcare services (Lui-Filho et al., 2015).

In Brazil, women represent the majority of the Brazilian population, corresponding to 51.5% of the total, being the main users of the Unified Health System (SUS). This reality highlighted the need for public policies that address the specificities inherent to female health and that focus on comprehensive care, including the climacteric/menopause phase (Alcântara et al., 2020; Instituto Brasileiro de Geografia e Estatística [IBGE], 2022). Women in the climacteric phase seek medical assistance due to menstrual irregularity and climacteric symptoms. However, some of them choose not to seek medical help as they consider these symptoms a natural part of the process (Pedro et al., 2002). In 2008, the Manual for Comprehensive Attention to Women's Health in Climacteric/Menopause was prepared by the Technical Area of Women's Health of the Ministry of Health. This manual implements one of the objectives of the National Policy for Comprehensive Attention to Women's Health, aiming to improve the care provided to women at this stage of life. It provides guidelines that guide health professionals towards comprehensive and humanized care, taking into account the diversity and specific needs of Brazilian women (Ministério da Saúde, 2008).

Changes in emotional behavior and their manifestations in different population profiles should be studied in order to contribute to health policies, improving the quality of life and prevention of future diseases (Ferreira et al., 2015). According to the Brazilian Institute of Geography and Statistics (IBGE, 2022) the average life span of Brazilians is 77 years, with 73.6 for men and 80.5 for women. Women spend a good part of their lives in the menopause period, requiring health actions relevant to this period of life. Thus, in this study we aimed to evaluate the factors associated with emotional, sexual and sleep behavior in the climacteric/menopause period of women from a Basic Health Unit in the city of Canoas, RS.

## Method

The exploratory descriptive research was carried out in the municipality of Canoas in the State of Rio Grande do Sul, the municipality belongs to the metropolitan region of Porto Alegre with an estimated population of 348,208 inhabitants in the year 2020 (IBGE, 2020). The Basic Health Unit (UBS) União was chosen as the study site, which has the largest territory in the municipality, with 7 family health teams (ESF) and 3 oral health teams that together serve about 25,000 people, from of which 1,386 are women aged between 40 and 65 years.

Data sampling was carried out between April 2018 and December 2019 and started after the project was approved by the Ethics Committee of the Universidade Luterana do Brasil/ULBRA (CAAE: 86378818.1.0000.5349). All participants signed the Free and Informed Consent Term (TCLE). The selection process was an intentional, non-probabilistic convenience sampling method. A total of 204 women, all aged between 40 and 65, who were seeking healthcare at the UBS União clinic, were included in the study. These women were invited to join the research while waiting for their appointments in the waiting room. Those who agreed to participate were directed to a reserved room, where they underwent interviews conducted by the first author, with an average duration of approximately 40 minutes.

Three instruments were used. To characterize the sample, a sociodemographic questionnaire was applied. The variables were: age, education (did not study, 1st to 5th grade, 5th

to 8th grade, complete high school, complete higher education); whether you have a paid activity (yes or no); children (no, yes: 1 to 2 or more than 2); marital status, which in the statistical analysis was divided into two groups: married and unmarried women, which included single, widowed and divorced women; weight and height, for evaluation where the body mass index (BMI) was evaluated. The second instrument was the Stunkard Silhouette Scale, which assesses body satisfaction based on nine body figures, ranging from a very thin woman to an obese woman. The participants chose the figure that better represented themselves at the moment (current silhouette) and also the one that they would like to look like (desired silhouette) (Stunkard et al., 1983). The third instrument was the Menopause Rating Scale (MRS) to assess the most prevalent climacteric/menopause signs and symptoms and validated for Portuguese (Heinemann et al., 2004). It comprises 11 questions that address symptoms divided into somatovegetative, psychological and urogenital domains. For each question, women can choose between five possibilitie: absent, mild, moderate, severe and very severe. In order to analyze the characteristics related to emotional, sleep and sexual behavior, the following questions were selected from the MRS scale: for emotional behavior - depressed mood (feeling down, sad to the point of crying, lack of will, exchanges of humor); irritability; anxiety; physical and mental exhaustion (general decrease in performance, lack of concentration, lack of memory); sleep problems (difficulty falling asleep, difficulty sleeping through the whole night, waking up early); and sexual problems (lack of sexual desire, activity and satisfaction).

Quantitative variables were described as mean and standard deviation or median and interquartile range. Categorical variables were described by absolute and relative frequencies. To assess associations between categorical variables, Pearson's chi-square or Fisher's exact tests were used. To compare means, the T-student test for independent samples was applied. In case of asymmetry, the Mann-Whitney test was used. The significance level adopted was 5% ($p \leq 0.05$) and the analyzes were performed using SPSS version 21.0.

## Results

A total of 204 women between 40 and 65 years old who sought medical care at UBS União in Canoas, RS, were evaluated. The sociodemographic data are shown in table 1. The mean age was 53.3 ± 8.2 years, most decqlared themselves white (67%) and are married (51.7%), with an average of three children, and has no job or any paid activity (54.9%). The highest level of schooling was from 1st to 5th grade (49.8%), characterizing a vulnerable population. Regarding health, most women had periodic medical appointments at the health center (80.5%), were in menopause (71.6%) and had an average systolic/diastolic blood pressure of 12/8. The mean BMI was 31.0 ± 7.4 characterized as Obesity grade I (World Health Organization [WHO], 2021) and most were dissatisfied with their body (82.6%).

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**Table 1**

*Sociodemographic Profile of Women between 40 and 65 Years old who Attended Basic Health Unit União, Canoas, RS (2019-2020)*

| Variables | n=204 |
|---|---|
| **Age (years) – Mean ± SD** | 53.3 ± 8.2 |
| **Skin color – n (%)** | |
| White | 136 (67.0) |
| Black | 17 (8.4) |
| Brown | 50 (24.6) |
| **Education level – n (%)** | |
| Did not study | 1 (0.5) |
| 1st to 5th grade | 100 (49.8) |
| 6th to 8th grade | 52 (25.9) |
| Complete High School | 33 (16.4) |
| Incomplete High School | 14 (7.0) |
| Incomplete Higher Education | 1 (0.5) |
| **Marital status – n (%)** | |
| Married | 105 (51.7) |
| Single | 53 (26.1) |
| Divorced | 17 (8.4) |
| Widow | 28 (13.8) |
| **Number of children - Median (P25 - P75)** | 3 (2 – 4) |
| **Work/paid activity - n (%)** | 92 (45.1) |
| **Systolic blood pressure - Mean ± SD** | 12.7 ± 1.9 |
| **Diastolic blood pressure - Mean ± SD** | 8.1 ± 1.5 |
| **BMI - Mean ± SD** | 31.0 ± 7.4 |
| **Periodic medical consultations at the UBS - n (%)** | 153 (80.5) |
| **Menopause - n (%)** | 141 (71.6) |
| **Body satisfaction (N=161) - n (%)** | |
| Dissatisfied (she wanted to be bigger) | 3 (1.9) |
| Satisfied | 25 (15.5) |
| Dissatisfied (she wanted to be smaller) | 133 (82.6) |

*Note*. SD – Standard Deviation.

Table 2 shows women's perception of severe to very severe signs and symptoms of climacteric/menopause related to psychological symptoms (depressed mood, irritability, anxiety and physical and mental exhaustion), sleep problems and sexual problems. Physical and mental exhaustion had the highest percentage (49%), with lack of memory (24.1%), followed by sleep problems (48.5%) with greater difficulty sleeping through the night (34.7 %) and depressed mood (46.2%) with mood swings (29.1%). Anxiety was reported by 40.6% and 28.1% had sexual problems.

**Table 2**

*Severe to very Severe Signs and Symptoms of Menopause from the MRS (Menopause Rating Scale) of Women Attending Basic Health Unit União, Canoas, RS (2019-2020)*

| Signs and Symptoms | Severe to very severe (%) |
|---|---|
| **Sleep problems** | 48.5 |
| Difficulty falling asleep | 28.2 |
| Difficulty sleeping through the night | 34.7 |
| Wake up early | 11.6 |
| **Depressive mood** | 46.2 |
| Feel down | 20.8 |
| Sad to the point of crying | 25.9 |
| Lack of will | 22.4 |
| Exchanges of humor | 29.1 |
| **Irritability** (feeling nervous, tense, aggressive) | 29.6 |
| **Anxiety** (impatience, panic) | 40.6 |
| **Physical and mental exhaustion** | 49.0 |
| General drop in performance | 17.9 |
| Lack of concentration | 19.1 |
| Lack of memory | 24.1 |
| **Sexual problems** | 28.1 |
| Lack of sexual desire, activity and satisfaction | 16.9 |

A comparison of the sociodemographic, health and body image profile was carried out between women with and without severe/very severe symptoms of sleep problems, depressed mood, irritability, anxiety, physical and mental exhaustion and sexual problems (Tables 3 and 4). There was no statistically significant relation with sexual problems. We identified statistical differences between marital status and depression, anxiety, sleep problems and physical/mental exhaustion, with most married women not experiencing severe symptoms of these variables ($p>0.05$). A greater number of children was associated with sleep problems, depressed mood and irritability ($p>0.05$). Irritability was higher in younger women ($p>0.05$). Women who had severe/very severe anxiety symptoms had significantly higher BMI ($p>0.05$) and who were menopausal tended to have greater irritability ($p=0.052$).

**Table 3**

*Comparison of Sociodemographic, Health and Body Image Profile Between Women with and Without Severe/very Severe SYMPTOMS of Depression, Irritability and Anxiety who attended Basic Health Unit União, Canoas, RS (2019-2020)*

| Variables | With Depressive Mood (n=91) | Without Depressive Mood (n=106) | p | With Irritability (n=60) | Without Irritability (n=143) | p | With Anxiety (n=82) | Without Anxiety (n=120) | p |
|---|---|---|---|---|---|---|---|---|---|
| **Age**- Mean ± SD | 52.0 ± 8.7 | 54.2 ± 7.7 | 0.064 | 51.3 ± 8.2 | 54.0 ± 8.0 | **0.026*** | 52.2 ± 8.2 | 54.0 ± 8.1 | 0.137 |
| **Skin color**- n (%) | | | 0.461 | | | 0.104 | | | 0.115 |
| White | 59 (65.6) | 72 (67.9) | | 33 (55.9) | 102 (71.3) | | 55 (67.9) | 79 (65.8) | |
| Black | 6 (6.7) | 11 (10.4) | | 7 (11.9) | 10 (7.0) | | 3 (3.7) | 14 (11.7) | |
| Brown | 25 (27.8) | 23 (21.7) | | 19 (32.2) | 31 (21.7) | | 23 (28.4) | 27 (22.5) | |
| **Education level**- n (%) | | | 0.18 | | | 0.168 | | | 0.804 |
| Did not study/1st to 5th grade | 48 (53.9) | 48 (45.7) | | 36 (61.0) | 64 (45.4) | | 43 (53.1) | 57 (48.3) | |
| 6th to 8th grade | 26 (29.2) | 25 (23.8) | | 14 (23.7) | 38 (27.0) | | 21 (25.9) | 31 (26.3) | |
| Complete High School/ Incomplete Higher Education | 11 (12.4) | 23 (21.9) | | 7 (11.9) | 27 (19.1) | | 11 (13.6) | 22 (18.6) | |
| Incomplete High School | 4 (4.5) | 9 (8.6) | | 2 (3.4) | 12 (8.5) | | 6 (7.4) | 8 (6.8) | |
| **Marital status**- n (%) | | | **0.011*** | | | 0.162 | | | **0.032*** |
| Married | 36 (39.6) | 65 (61.9) | | 26 (43.3) | 79 (55.6) | | 33 (40.2) | 72 (60.5) | |
| Single | 30 (33.0) | 21 (20.0) | | 19 (31.7) | 33 (23.2) | | 24 (29.3) | 27 (22.7) | |
| Divorced | 11 (12.1) | 5 (4.8) | | 8 (13.3) | 9 (6.3) | | 10 (12.2) | 7 (5.9) | |
| Widow | 14 (15.4) | 14 (13.3) | | 7 (11.7) | 21 (14.8) | | 15 (18.3) | 13 (10.9) | |
| **Number of children** - Median (P25- P75) | 3 (2 – 4) | 2 (2 – 4) | **0.014*** | 3 (2 – 4) | 2 (2 – 4) | **0.027*** | 3 (2 – 4) | 3 (2 – 4) | 0.199 |
| **Systolic blood pressure**- Mean ± SD | 12.7 ± 2.0 | 12.5 ± 1.8 | 0.518 | 12.8 ± 2.2 | 12.6 ± 1.8 | 0.577 | 12.5 ± 2.0 | 12.7 ± 1.8 | 0.513 |
| **Diastolic blood pressure**- Mean ± SD | 8.0 ± 1.2 | 8.2 ± 1.7 | 0.467 | 7.9 ± 1.4 | 8.2 ± 1.5 | 0.255 | 7.9 ± 1.4 | 8.2 ± 1.5 | 0.236 |
| **BMI**- Mean ± SD | 31.9 ± 8.7 | 30.2 ± 6.2 | 0.128 | 31.7 ± 9.6 | 30.7 ± 6.4 | 0.389 | 32.6 ± 8.7 | 29.9 ± 6.3 | **0.014*** |
| **Paid work/activity**- n (%) | 42 (46.2) | 47 (44.3) | 0.911 | 29 (48.3) | 63 (44.1) | 0.686 | 40 (48.8) | 51 (42.5) | 0.461 |
| **Periodic consultations at UBS**- n (%) | 71 (85.5) | 78 (77.2) | 0.215 | 40 (72.7) | 112 (83.6) | 0.132 | 63 (81.8) | 88 (79.3) | 0.807 |
| **Menopause**- n (%) | 28 (32.2) | 27 (26.2) | 0.457 | 23 (39.0) | 33 (24.1) | 0.052 | 27 (34.6) | 28 (23.9) | 0.144 |
| **Body satisfaction**- n (%) | | | 0.666 | | | 0.981 | | | 0.313 |
| Dissatisfied (She wanted to be bigger) | 1 (1.4) | 2 (2.4) | | 1 (2.0) | 2 (1.8) | | 0 (0.0) | 3 (3.3) | |
| Satisfied | 10 (13.9) | 15 (18.3) | | 8 (16.3) | 17 (15.3) | | 11 (16.4) | 13 (14.1) | |
| Dissatisfied (She wanted to be smaller) | 61 (84.7) | 65 (79.3) | | 40 (81.6) | 92 (82.9) | | 56 (83.6) | 72 (82.6) | |

*Note*. SD – Standard Deviation. Significance level p>0.05*

## Discussion

In this study, the signs and symptoms of climacteric/menopause and whether they are associated with the sociodemographic and health profile of the participants were investigated. The 204 women in the study were aged between 40 and 65 years and attended a UBS in the city of Canoas/RS. Research related to this topic is relevant, since women spend about 1/3 of their lives in this period.

In the sociodemographic profile, we observed that the average age was around 53.3 years, most perceive themselves as white (67%), married (51.7%), with an average of 2 to 4 children, with low education, obese, without performing any type of paid work (54.9%) and with a high rate of body dissatisfaction (84.5%). A similar profile was found in a study carried out in the city of Franca/SP, where most women reported being married, with only elementary education and engaged in housework (Martins et al., 2009). Sociodemographic characteristics, lifestyle factors, and concomitant health problems appear to have potential and modifiable influences on the prevalence and intensity of menopausal symptoms. A survey of 6,917 Swiss women found that the incidence of symptoms was inversely related to age, education level, physical activity, healthy lifestyle and the absence of health-related problems (Li et al., 2003).

Regarding education level, only 16.4% completed high school. A study carried out in the city of Paulo Afonso, Bahia, linked women with a low level of education with a greater number of symptoms resulting from the climacteric period (Sousa Santos et al., 2016). Therefore, the educational level has an influence on the perception and understanding of symptoms and can interfere with preventive health attitudes. Therefore, it is important that women, when seeking care, receive guidelines that emphasize the importance of health education. Although low education is related to the worsening of depressive symptoms (Dos Santos et al., 2021), in our study there was no such association.

Regarding marital status, we observed that it is related to most of the severe signs and symptoms studied. Women who reported not being married (single, divorced or widowed) were positively associated with sleep problems, depressed mood, anxiety, and physical and mental exhaustion. Some studies have reported the marital relationship as a predominant factor in the quality of life of families. The study by Pinheiro and Costa (2020) identified a positive association between marital satisfaction and psychological quality of life. At this stage of life, the closest person with whom a woman has a relationship is her partner, who is often responsible for providing the necessary support through the events caused by menopause. The relationship between quality of life and marital status was found in other studies carried out in Brazil and in other countries (Dos Santos et al., 2021; Avis et al., 2004). In this sense, it becomes relevant to investigate the understanding of men about menopause. A study carried out in the city of Palmeira das Missões/RS, identified that they have little knowledge about the clinical and psychological changes that occur to women during the climacteric period. The changes best known by them were the presence of hot flashes and irritability (Leite et al., 2013).

The mean BMI of the studied sample was 31.0 Kg/m2 ± 7.4, characterizing an obese population (WHO, 2021). Many menopausal women gain weight due to decreased estrogen (Mauvais-Jarvis et al., 2013). Obesity is related to poor quality of life and worsens

menopausal symptoms, both somatic and biopsychic symptoms (Goh & Hart, 2018; Koo et al., 2017; Molle at al., 2020). In addition, most women reported dissatisfaction with their bodies, wanting to be smaller (82.6%). Body dissatisfaction was also identified in women in different contexts. A study carried out with climacteric women from the riverside of Pará also found that most were dissatisfied with their body image, wanting to be smaller (65%) (Campos et al., 2021a). Likewise, another study carried out in Porto Alegre, RS, with postmenopausal women with a high level of education and income above six minimum wages, most were not satisfied with their body image. Satisfaction with body image was related to better quality of life, lower probability of presenting depressive symptoms, lower body mass index and higher personal and family income (Skopinski et al., 2015).

BMI was also associated with anxiety in women who were treated at UBS União de Canoas/RS. Those who perceived severe/very severe anxiety symptoms were grade I obese (32.6 kg/m2 ± 8.7), while women without symptoms were overweight (29.6 kg/m2 ± 6.3) ($p>0.05$). This result was corroborated by other studies (Aldrighi et al., 2002; Bossemeyer, 2003; Gambacciani et al., 2003). A literature review identified that anxiety was one of the most common psychiatric disorders in the climacteric period and that several factors can interfere with the perception of symptoms, such as economic, social and cultural factors (Negreiros et al., 2021).

Another common disorder often reported during menopause is sleep problems, often associated with vasomotor problems, depression, and anxiety. These may also be associated with less refreshing and more fragmented sleep (Kravitz et al., 2008). They are also associated with natural aging processes. A study with postmenopausal women who had a mean BMI of 31.6 kg/m2, similar to our study, identified a high prevalence of sleep-disordered breathing, fragmented sleep and insomnia in the group with a higher BMI, above 30 kg /m2 (Corrêa et al., 2014). In our study, 48.5% of women reported severe sleep symptoms, 34.7% had difficulty sleeping every night and 28.2% had difficulty falling asleep. In addition, participants with severe sleep symptoms were less married (single, divorced or widowed) and had a greater number of children ($p>0.05$). Other studies have also identified sleep problems in climacteric and menopausal women (Campos et al., 2021b, Lima et al., 2019; Mota et al., 2021; Santos et al., 2016; Silva Filho & Costa, 2008; Souza et al., 2005).

Loss of estradiol production is likely involved in sleep disorders, as estrogen replacement therapy is effective in alleviating sleep disruptions during this period and may confer benefits on women's sleep. Estrogen appears to exert regulatory effects in the areas of sleep, the hypothalamus, preoptic region and hippocampus. However, the causes of changes in sleep quality in menopausal women should be considered multifactorial, as they are not only related to estrogen deprivation, but also to ethnic, personal and environmental factors (Dos Santos et al., 2021).

Several personal life challenges and stressors, including changes in family roles, increasing demands at work, and health and retirement concerns, contribute to sleep disturbances (Baker et al, 2018) in addition to depressive symptoms (Fagulha, 2005; Troxel et al., 2010). Women who lose a partner through separation, divorce, or widowhood often experience a precipitous decline in socioeconomic resources stemming from the loss of the top earner in the family. Thus, the stable presence of a partner improves their socioeconomic position and access to resources and, with that, brings more tranquility and well-being.

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Women with more children showed severe/very severe symptoms of irritability and depressed mood (p>0.05). In addition, the younger ones had a positive association with irritability symptoms (p>0.05) and those who were in menopause tended to irritability (p=0.052). Data suggest that estrogen may exert a direct influence on mood (Antunes et al., 2003; Mong & Cusmano 2016). The study by Polisseni et al. (2008) identified mood swings, such as irritability and nervousness, in addition to mild depressive symptoms, characteristic of perimenopausal women. Mood changes were also frequent in climacteric women living in southwest Bahia (Mota et al., 2021). Estrogen fluctuations during the climacteric period, combined with stressful situations, can trigger an increase in cortisol synthesis, which interferes with mood, causing irritability (Pereira et al., 2009).

Regarding sexual problems, 28.1% of women reported experiencing severe to very severe symptoms. The sexuality of menopausal women with sexual dysfunctions may be permeated by emotional and psychological inhibitions (Silva et al., 2022). Several studies have identified sexual dysfunction in climacteric and menopausal women, corroborating our finding (Freitas et al., 2015; Silva et al, 2022; Tavares de Arruda et al, 2018). Where climacteric women with reduced quality of life have greater sexual dysfunctions (Figuerêdo Meira et al., 2020).

There are several changes that women undergo during the climacteric and menopause phase that influence social life. Many do not realize or understand what climacteric means and what changes will go through during this period, because they were not guided about this phase of their lives (Ferreira et al., 2015). The lack of understanding of physiological events has negative repercussions on women's lives, as discussed in this study.

As limitations of the study, we can mention the cross-sectional design and the convenience sample, which may have compromised the sampling heterogeneity, limiting the generalization of the results.

## Final Considerations

Climacteric encompasses a broader context that includes women inserted in a social environment, bringing with it changes in behavior, which interfere with women's health and quality of life. In this study we found that marriage, or having a partner, can be a protective factor against depressive symptoms, anxiety, sleep problems and physical and mental exhaustion.

Climacteric encompasses a broader context that includes women inserted in a social environment, bringing with it changes in behavior, which interfere with women's health and quality of life. In the present study, we can observe that marriage, having a partner, proved to be a protective factor against depressive symptoms, anxiety, sleep problems and physical and mental exhaustion.

This study was carried out in a community in Canoas, in the metropolitan region of Porto Alegre, RS, where women had low education level. It is important that investigations like ours are replicated in different locations, so that a profile of the main factors associated with emotional and physical behavior can be identified, and in relation to the changes perceived by women in the climacteric/menopause.

In this way, it will be possible to contribute positively to family health care. It is suggested that health professionals pay attention to women who reach the age of 40 years, and who may be promoting the care of climacteric women, emphasizing the characteristics of this

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phase and that it is part of the female hormonal cycle. Therefore, it is necessary to promote knowledge to women, so that they can assertively understand the physiological, behavioral and emotional aspects of this stage of life.

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*Received on: 30/03/2023*

*Last review on: 18/10/2023*

*Final acceptance on: 18/12/2023*

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