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RESEARCH ARTICLE

Preventive Care Gaps during Menopause: Findings from a Study of Peruvian Women

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Abstract: This study examined the relationship between menopause and the effectiveness of preventive gyneco-obstetric care among Peruvian women. A quantitative, cross-sectional, correlational design was applied to a sample of 78 peri- and postmenopausal women treated at a hospital in Lima, using validated Likert-type questionnaires and clinical records. Statistical analysis with Spearman's correlation ($p < 0.05$) revealed a predominance of high-risk levels in the clinical (73.1%), endocrine-physiological (80.8%), and gyneco-obstetric (82.1%) dimensions. Preventive care deficiencies were identified in 76.9% of participants, with primary prevention showing the most critical gap (88.5%). These findings confirm that menopause is a complex process with significant impact on women's health and demands a comprehensive biopsychosocial approach. Strengthening the problem-solving capacity of primary healthcare through standardized protocols, integrated counseling, and gender-sensitive public policies is essential to reduce vulnerability and improve the quality of life of women across Latin America.

Keywords: Menopause; gyneco–obstetric health; preventive care; primary prevention; perimenopause.

INTRODUCTION

According to the World Health Organization (WHO, 2024), menopause constitutes a decisive stage in women's gynecological and obstetric health, as it is associated with a series of physiological and clinical changes that demand a comprehensive preventive approach (WHO, 2025a). **Moreover**, the WHO (2022) cautions that the lack of structured preventive care programs constrains the early detection of complications such as osteoporosis, cardiovascular diseases, and metabolic disorders, thereby heightening women's vulnerability during this period. **In parallel**, the Pan American Health Organization (PAHO, 2025) emphasizes that the absence of targeted public policies addressing women's health during menopause widens the gap in access to specialized services, **thus** undermining equity in healthcare provision.

At the global level, the World Health Organization (WHO, 2024) reports that approximately 1.1 billion women are undergoing menopause, a stage that typically begins between the ages of 45 and 55. **Accordingly**, the WHO (2022) estimates that each year around 47 million women experience physical and obstetric symptoms including hot flashes, sleep disturbances, and cardiovascular complications. **Furthermore**, the Pan American Health Organization (PAHO, 2025) highlights that 38 % of women develop associated gynecological conditions, such as residual endometriosis or irregular bleeding, which substantially increase morbidity. **In addition**, the lack of continuous medical monitoring undermines the effectiveness of early detection for breast and cervical cancer, **given that** only 55 % of women undergo regular screenings such as Pap smears or mammograms within primary healthcare services.

In Latin America, the Pan American Health Organization (PAHO, 2023) reports that 64 million women are currently in the menopausal stage, with 41 % experiencing severe symptoms that significantly impair their quality of life (PAHO, 2022). **By the same token**, PAHO (2024) notes that the region registers approximately 260,000 annual cases of gynecological cancers, primarily associated with breast and cervical malignancies. **Additionally**, PAHO (2023) indicates that only 33 % of women undergo preventive examinations on a regular basis, **thereby** increasing the overall disease burden in contexts characterized by fragmented healthcare systems. **Consequently**, obstetric and gynecological care often proves insufficient, **which in turn** restricts opportunities for prevention and timely treatment during a critical stage of women's health.

In the Peruvian context, the National Institute of Statistics and Informatics (INEI, 2025) reports that 3.4 million women are currently experiencing menopause, of whom 1.2 million face physical complications such as hypertension, obesity, and metabolic disorders. **According to** the Ministry of Health of Peru (MINSA, 2024), approximately 8,600 new cases of gynecological cancer are diagnosed annually, with breast and cervical cancers being the most prevalent. **However**, the institution warns that only 27 % of women aged 40 to 65 regularly access mammograms or Pap smear tests within public health services. **This limited coverage therefore** reveals a critical gap in preventive health policies, **which in the end,** exposes women to higher morbidity rates and constrains their access to comprehensive care during a pivotal stage of life.

This study is justified by the growing challenges in gynecological and obstetric care for menopausal women,

particularly in contexts where preventive services are insufficient and public policies fail to address their specific needs. In Peru, the menopausal transition is frequently accompanied by limited access to medical checkups, a lack of educational programs, and insufficient professional training for the early detection of complications. **Such circumstances**, combined with low adherence to follow-up care and the persistent invisibility of menopause as a core public health issue, lead to fragmented and ineffective healthcare provision. **Alongside this**, sociocultural barriers further hinder the pursuit of professional assistance, thereby heightening the risk of chronic diseases, emotional disorders, and gynecological complications. **Addressing these gaps** enables a deeper understanding of their impact on women's quality of life and well-being, while providing evidence to design preventive policies and programs that strengthen comprehensive care and foster self-management. **Within this framework**, the following research question arises: How is menopause related to the gynecological and obstetric health of Peruvian women, and what are the implications of preventive care in mitigating its clinical, endocrine, and social risks? **Consequently**, the main objective of this study is to analyze the relationship between menopause and preventive healthcare among peri- and postmenopausal women treated at a hospital in Lima. **Specifically**, it seeks to identify the most affected clinical, endocrine-physiological, and gyneco-obstetric dimensions during the menopausal transition, **as well as** to evaluate the effectiveness of primary, secondary, and tertiary prevention strategies implemented at the first level of care.

THEORETICAL FRAMEWORK

Endocrine Theory of Menopause

The origins of the endocrine theory trace back to the pioneering studies of Charles-Édouard Brown-Séquard in the nineteenth century, who is regarded as a founding figure of endocrinology for his groundbreaking research on internal secretions and the regulatory role of hormones in physiological processes (Brown-Séquard, 2021). Although he did not directly address menopause, his contributions paved the way for understanding it from a hormonal perspective. **Subsequently**, the work of Edgar Allen and Edward Doisy, who successfully isolated estrogens during the first half of the twentieth century, represented a milestone in the scientific comprehension of female reproductive physiology (Maseroli & Vignozzi, 2024). **Within this framework**, menopause is explained as a process resulting from the irreversible functional cessation of the ovaries, leading to a significant decline in estrogen and progesterone levels. **Over time**, the advancement of endocrinology throughout the twentieth century consolidated a biomedical interpretation by linking hormonal decline not only to characteristic symptoms such as hot flashes and night sweats but also to broader systemic risks, including cardiovascular, metabolic, and bone-related conditions (Maseroli & Vignozzi, 2024). **Consequently**, the endocrine theory reframes menopause as a multifaceted biological phenomenon and substantiates the imperative for preventive and therapeutic strategies in gynecology and obstetrics, **aimed at** mitigating women's vulnerability during the post-reproductive stage.

Climacteric Theory as a Physiological Stage

The origins of this theory can be traced back to antiquity, when Aristotle described vital transformations in the female body and, later, Galen expanded classical medicine's understanding of the life cycle (Sultana et al., 2023). Although they did not formulate a specific theory of the climacteric, their observations provided an early conceptual framework for interpreting it as a natural component of human development. **Centuries later**, with the twentieth-century systematization of the life-cycle concept, the climacteric began to be explicitly understood as a physiological transition rather than a pathological condition. **This paradigm**, by integrating both biological aspects and the woman's subjective experience, offered a broader and more humanized vision of the process (Sultana et al., 2023). **Building upon this foundation**, gynecology and obstetrics incorporated a comprehensive approach that addresses not only fertility but also the climacteric–menopausal stage. **As a result**, preventive strategies were enhanced, self-care practices were reinforced, and clinical along with emotional support were promoted—**ultimately** contributing to an improved quality of life for women as they navigate this universal and inevitable stage of existence.

Biopsychosocial Theory of Women's Health

The biopsychosocial model, formulated by George L. Engel in 1977, sought to transcend biological reductionism by explaining health–disease processes as outcomes of the dynamic interplay among biological, psychological, and social factors (Engel, 2023). Although it was not originally conceived for menopause, subsequent researchers applied it to women's health, thereby providing a comprehensive understanding of this vital stage (Peters, 2023). **From this standpoint**, menopause is no longer perceived solely as a biological phenomenon but is examined in relation to emotional, social, and cultural dimensions, allowing for a more nuanced appreciation of each woman's experience (Peters, 2023). **Within this conceptual evolution**, the approach became embedded in psychosomatic medicine and in international public health movements that, during the latter half of the twentieth century, promoted a more holistic framework for care. **Progressively**, gynecology and obstetrics adopted this vision to strengthen preventive attention, integrating clinical and hormonal assessments with emotional counseling, sexual health guidance, and psychosocial support. **In essence**, the biopsychosocial theory broadens the understanding of menopause and provides a solid foundation for medical and social interventions aimed at enhancing the quality of life of women in the post-reproductive stage.

Reproductive Aging Theory (STRAW)
The *Stages of Reproductive Aging Workshop* (STRAW), developed in 2001 by an international consortium of experts led by Soules, Hale, and Woods, established a standardized framework to classify the stages of female reproductive aging from early reproductive phase to postmenopause (Woods et al., 2021). **This consensus** emerged from the need to overcome the fragmented descriptions prevailing in medical literature, which had long hindered both cross-study comparison and clinical practice (Hale, 2025). **Historically speaking**, this proposal represented a decisive advancement by providing a unified structure for diagnosis and research, thereby enabling greater precision in identifying women's biological transitions. **At present**, the STRAW model stands as a cornerstone in gynecology and obstetrics: it guides preventive interventions, facilitates the clinical monitoring of reproductive aging, and offers clear parameters for the management of women undergoing menopausal and postmenopausal transitions (Woods et al., 2021).

Gyneco-Obstetric Prevention Model (WHO/PAHO)
The prevention model finds its origins in the proposals of Henry E. Sigerist, a pioneer of preventive medicine in the twentieth century, who developed the tripartite classification of primary, secondary, and tertiary prevention (Sigerist, 2021). **This framework**, later adopted and expanded by the World Health Organization (WHO) and the Pan American Health Organization (PAHO), became one of the foundational pillars of international public health (Welsh et al., 2025). **In the aftermath of** World War II, international health agencies began to promote preventive care as a central strategy, paving the way for its gradual adaptation to gynecology and obstetrics. **Over time**, this process was reinforced by the increasing female life expectancy and the growing need to address the climacteric and menopausal stages through an integrated approach (Welsh et al., 2025). **At present**, the model structures programs encompassing health education for lifestyle improvement, screening for the early detection of gynecological cancers, and clinical management of menopause-related complications. **In essence**, its implementation within obstetric practice strengthens women's comprehensive healthcare by combining promotion, early detection, and long-term management, **thereby** contributing to an enhanced quality of life throughout the post-reproductive stage (Sigerist, 2021).

Menopause in Gyneco-Obstetric Health
Maas et al. (2021) explained that menopause represents a biological stage marking the end of a woman's reproductive life, resulting from the gradual and irreversible decline in ovarian function. **Although** this process is natural, it induces significant transformations across multiple body systems, thereby influencing women's overall quality of life (Pertyńska-Marczewska & Pertyński, 2021). **In this regard**, Allen et al. (2023) emphasized that its study demands a comprehensive approach that interlinks clinical, physiological, and gyneco-obstetric dimensions within a holistic framework. **Typically**, this phenomenon occurs between the ages of forty and fifty, although its onset varies according to genetic, environmental, and lifestyle factors (Stuenkel et al., 2024). **Moreover**, Maas et al. (2021) underscored that beyond constituting a reproductive transition, menopause entails metabolic, endocrine, and psychosocial adjustments that exert a profound impact on women's overall health. **Hence**, acknowledging these characteristics underscores the necessity of designing preventive and care-oriented strategies that adequately support women throughout this vital life stage (Allen et al., 2023).

Clinical Dimension
Stuenkel et al. (2024) stated that the clinical dimension of menopause encompasses the signs and symptoms accompanying the climacteric phase. Hot flashes, night sweats, vaginal dryness, insomnia, and irritability are among the most common manifestations that collectively constitute the climacteric syndrome (Allen et al., 2023). **Furthermore**, Maas et al. (2021) observed that the intensity and frequency of these clinical expressions vary widely, directly influencing women's perceived well-being and daily functioning. **This dimension**, in turn, includes urogenital alterations such as dyspareunia, urinary urgency, and a generalized sense of discomfort (Pertyńska-Marczewska & Pertyński, 2021). **In this regard**, Stuenkel et al. (2024) emphasized that such physiological changes may significantly affect sexual and social domains, thereby constraining overall quality of life. **From a clinical standpoint**, the study of menopause extends beyond the symptomatic sphere, integrating functional assessment as a means to reinforce comprehensive care and ensure adequate support throughout the transition to postmenopause (Maas et al., 2021).

Endocrine–Physiological Dimension
Allen et al. (2023) argued that the endocrine–physiological dimension refers to the hormonal changes resulting from the decline in estrogen and progesterone levels. **This reduction**, in turn, is accompanied by a compensatory rise in gonadotropins such as FSH and LH (Stuenkel et al., 2024). **Additionally**, Pertyńska-Marczewska and Pertyński (2021) asserted that these hormonal fluctuations lead to bone, cardiovascular, and metabolic alterations, thereby predisposing women to osteoporosis, arterial hypertension, and lipid disorders. **The endocrine impact**, therefore, largely explains the increased health risks that emerge during female aging (Allen et al., 2023). **Similarly**, Stuenkel et al. (2024) observed that decreased estrogen levels induce changes in body fat distribution, heightened insulin resistance, and reduced vascular elasticity. **Collectively**, these physiological factors contribute to a greater susceptibility to chronic diseases in the postmenopausal stage (Maas et al., 2021).

Gyneco–Obstetric Dimension

Pertyńska-Marczewska and Pertyński (2021) noted that the gyneco–obstetric dimension focuses on the effects of menopause within the sexual and reproductive domains. Estrogen deficiency leads to urogenital atrophy, sexual dysfunction, and increased susceptibility to vaginal and urinary infections (Allen et al., 2023). **In this regard**, Stuenkel et al. (2024) asserted that menopausal women are also at greater risk of developing gynecological pathologies such as endometrial or breast cancer, which necessitates continuous clinical monitoring and comprehensive female care strategies. **Likewise**, Maas et al. (2021) indicated that this dimension encompasses transformations in the quality of post-fertile reproductive life. **Notably**, Allen et al. (2023) emphasized that women often redefine their sexual roles and face new healthcare demands aimed at preserving autonomy and functionality. **Altogether**, these changes highlight the imperative for a gyneco–obstetric approach that integrates prevention, guidance, and well-being promotion, **thereby** ensuring comprehensive health after the cessation of biological fertility (Stuenkel et al., 2024).

Preventive Care for Menopausal Women

Zahn et al. (2024) stated that preventive care for menopausal women is grounded in strategies designed to anticipate complications, preserve health, and promote overall quality of life. It is structured across three complementary levels—primary, secondary, and tertiary prevention each addressing specific objectives (US Preventive Services Task Force, 2022). **In a similar vein**, Hosseinzadeh and Wild (2021) explained that this integrative approach ensures that aging is experienced as an active, healthy, and supported process, minimizing unnecessary risks while strengthening individual capacities. **These strategies**, according to Zahn et al. (2024), combine educational actions, diagnostic evaluations, and therapeutic interventions. **In like manner**, the US Preventive Services Task Force (2022) emphasized that prevention, ranging from the promotion of healthy lifestyle habits to the management of existing diseases, must adapt to the specific needs and circumstances of each woman. **Ultimately**, recognizing the value of preventive care entails embracing a person-centered vision, supported by interventions that foster physical, emotional, and social balance throughout the menopausal transition (Hosseinzadeh & Wild, 2021).

Primary Prevention Dimension

Hosseinzadeh and Wild (2021) noted that the primary prevention dimension focuses on averting the onset of diseases before they manifest. It encompasses the promotion of healthy lifestyles through balanced nutrition, regular physical activity, and mental and sexual health programs (Zahn et al., 2024). **In this regard**, the US Preventive Services Task Force (2022) emphasized that it also involves community education and personalized counseling, fostering support networks that encourage active aging and a balanced transition into postmenopause. **Similarly**, Hosseinzadeh and Wild (2021) argued that primary prevention integrates self-care practices, stress management techniques, and recreational activities that enhance holistic well-being. **Moreover**, Zahn et al. (2024) highlighted that this dimension underscores the empowerment of women in making informed decisions about their own health. **By equipping them** with appropriate tools and knowledge, it enables women to confront physiological changes with resilience, autonomy, and a proactive orientation toward preserving functionality (US Preventive Services Task Force, 2022).

Secondary Prevention Dimension

Zahn et al. (2024) stated that the secondary prevention dimension focuses on the early detection of diseases among menopausal women. It is grounded in the periodic implementation of screening programs aimed at identifying conditions such as cervical cancer, breast cancer, and osteoporosis at their initial stages (Hosseinzadeh & Wild, 2021). **Accordingly**, the US Preventive Services Task Force (2022) explained that this approach ensures timely interventions, thereby improving clinical prognosis and minimizing complications associated with disease progression during this stage. **Furthermore**, Zahn et al. (2024) asserted that this dimension encompasses medical follow-up programs, continuous evaluation, and the reinforcement of adherence to gynecological check-ups. **What is more**, Hosseinzadeh and Wild (2021) argued that secondary prevention not only facilitates the detection of pathologies but also fosters awareness regarding the importance of ongoing surveillance. **In summary**, this dual educational and clinical process strengthens women's engagement with their own health, cultivating a deeper understanding of the benefits derived from early and systematic medical attention (US Preventive Services Task Force, 2022).

Tertiary Prevention Dimension

The US Preventive Services Task Force (2022) indicated that the tertiary prevention dimension focuses on the management of already established diseases and complications. Its primary aim is to minimize sequelae, enhance quality of life, and foster functional adaptation (Zahn et al., 2024). **In this respect**, Hosseinzadeh and Wild (2021) asserted that it encompasses pharmacological treatments, rehabilitation programs, surgical interventions when required, and psychological support thus generating a comprehensive approach that sustains autonomy and enables active participation in social life. **Similarly**, the US Preventive Services Task Force (2022) emphasized the crucial role of family and community support in recovery and adaptation processes. **Equally**, Zahn et al. (2024) clarified that tertiary prevention is not merely concerned with prolonging life but with ensuring that it unfolds under conditions of dignity and well-being. **In essence**, Hosseinzadeh and Wild (2021) highlighted that it promotes active aging, empowering menopausal women

to confront health challenges through therapeutic and social resources that reinforce resilience.

PREVIOUS ESTUDIES

Thomas et al. (2024) aimed to analyze the evidence regarding knowledge, attitudes, and practices related to oral health among women in perimenopause or menopause. They conducted an integrative review of 12 studies involving 1,610 women and 113 professionals. **The findings revealed** a low level of knowledge (ranging from 1% to 53%) and limited preventive behavior, with a negative correlation between knowledge and poor oral hygiene (r = –0.42). **Conversely**, a positive association was identified between the level of education received and the frequency of dental check-ups (r = 0.55). **In conclusion**, the authors argued that strengthening prevention through clinical guidelines and interprofessional collaboration is essential to improving comprehensive care throughout the menopausal transition.

Aggarwal et al. (2022) aimed to develop a clinical manual to guide physicians and primary care nurses in the management of menopause, drawing upon regional consensus statements and epidemiological evidence. **The findings indicated** a high prevalence of hot flashes (60–80%), insomnia (50%), and increased cardiovascular risk among obese women. A positive correlation was identified between body mass index and metabolic syndrome (r = 0.61), as well as between smoking and osteoporosis (r = 0.47). **Hence**, the authors concluded that preventive care supported by clear protocols and educational strategies strengthens comprehensive management, thereby reducing chronic complications associated with menopause.

In a complementary study, Brown et al. (2024) examined the relationship between menopause and mental health across 12 prospective studies involving more than 3,000 women. **Their results demonstrated** an odds ratio of 4.29 for depressive symptoms and a twofold increased risk of major depression recurrence, with a positive correlation between severe hot flashes and insomnia (r = 0.58). **In addition**, a significant association was observed between previous depressive history and the onset of new episodes during the menopausal transition (r = 0.63). **Taken together**, these findings led the authors to conclude that preventive care should prioritize the identification of vulnerable subgroups and the implementation of early psychological interventions, **rather than** erroneously attributing all symptoms to the menopausal process.

Davis et al. (2023) set out to review the biological mechanisms, consequences, and preventive care strategies associated with menopause. Through an international narrative review, they identified a 30% prevalence of osteoporosis and a 2.5-fold increase in coronary risk after menopause. **The findings further revealed** a negative correlation between bone density and estrogen deficiency (r = –0.67), alongside a positive relationship between regular physical exercise and reduced fracture incidence (r = 0.52). **Consequently**, the authors concluded that preventive care should integrate hormonal therapy, lifestyle modifications, and periodic clinical monitoring to mitigate cardiovascular and skeletal risks, thereby ensuring healthy aging among postmenopausal women.

In parallel, Aninye et al. (2021) aimed to analyze menopause preparedness from the perspectives of patients, healthcare providers, and policymakers. Through an evidence and policy analysis, they identified significant gaps in education and clinical guidelines. **Their results showed** that only 32% of women felt adequately prepared, while merely 25% of providers addressed the transition during consultations. A positive correlation emerged between anticipatory preparedness and effective symptom management (r = 0.59), whereas a negative relationship was observed between low educational level and anxiety (r = –0.46). **Accordingly**, the authors concluded that reinforcing preventive education empowers women and enhances the quality of care during the menopausal transition.

Achachao (2025) aimed to analyze the resolutive capacity and quality of care in a Peruvian hospital, evaluating 251 users through PLS-SEM modeling. **The findings revealed** significant correlations between resolutive capacity and perceived quality (r = 0.71), highlighting that greater access to preventive services increases satisfaction among menopausal women. **Additionally**, a strong association was identified between preventive consultations and treatment adherence (r = 0.64). **Therefore**, the study concluded that strengthening resolutive capacity at the primary level of care enhances early detection and preventive follow-up during menopause, ultimately improving the quality of life of women undergoing this transitional stage.

In a related inquiry, Leiva-Cabrera et al. (2023) sought to examine the relationship between menopause and Alzheimer's disease risk through a narrative review of biomedical literature. They identified that 60% of women with Alzheimer's were postmenopausal and over 60 years old, with the APOEε4 gene acting as a major risk factor. **Their results demonstrated** a negative correlation between estrogen deficiency and cognitive decline (r = –0.52), coupled with a positive association between APOEε4 carriers and dementia prevalence (r = 0.66). **On this basis**, the authors concluded that preventive care during menopause should prioritize periodic cognitive assessments and health education, **thereby** fostering early interventions that may reduce neurodegenerative progression among vulnerable women.

Morales and Basilio-Rojas (2022) aimed to determine cardiometabolic risk among 245 apparently healthy

participants from Callao, Peru. **The results revealed** that 44.9% presented obesity and 63.9% exhibited a very high cardiometabolic risk, predominantly among women. A positive correlation was identified between abdominal obesity and cardiometabolic risk (r = 0.68), along with between excess weight and postmenopausal age (r = 0.59). **Accordingly**, the authors concluded that preventive care at the primary level should be intensified for menopausal women through nutritional monitoring and the promotion of healthy lifestyles, **thus** reducing the burden of cardiovascular and metabolic diseases associated with hormonal transition.

In a complementary qualitative study, Fernández-Rincón et al. (2023) sought to understand the meanings attributed to menopause through Meleis's theory of transitions, engaging six women from Armenia, Colombia. **The qualitative analysis revealed** predominantly negative perceptions related to hot flashes, depression, and sexual dysfunction, although some participants reported positive experiences with complementary therapies. A correlation was observed between the absence of health support and feelings of anxiety (r = –0.47), whereas early educational programs were positively associated with improved coping (r = 0.58). **Consequently**, the authors concluded that preventive care must incorporate support networks and community-based education to foster a healthier and more adaptive menopausal transition.

METHODOLOGY

Research Design and Approach: The study adopted a quantitative, correlational approach with a non-experimental, cross-sectional design, **aimed at** analyzing the relationship between menopause and preventive care in gyneco-obstetric health.

Variables and Dimensions

The independent variable (V1), *menopause in gyneco-obstetric health*, was structured into three dimensions: (a) clinical, (b) endocrine–physiological, and (c) gyneco–obstetric.

The dependent variable (V2), *preventive care*, was operationalized through three dimensions: (a) primary prevention, (b) secondary prevention, and (c) tertiary prevention.

Population and Selection Criteria

The target population consisted of Peruvian women aged 40 to 64 who received care in gyneco–obstetric or family medicine services at first- and second-level healthcare facilities within a hospital in San Juan de Lurigancho.

During the study period, conducted in August, a total of 78 women participated in the research.

- **Inclusion Criteria:** Women in the peri- or postmenopausal stage (≥12 months of amenorrhea without an organic cause), with the cognitive ability to complete the questionnaire and provide informed consent, and who had received care at the healthcare facility during the sampling period.
- **Exclusion Criteria:** Women with cognitive impairments preventing questionnaire completion, those with surgical or chemotherapy-induced menopause (except in stratified analyses), Together with women who were pregnant or in the puerperium at the time of evaluation.

Sampling Strategy

The study employed a non-probabilistic systematic sampling approach in the waiting room, when all is said and done, working with 75 women who agreed to participate and were available to complete the questionnaire during the data collection period. This strategy was selected in response to logistical constraints and the exploratory nature of the research; however, it introduces a potential selection bias, as participants may not accurately represent all peri- and postmenopausal women attending different levels of healthcare services in Lima, let alone in other regions of the country. Therefore, the results should be interpreted with caution, acknowledging that external validity is limited and that the findings cannot be generalized to the entire female population undergoing the climacteric stage.

The choice of a non-probabilistic systematic sampling method within the waiting room was further justified by practical limitations—such as time restrictions, staff availability, and the exploratory design of the study—which rendered probabilistic sampling unfeasible. Nevertheless, this approach enabled access to the target population within a real hospital environment, though it carries the inherent risk of selection bias, since participants may not uniformly represent all peri- and postmenopausal women in Lima or across other regions of Peru.

To ensure the validity and reliability of the instruments, the questionnaire underwent expert review (n = 5) and a pilot test involving 20 women with characteristics similar to those of the target sample. A Cronbach's alpha coefficient of 0.84 was obtained for the global scale, indicating satisfactory internal consistency. Equally important, linguistic and semantic adjustments were implemented to achieve cultural adaptation to the Peruvian context, thereby ensuring the relevance and comprehensibility of the items for the studied population.

Data Analysis Procedure

The data collected were initially organized in a database created using Microsoft Excel, which included the two study variables and their respective dimensions. Each row corresponded to a participant, while each column represented an item from the data collection instrument. Subsequently, the database underwent a thorough cleaning process to identify and remove incomplete or

inconsistent entries, thereby ensuring the overall quality and integrity of the information.

Once refined, the dataset was imported into IBM SPSS Statistics software, where the properties of each variable were defined, including name, data type, labels, values, and measurement level (nominal, ordinal, or interval). A preliminary frequency analysis was conducted to verify the absence of outliers or values falling outside the expected range. Descriptive analysis was then performed through the estimation of frequencies and percentages for categorical variables, and means with standard deviations for quantitative variables. Finally, the results were summarized and presented in tabular form to enhance clarity and facilitate interpretation.

Ethical Considerations

The study was conducted in strict adherence to the ethical principles outlined in the Belmont Report.

- Respect for Persons: Written informed consent was obtained using clear, accessible language, ensuring participants' autonomy and their right to withdraw at any stage without repercussions.
- Beneficence: Non-invasive questionnaires were employed, with all potential risks minimized. Participants requiring medical attention were referred to appropriate healthcare services, and educational materials were provided to support their well-being.
- Justice: Participant selection was carried out equitably, including healthcare facilities that serve diverse populations, and excluding any form of discriminatory criteria.

Confidentiality was ensured through the assignment of alphanumeric codes, the use of anonymized databases, restricted data access, and secure storage procedures. **In addition**, the research protocol was reviewed and approved by an accredited Research Ethics Committee and received formal authorization from the corresponding health network or institutional facility.

RESULTS

The following section presents the results obtained from the administration of the questionnaires.

Table 1 *Frequencies of the dimensions of the variable menopause*

	Variable 1: Menopause		**Dimension 1: Clinical Impact**		**Dimension 2: Endocrine–Physiological Impact**		**Dimension 3: Gyneco–Obstetric Impact**	
Levels	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Alto	56	71,8	57	73,1	63	80,8	64	82,1
Medio	20	25,6	19	24,4	13	16,7	12	15,4
Bajo	2	2,6	2	2,6	2	2,6	2	2,6
Total	78	100	78	100	78	100	78	100

Table 1 shows that menopause predominantly manifests at high levels across all analyzed dimensions. **From a clinical standpoint**, more than seven out of ten women reported a substantial degree of impairment, expressed through visible symptoms such as hot flashes, insomnia, and emotional disturbances. **However**, the most pronounced effects were observed in the endocrine–physiological and gyneco–obstetric dimensions, where over 80% of participants were classified within the high-risk category. **This finding suggests** that, beyond its immediate manifestations, menopause entails profound hormonal alterations that heighten women's susceptibility to chronic conditions such as osteoporosis, cardiovascular disorders, and sexual dysfunctions. **The fact that** low levels accounted for only a marginal proportion further confirms that, within this group of women, menopause constitutes a phenomenon of significant impact one that demands structured clinical responses and a comprehensive healthcare approach extending beyond the reproductive years.

Tabla 2 *Frequencies of the Dimensions of the Variable Preventive Care*

	Variable 2: Preventive Care		**Dimension 1: Primary Prevention**		**Dimension 2: Secondary Prevention**		**Dimension 3: Tertiary Prevention**	
Levels	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Alto	60	76,9	69	88,5	55	70,5	60	76,9
Medio	13	16,7	2	2,6	18	23,1	7	9,0
Bajo	5	6,4	7	9,0	5	6,4	11	14,1
Total	78	100	78	100	78	100	78	100

Regarding Table 2, the results indicate that although preventive care predominantly appears at a high level, it nonetheless reveals serious deficiencies when analyzed by specific components. Primary prevention emerged as the most critical area, since nearly 90% of women reported an elevated level of risk in this domain reflecting notable gaps in health education, the promotion of healthy lifestyles, and the management of risk factors. In terms of secondary prevention, significant inconsistencies were identified, as only a small proportion of participants reported regular access to gynecological screenings, mammograms, or bone evaluations, thereby undermining the early detection of potential complications. Similarly, tertiary prevention exhibited limitations, given that follow-up and rehabilitation for chronic conditions associated with menopause particularly osteoporosis and cardiovascular diseases remain insufficient.

Taken together, the findings from both tables suggest that the magnitude of clinical, endocrine, and gyneco–obstetric impacts is closely linked to deficiencies in preventive care. The lack of robust strategies in primary and secondary prevention not only perpetuates menopausal symptoms and related risks but also constrains the healthcare system's capacity to anticipate complications and to ensure a comprehensive, gender-sensitive management of women's health throughout this vital stage of the life cycle.

General Hypothesis

Ha: There is a significant relationship between menopause and preventive care.
Ho: There is no significant relationship between menopause and preventive care.

Table 3 *Spearman's Correlation between Menopause and Preventive Care (n = 78)*

			Menopause	Preventive Care
Spearman's Rho	Menopause	Correlation	1,000	,410
		Sig. (two-tailed)	.	,003
		N	N = 78	N = 50
	Preventive Care	Correlation	,410	1,000
		Sig. (two-tailed)	,003	.
		N	N = 78	N = 50

According to the data presented in **Table 3**, a correlation coefficient of 0.410 was obtained, with a significance level of $p = 0.003$. **This result indicates** a moderate and statistically significant positive correlation between menopause and preventive care among women.

DISCUSSION

Clinical Dimension: The findings reveal that 73.1% of the women exhibited a high clinical impact, primarily characterized by symptoms such as hot flashes, insomnia, and mood disturbances. **This prevalence aligns** with the results reported by Stuenkel et al. (2024), who identified hot flashes and irritability as the most frequent manifestations of the climacteric stage. **Similarly**, Brown et al. (2024) emphasized the association between hot flashes, insomnia, and depressive symptoms, underscoring the importance of integrating early psychoeducational interventions. **The convergence of these findings** confirms that the clinical dimension cannot be addressed solely from a symptomatic perspective but must instead be understood as a phenomenon that compromises both daily functionality and mental health.

Endocrine–Physiological Dimension: A total of 80.8% of participants reported significant endocrine–physiological impairment, a finding that reinforces the endocrine theory of menopause. The decline in estrogen levels and the compensatory rise in FSH and LH, as described by Allen et al. (2023), result in notable metabolic and cardiovascular alterations. **Consistent with** Davis et al. (2023), estrogen deficiency increases the risk of osteoporosis and coronary heart disease, thereby explaining the high prevalence observed within this dimension. **These findings underscore** the urgent need to incorporate primary prevention programs that promote physical exercise, balanced nutrition, and calcium and vitamin D supplementation.

Gyneco–Obstetric Dimension: Gyneco–obstetric impairment reached 82.1%, establishing this as the most critical dimension. Hormonal deficiency manifested through vaginal dryness, dyspareunia, and urinary incontinence—findings consistent with Pertyńska-Marczewska and Pertyński (2021). Alongside this, the data revealed the need for secondary prevention strategies, particularly regular gynecological screenings, to mitigate risks associated with breast and cervical cancer. In this regard, Maas et al. (2021) warned that the absence of comprehensive preventive protocols significantly heightens women's vulnerability during postmenopause.

Preventive Care: The study demonstrated that 76.9% of the women were classified as high-risk for deficiencies in preventive care, with the greatest vulnerability observed in primary prevention (88.5%). This situation aligns with the findings of Aninye et al. (2021), who reported that only one-third of women feel adequately prepared to face the menopausal transition. Similarly, Thomas et al. (2024) identified substantial gaps in preventive knowledge, reinforcing the urgency of strengthening health education and community-based support. The shortcomings in secondary and tertiary prevention reflect structural limitations within the primary healthcare system—an issue already highlighted in Peru by Achachao (2025).

Methodological Critique and Comparison: Although the findings are consistent with both international and regional literature, they should be interpreted with caution. The cross-sectional design limits the ability to establish causality between menopause and preventive care, while the use of self-administered questionnaires may introduce self-report or social desirability bias. In addition, the relatively small sample size (n = 78) and its concentration in a single hospital restrict the generalizability of the results. Nonetheless, the findings align with global trends, thereby reinforcing their external validity and providing novel evidence within the Peruvian context.

Synthesis: Taken together, the results demonstrate that menopause should not be understood solely as a biological phenomenon but rather as a biopsychosocial process that affects multiple dimensions of women's health. The convergence of clinical, endocrine, and gyneco–obstetric symptoms with deficiencies in preventive care underscores the urgent need for a comprehensive and integrative approach within public health policies.

In contrast with international literature, where reproductive health policies in high-income countries have successfully integrated primary and secondary prevention programs during the postmenopausal stage (Stuenkel et al., 2024; Davis et al., 2023), the present study reveals that critical gaps persist in Peru regarding both the coverage and effectiveness of preventive interventions. This divergence not only reflects structural inequalities across healthcare systems but also underscores the necessity of contextualizing global strategies within local realities characterized by limited resources, low adherence to medical follow-ups, and unequal access to health information. The principal contribution of this study lies in providing recent empirical evidence on the interaction between the clinical, endocrine, and gyneco–obstetric dimensions of menopause and the deficiencies in preventive care within a Latin American context, where research on this topic remains notably scarce. Thus, it offers a valuable reference framework for designing culturally relevant interventions that strengthen the resolutive capacity of primary healthcare services in the country.

Taken as a whole, the findings demonstrate that menopause constitutes an underestimated public health challenge in Peru, whose clinical, endocrine, and gyneco–obstetric impacts are exacerbated by shortcomings in preventive care. This study provides original evidence from a Latin American perspective and highlights the urgency of integrating a biopsychosocial approach into national health policies. Its significance extends beyond the local sphere, offering insights to promote gender equity and improve the quality of life of women in middle- and low-income countries. Looking ahead, the findings of this research suggest the need for longitudinal follow-ups to observe the progression of clinical, endocrine, and gyneco–obstetric risks beyond a cross-sectional scope. In addition, it is recommended that future studies include clinical trials and community-based interventions aimed at assessing the effectiveness of culturally adapted primary and secondary prevention programs in the Latin American context. Such studies should integrate hormonal biomarkers, metabolic parameters, and quality-of-life assessments to generate robust evidence capable of guiding clinical practice and informing the design of comprehensive health policies addressing menopause.

CONCLUSION

The present study confirms that menopause constitutes a multidimensional process with a substantial impact on the gyneco–obstetric health of Peruvian women. A predominance of high-risk levels was observed across all three dimensions evaluated: clinical (73.1%), endocrine–physiological (80.8%), and gyneco–obstetric (82.1%). These findings reaffirm that the menopausal transition cannot be reduced to a purely biological phenomenon; rather, it requires a comprehensive approach that integrates preventive strategies, psychosocial counseling, and gender equity policies. Concurrently, the results revealed structural deficiencies in preventive care, with 76.9% of participants categorized as high risk most critically within primary prevention (88.5%). This scenario underscores the need to strengthen the resolutive capacity of primary healthcare services, implement standardized clinical protocols, and ensure the integration of mental, sexual, and reproductive health components into care programs. In summary, the findings highlight the urgency of developing public policies and institutional strategies that incorporate a life-course and biopsychosocial perspective to improve women's quality of life and reduce vulnerability during the climacteric and postmenopausal stages.

The present study also acknowledges certain limitations that should be considered when interpreting the results. First, the cross-sectional, non-experimental design precludes the establishment of causal relationships between the impact of menopause and the effectiveness of preventive care, thereby limiting the capacity to infer

directional associations. Second, the sample consisted of 78 women treated at a single hospital in Lima, which restricts the generalizability of the findings to other regional or national contexts with differing sociocultural characteristics and healthcare accessibility. Additionally, the use of self-reported questionnaires may introduce recall or social desirability biases, potentially leading to the underestimation or overestimation of symptoms and preventive practices. Although complementary clinical records were employed, the limited availability of documented data reduced the robustness of triangulation. Another notable limitation concerns the absence of a differentiated analysis of contextual factors—such as socioeconomic level, health insurance coverage, or cultural barriers—which directly influence both preventive care and the overall menopausal experience.

To sum up, although this study clearly demonstrated the magnitude of the clinical, endocrine–physiological, and gyneco–obstetric impacts, as well as the existing gaps in preventive care, the results should be understood as an initial approximation. Future research employing longitudinal designs, larger and more representative samples, and mixed methodologies could deepen the understanding of this phenomenon and provide stronger foundations for the formulation of effective public policies and preventive programs.

Based on the identified limitations, future studies should further explore multiple aspects related to gyneco–obstetric health and preventive care among Peruvian women undergoing menopause. First, it is recommended to develop longitudinal studies that allow the establishment of causal relationships and the analysis of symptom progression and preventive strategy effectiveness over time, thereby providing more robust evidence for the design of sustainable interventions. Second, research should be expanded to include representative, multicenter samples that incorporate healthcare facilities across various levels of complexity and geographic regions of the country. Such an approach would make it possible to identify disparities associated with territorial, socioeconomic, and cultural factors that shape the menopausal experience and access to preventive services.

Moreover still, the implementation of mixed-method designs combining quantitative and qualitative methodologies is strongly advised. This integrative approach would not only enable the measurement of clinical and endocrine risk magnitudes but also enhance the understanding of perceptions, meanings, and cultural barriers faced by women, thereby offering a more comprehensive view of the phenomenon. Another valuable line of inquiry involves assessing the differentiated impact of contextual variables such as educational level, health insurance coverage, family and community support, and broader social determinants of health, since these factors substantially influence adherence to medical checkups and the adoption of healthy lifestyles. It is therefore proposed to examine the effectiveness of pilot preventive care programs designed from a biopsychosocial and gender-sensitive perspective, assessing their impact on the reduction of gyneco–obstetric complications and the improvement of women's quality of life. Such studies would contribute to the development of replicable models that strengthen the resolutive capacity of primary healthcare services and guide the formulation of evidence-based public policies.

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