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# Climacteric related to lifestyle in women of a Mexican population

## Climaterio relacionado al estilo de vida en mujeres de una población mexiquense

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## ABSTRACT:

**Introduction**: The woman in the climacteric presents diverse physiological, physical, psychological and social changes, due not only to the hormonal decrease, but also to the lifestyle.
Women in the climacteric period present diverse physiological, physical, psychological and social changes, due not only to hormonal decline, but also to lifestyle.
**Objective:** To analyze the relationship between climacteric and lifestyle in a population of The State of Mexico.
**Methodology**: Quantitative, correlational and cross-sectional study. The sample consisted of 143 women aged 45 and 59 years, non-probabilistic convenience sampling. Two instruments were applied: Nola Pender's Lifestyle Profile (PEPS-I) and Blatt Kupperman's scale (IMK). The Project was approved by the Research Ethics Committee. The data were analyzed with the SPSS Vs 25 program. Descriptive statistics and Spearman's rho were established.
**Results**: Lifestyle was found to be regular in most of the participating women (91.2%), μ= 108.87±14.21 minimum of 76 and maximum of 147; regarding climacteric symptoms μ= 10.09±4.9 minimum of 0 and maximum of 23 was observed. A statistically significant correlation of the two study variables was obtained (Rho= p≤ 0.05).
**Conclusion:** The women lifestyle during climacteric is regular and is related to lifestyle.

**Keywords:** Climacteric, Lifestyle, Women, Mexico.

## RESUMEN:

**Introducción:** La mujer en el climaterio presenta diversos cambios fisiológicos, físicos, psicológicos y sociales, debidos no solo a la disminución hormonal, sino también al estilo de vida

**Objetivo:** Analizar la relación entre el climaterio y el estilo de vida en una población mexiquense.
**Metodología:** Estudio cuantitativo, correlacional y transversal. La muestra se conformó por 143 mujeres de 45 a 59 años de edad, muestreo no probabilístico a conveniencia. Se aplicaron dos instrumentos: Perfil de Estilo de Vida (PEPS-I) de Nola Pender y escala de Blatt Kupperman (IMK). Proyecto aprobado por Comité de Ética en Investigación. Los datos fueron analizados con el programa SPSS Vs 25. Se estableció estadísticos descriptivos y rho de Spearman.
**Resultados:** El estilo de vida resultó ser regular en la mayoría de las mujeres participantes (91.2%), se observó μ= 108.87±14.21 mínima de 76 y máxima de 147; respecto a los síntomas del climaterio se observó μ= 10.09±4.9 mínima de 0 y máxima de 23. Se obtuvo una correlación estadísticamente significativa de las dos variables estudio (Rho= p≤ 0.05).
**Conclusión:** El estilo de vida de las mujeres durante el climaterio es regular y se relaciona con el estilo de vida.

**Palabras clave:** Climaterio, Estilo de vida, Mujeres, México.

# INTRODUCTION

Women in the climacteric period undergo various physiological, physical, psychological and social changes, due not only to hormonal decline, but also to the life history and family events that occur at this stage of life. The climacteric period is contemplated from 45 to 59 years of age and represents the transition from reproductive to non-reproductive life. In Mexico, this population group occupies approximately 8.6% of the general population [(1)], hence the importance of identifying not only vasomotor symptoms, but also lifestyle. From a physiological point of view, the manifestations of estrogen deficiency are hot flashes, also known as hot flushes, described as periods of sensations of heat in the face and neck, followed or accompanied by facial flushing and diaphoresis; they are often accompanied by tachycardia, chills that also translate into anxiety in the woman who suffers from them. The frequency ranges from 5 to 10 times a day, which can disturb rest and sleep [(2)].

Prior to menopause, 50% of women have menstrual disorders such as polymenorrhoea, hypomenorrhoea, hypermenorrhoea, oligomenorrhoea. Likewise, estrogen deficiency favours atrophy in the bladder and vagina; in the vagina, thinning, dryness, pruritus, dyspareunia and genital atrophy are observed in later stages of the postmenopause; bladder and urethra manifestations are sometimes nocturia, dysuria and urinary incontinence [(3)]. Vulvovaginal atrophy is a chronic condition with a significant impact on sexual health and quality of life [(4)].

Several factors are involved in the climacteric period, such as heredity, race, socioeconomic status, and lifestyle, including smoking, contraceptives, obesity, among others. By virtue of the achievements made in public health, it is to be expected that around four million women will reach the age of menopause, which in itself justifies the need to study this stage of life in relation to its manifestations and its psychosocial repercussions in order to provide the care that women require in the face of these changes and manifestations; in this sense, it has been described that the physical manifestations are largely of psychological origin, which can influence social relations: with the partner, family, friends and in some cases at work [(5)]. In a multicentre longitudinal study conducted in the United States with 3302 premenopausal women of African-American, Caucasian, Chinese, Hispanic and Japanese origin, identified as SWAN [(6)], they characterised the physiological and psychosocial changes that occurred during the transition to menopause and to observe their effects on subsequent health and risk factors for age and age-related diseases.

It has also been described that the climacteric stage is associated with an increase in body fat, mainly in the abdominal region, which facilitates the development of insulin resistance, hypertension and dyslipidemia, explained by genetic factors, menstrual and reproductive history, as well as lifestyle, mainly related to dietary patterns and exercise[7,8]. A study carried out in Ecuador shows that the frequency and intensity of exercise in women in the climacteric stage is low, and in relation to nutritional status, they mention deficient nutrition that is associated with overweight and obesity[9].

It is important to mention that lifestyle is mediated by motivational and behavioural components, which influence decision-making and, when unhealthy, become potent health risks at any stage of the life cycle; specifically during the climacteric period, women have an increased risk of disease due to hormonal deprivation.

The model developed by Nola Pender based on the concept of self-efficacy focuses on understanding attitudes towards lifestyle and indicators include nutrition, exercise, stress management, health responsibility, interpersonal support and self-fulfilment [10].

In women of a population of The State of Mexico, there has been low participation of women in climacteric period in the exercise and they are observed with overweight and obesity, Furthermore, the lifestyle and its relationship with the symptoms of climacteric is unknown, hence the objective of this study is to analyze the relationship between climacteric and lifestyle in a population of State of Mexico.

# MATERIAL Y METHODS

It is a quantitative, correlational and cross-sectional study. The universe in the city of Toluca is 130,000 women between 45 and 59 years of age. The sample was calculated using the simple finite sample formula with a margin of error of 7% and a confidence level of 90%, comprising 143 women. The sampling was a non-probabilistic convenience sampling. Inclusion criteria were women aged 45-59 years from the city of Toluca, without hormone replacement therapy, with the possibility of responding online. Women with early menopause due to ovarian failure or hysterectomy with bilateral salpingo-oophorectomy before or during pre-menopause were excluded. The response rate was 100%.

Instrument. There was a section for characterising the participants. Two questionnaires were applied: Lifestyle Profile (PEPS-I) validated version in Mexico by Pender (10) comprising six dimensions: nutrition (items 1,5,14,19,26,35), exercise (items 4,13,22,30,38), stress management (items 6,11,27,36,40,41,45), responsibility in health (items 2,7, 15,20,28,32,33,42,43,46), interpersonal support (items 10, 18, 24, 25, 31, 39, 47) and self-actualisation (items 3, 8, 9, 12, 16, 17, 21, 23, 29, 34, 37, 44, 48); is composed of 48 items. Interpretation. The minimum score is 48 and the maximum 192. For its interpretation it is classified as follows: good lifestyle 145 to 192, fair 97 to 144 and deficient 48 to 96.

The other instrument was the Blatt Kupperman scale (IMK), one of the most widely used instruments in the evaluation of climacteric symptomatology, it involves eleven symptoms: vasomotor symptoms, insomnia, nervousness, melancholy, vertigo, weakness, arthralgias/myalgias, headache, palpitations, tinnitus; each is assigned

different scores according to the intensity and prevalence with which they occur: absent = 0, Mild = 1, Moderate = 2, Severe = 3. The total scores are classified as mild (up to 19), moderate (20 to 35) and severe (greater than 35).

In the application of the instruments reliability was observed with Cronbach's Alpha of: Lifestyle 0.863 and Kupperman scale 0.820.

Procedure. Prior to the fieldwork, the project was submitted to the Research Ethics Committee of the Faculty of Nursing and Obstetrics, which approved it; the application was self-administered online (https://forms.office.com/r/P2bymKjuXB), including informed consent. The data obtained were analysed with the SPSS Vs 25 programme. Descriptive statistics were established to determine distribution and homoscedasticity and Spearman's rho inferential test.

he ethical and legal aspects are based on the Declaration of Helsinki, General Health Law in Mexico, Article 100, which concludes that there is reasonable safety that does not expose participants to risk or harm. Likewise, the respect and protection of rights and welfare in research, as described in Title Two Chapter of the Regulations of the General Health Law on Research, prevails[11]. Project approved by the Research Ethics Committee of the Faculty of Nursing and Midwifery (No. 002/2021).

# RESULTS

The average age observed in the women who participated in this study is 50.13 4.29, the majority is in an age range of 45 to 50 years with 68.8% followed by 52 to 55 23.5 and 56 to 59 17.6%; in terms of marital status are married 66.9%, followed by widows 20.6%, in free and unmarried union 12.5%; concerning the occupation 35.3% unpaid work (home), employed 30.9%, freelance professional 16.2%, merchant 7.4%, retired 10.2% (economically active women are 64.7%); in nuclear family 86% and extended 15%.

The lifestyle was found to be regular in most of the participating women; score was obtained above the expected average that was 72; of the dimensions, which refers to the interpersonal support feeding and self-actualization, score was also observed above the expected average, while in the dimensions of exercise, social responsibility and stress, the score is below the average obtained (Table 1).

**Table 1. Average Dimensions of the Lifestyle Scale (PEPS) and Kupperman Scale**

| Variable | Medium | SD | Mínimum | Maximum | Range |
|---|---|---|---|---|---|
| Nutrition | 14.48 | 2.74 | 8 | 20 | 12 |
| Exercise | 8.44 | 2.68 | 5 | 18 | 13 |
| Social responsability | 19.75 | 4.38 | 11 | 34 | 23 |
| Stress management | 13.59 | 3.18 | 7 | 22 | 15 |
| Interpersonal Support | 19.41 | 3.74 | 10 | 28 | 18 |
| Self-update | 33.30 | 4.5 | 23 | 46 | 23 |

| | | | | | |
|---|---|---|---|---|---|
| Scale PEPS | 108.87 | 14.21 | 76 | 147 | 71 |

Source: Applied questionnaire

With all of the above, it is established that the majority of women present a lifestyle considered at a regular level and less than 10% acceptable (Table 2).

**Table 2. Lifestyle in women aged 45 to 59 in the city of Toluca**

| Age | Symptoms | N=136 | |
|---|---|---|---|
| | | Frecuency | Porcentage |
| 45-49 years old | Mild | 66 | 47.7 |
| 50-54 years old | Mild | 38 | 27.9 |
| | Moderate | 2 | 1.4 |
| 55-59 years old | Mild | 28 | 21.6 |
| | Moderate | 2 | 1.4 |

Source: Applied questionnaire

As for the symptoms of the climacteric by age, it is observed that they range from mild or moderate, where at a younger age, the symptoms are mild while the moderate symptoms are observed with a higher percentage in women aged 50 to 59 years (Table 3), from the Kupeerman scale μ= 10.09 4.9 minimum 0 and maximum 23 were observed.

# DISCUSSION

The lifestyle according to the Pender Model [12,13] indicates that each person has unique personal characteristics and experiences that affect subsequent actions. The elements that have an important meaning in the motivation for a healthy lifestyle are knowledge and affection, in which nursing can intervene. Health promotion behaviour is the desired behavioural outcome, making it the endpoint of the health promotion model. These behaviours should result in improved health, functional ability and quality of life at all stages of development. This study corresponds to the assessment phase in which the commitment of women during the climacteric period to engage in healthy behaviours is identified.

The women who participate in this study are mostly married this coincides with another study carried out in women in the climacteric in the state of Sonora, which, although not catalogued by legal status, were identified by the fact of having a partner [14]. In terms of occupation, they are still economically active, since according to INEGI they are of working age and the percentages are similar to the economically active participation rate of 56.7% [15]. In Mexico, the most frequent type of family is that of this type of family observed in the study population.

The diet-related lifestyle was observed in a study conducted in Spain, that the majority of women during the climacteric who participated in the study, consume in minimum recommended frequency, the type of healthy food in all groups except for the consumption of vegetables, as a consequence they have a deficit in the intake of vegetables and a consumption of coffee higher than recommended, may predispose to the appearance of higher cardiovascular risk factors, such as dyslipidemia and high blood pressure[16] unlike the study group, who mostly refer to planning their diet by

integrating the four food groups into the three meals they make a day, identify the nutrients of the food by reading the labels of the packaged food, as well as the amount of fiber and avoid the intake of food with artificial or chemical ingredients, all this in order to maintain a healthy life, which is a factor according to NOM-035-SSA2-2012[17] decreases the incidence of risk factors for cardiovascular diseases.

It is worth mentioning a study carried out with Brazilian women in whom the symptomatology was moderate to severe, and this was more related to processed foods than to those who consume more fruits and vegetables [18]. Women in the climacteric stage are usually immersed in various work and family activities, which leaves them little time for physical exercise, which affects the level of adiposity[19]; the lack of exercise favours the incidence of fractures due to the decrease in bone density[20], which places the population studied in a condition of risk, since according to the results obtained it is identified that women do not cover even half of the time recommended by the WHO for physical activity[21]. In addition, a study conducted in Poland with women in the climacteric stage showed that physical activity was associated with fewer menopausal symptoms, so it is important to encourage regular physical activity as it is beneficial for health and relieves the symptoms of menopause [22]. Another intention to promote exercise is to improve bone mineral density (BMD) and to prevent osteoporotic vertebral fractures. Core strengthening exercises and attention to posture/balance can help mitigate falls [23].

The Pender model contemplates the adoption of commitment to establish health-promoting behaviour strategies, in this sense personal preferences and demands are factors in this behaviour[24]. In this study, little commitment to themselves was observed because they do not tell their doctor about their symptoms, most of the women reported consulting magazines or brochures to receive education or information about health and other medical references, despite the fact that NOM 035 [17], establishes that in this period of age, an exploration of the symptoms of the menopause should be carried out and health education should be provided in order to support their conscious, voluntary and informed decision on therapy and preventive measures in the self-care of their health, and in this way have an experience of the climacteric period as a natural process of life and not as a disease, it is here where the nurse should act in the role of consultancy to this group of women in the climacteric stage. In terms of lifestyle related stress management, it should be mentioned that menopause as part of the ageing process can be seen as a loss or as a threat to youth, which can influence its evaluation and can impact the level of stress associated with the woman's perception of symptoms [25]. In this sense, in a study conducted with a group of women in the climacteric stage it was observed that most women reported high levels of stress related to family, personal situations, work and health[26]. In this study it is observed that most women during this stage of life improve their stress levels through relaxation; however they are not fully aware of the source of stress, a situation that needs to be identified in order to be resolved.

Social relations and interpersonal support have great importance in the well-being of women during the climate, favoring the empowerment and perception of quality of life, crucial components to develop a positive aging. Good social relationships are the key to helping reduce stress symptoms, which promotes personal development and emotional support; there is evidence from other studies of the association between life satisfaction and social support, specifically family, partner and friends [27]. In this aspect the women participating in this study, the manifestations of affection and

communication with relatives and friends is scarce, however, the satisfaction with this area of their life is generally satisfied, situation that could be explained based on a study conducted with Latina women, who showed presence of defined goals and meaning of life [28].

Lifestyle related to self-actualisation, from Nola Pender's theory, should be understood as that which is desired in relation to the development of human potential, obtaining achievements [29]. In this aspect, the women participating in the study were observed to be strong in aspects related to self-acceptance and self-esteem, optimism, satisfaction with the personal environment, a situation that coincides with other similar studies. These results coincide with a study carried out on a group of Peruvian women where it was found that most of them have high self-esteem, and it was also found in another study that optimistic women, with emotional stability, emotional regulation, self-compassion and self-esteem, have better mental health to face this transition process [30,31].

# CONCLUSION

The physical and psychological manifestations of the climacteric period may vary from one woman to another, depending on a number of factors, among them lifestyle the cultural context: norms, habits, beliefs, rituals, traditions and values of each woman. Of the study population, the majority of women are between 45 and 50 years old, particularly married, in a nuclear family and more than half are economically active. The lifestyle of most women during the climacteric period is regular. About half of the women take care of their diet, as well as their health, however, they do not communicate with medical personnel, less than half of them exercise adequately, consequently they do not seek methods to reduce stress, they seek to interact with other people, they are optimistic, although they never visualize their future, generating ignorance of the importance of life. Most of the women present symptoms of mild intensity with greater frequency, highlighting numbness, tingling, palpitations, insomnia, nervousness, depression, muscle and joint pain.

Therefore, health systems should take into account cultural beliefs and practices in order to provide culturally appropriate and culturally consistent care to women who request it.

Finally, this result is not without limitations, which should be considered in future research, among them economic income, which is an indicator for access not only to health services but also to the necessary inputs to improve lifestyle.

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