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Quality of life assessment using the Menopause Rating Scale in climacteric women from a specialty hospital in Guayaquil: single-center cross-sectional observational study.

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Summary

Introduction: The climacteric transition and menopause trigger systemic physiological changes that impair health-related quality of life in the somatic, psychological, and urogenital spheres. In Ecuador, the limited and up-to-date epidemiological evidence on the comprehensive impact of this syndrome restricts the design of timely outpatient interventions. The objective of this study was to assess quality of life and the severity of climacteric symptoms in menopausal women attending the outpatient clinic of the Teodoro Maldonado Carbo Specialty Hospital in Guayaquil.

Methods: This was an observational, descriptive, cross-sectional, and prospective study conducted between 2024 and 2025. From a population of 216 patients aged 40 to 59 years diagnosed with menopausal symptoms (ICD-10 N95), a finite sample of 180 women was calculated (95% confidence level, 3% margin of error). Biosocial variables were recorded using a direct survey and informed consent. The validated 11-item Menopause Rating Scale (MRS) was administered (overall severe score > 16; somatic domain > 8, psychological domain > 6, and urogenital domain > 4). Descriptive statistics included frequencies, percentages, means, and standard deviations.

Results: The mean age was 44.64 ± 3.64 years, with the 40-44 age group predominating (52.78%). Sixty percent had a secondary education, 90.56% had a formal partner, 60.00% resided in the southern sector, and 60% denied any medical history (40.00% reported hypertension and/or diabetes mellitus). On the MRS global scale, 96.11% (n = 173) presented a severe impairment in their quality of life. The psychological domain was the most affected, with intense severity (94.44%), followed by the somatic (67.22%) and urogenital (56.67%) domains. Very severe hot flashes (60%), severe depressive mood (60%), very severe irritability (40%) and severe sexual problems (50%) were highlighted, associated with moderate to very severe vaginal dryness (70%).

Conclusion: Menopausal women seen in outpatient consultations present a severe deterioration in their quality of life in 96.11% of cases, characterized by an early symptomatic onset and a marked psychological, somatic and sexual compromise.

Keywords: Quality of life; Menopause, Climacteric, Women's health.

Introduction

The global increase in life expectancy has significantly raised the proportion of women going through postmenopause, which now represents approximately 26% of the world's female population. Menopause, clinically defined as the permanent cessation of menstruation after 12 consecutive months of amenorrhea due to the irreversible decline of ovarian follicular function, typically occurs between the ages of 45 and 55. Beyond marking the end of reproductive life, estrogen deprivation triggers systemic physiological changes that compromise vascular reactivity, promote the redistribution of visceral adipose tissue, and increase cardiometabolic risk, predisposing women to hypertension, insulin resistance, and metabolic syndrome.

During the menopausal transition, between 75% and 80% of women experience moderate to severe clinical manifestations that impair their health-related quality of life [1, 2]. This symptomatology encompasses three interrelated dimensions: the somatic-vegetative sphere (characterized by vasomotor symptoms such as hot flashes and sweating, sleep disturbances, and musculoskeletal pain), the psychological sphere (depressed mood, anxiety, irritability, and physical-mental exhaustion), and the urogenital sphere (vaginal dryness, dyspareunia, decreased libido, and urinary symptoms) [1]. To objectively quantify this symptom burden and its functional impact, the Menopause Rating Scale (MRS) has become an established, standardized, brief, and cross-culturally validated instrument in diverse populations [3].

Despite its clinical and epidemiological relevance, the comprehensive management of menopause remains a neglected challenge in Latin American health policies. In Ecuador, clinical practice guidelines and educational programs within the public health system prioritize maternal and child health and sexual and reproductive health, leaving a gap in care for older women. Furthermore, in the local context of Guayaquil, up-to-date epidemiological evidence on the overall impact of menopausal syndrome is scarce [4]; in tertiary institutions, such as the Teodoro Maldonado Carbo Specialty Hospital, previous records have been limited to evaluating isolated metabolic comorbidities, without assessing the overall impact on quality of life.

Characterizing the symptom profile of these patients is a fundamental step in designing timely preventive and multidisciplinary strategies for outpatient care. Therefore, the objective of this study was to assess quality of life and evaluate the severity of somatic, psychological, and urogenital symptoms in menopausal women treated at the outpatient clinic of the Teodoro Maldonado Carbo Specialty Hospital in Guayaquil.

Materials and methods

Studio design

This study is an observational, descriptive, and cross-sectional investigation with prospective data collection.

Scenery

The research was conducted at the Teodoro Maldonado Carbo Specialty Hospital of the Ecuadorian Social Security Institute (IESS), located in the outpatient clinic in the city of Guayaquil, Guayas Province, Ecuador. Data collection took place during the period 2024–

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2025, after the research protocol was approved by the institution's General Research Coordination on February 19, 2025.

Participants

Female patients seen in the outpatient clinic, diagnosed with menopausal symptoms and registered under ICD-10 code N95, aged between 40 and 59 years, who voluntarily agreed to participate through verbal and written informed consent, were included. Patients who refused to provide their personal information, those with diagnoses other than the one established, and records with incomplete surveys were excluded.

Variables

The biosocial variables analyzed were: age (grouped into intervals of 40–44, 45–49, 50–54, and 55–59 years), educational level (primary, secondary, and tertiary), marital status (single, married, in a common-law relationship, separated, or divorced), place of residence (north, south, central, rural), and personal medical history (hypertension, diabetes mellitus, or no history). The main variable was menopause-related quality of life, assessed using severity scores in the somatic, psychological, and urogenital domains.

Data sources

Data were collected prospectively through direct surveys and observation. The data collection instrument included a structured multiple-choice questionnaire for biosocial data and the 11-item self-administered Menopause Rating Scale (MRS), evaluated using a 0-to-4 Likert-type scale (0: no discomfort; 1: mild; 2: moderate; 3: severe; 4: very severe). The data were tabulated and consolidated into an extraction matrix in Microsoft Excel.

Study size

A finite population sampling method was used. From a universe of 216 patients seen annually with a diagnosis of menopause in outpatient consultation (with an average of 18 monthly visits), considering a confidence level of 95% ($Z = 1.96$), an expected proportion of 50% ($p = 0.50$; $q = 0.50$) and an accepted margin of error of 3% ($e = 0.03$), a sample size of 180 patients was calculated.

Quantitative variables

The results for categorical variables are presented as absolute frequencies and percentages, while the quantitative variable age is expressed as the mean and standard deviation. Scores obtained on the MRS scale were categorized according to the established cut-off points for mild or severe condition by domain (somatic > 8, psychological > 6, urogenital > 4) and for the overall score (severe > 16 points).

Statistical analysis

Descriptive statistics were used to process the data, calculating measures of central tendency and dispersion, as well as percentage distributions, using Microsoft Excel.

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Results

Participants

From a universe of 216 patients treated with a diagnosis of menopause symptoms in the outpatient area of the Teodoro Maldonado Carbo Specialty Hospital, 180 women who met the selection criteria and fully completed the evaluation instrument were finally included and analyzed.

Regarding educational level, 60.00% (n = 108) had secondary education (second level), 30.00% (n = 54) had higher education (third level), and 10.00% (n = 18) had primary education (first level). Regarding marital status, 50.00% (n = 90) were married, 40.56% (n = 73) were in a common-law relationship (90.56% with a formal partner), and 9.44% (n = 17) were single. Regarding place of residence, 60.00% (n = 108) lived in the southern sector of Guayaquil, 20.00% (n = 36) in the center, 10.00% (n = 18) in the north, and 10.00% (n = 18) in rural areas. Regarding personal medical history, 60.00% (n = 108) denied any prior comorbidities; 20.00% (n = 36) reported hypertension; 10.00% (n = 18) reported diabetes mellitus; and 10.00% (n = 18) reported both conditions concurrently.

Description of the study group

In the overall assessment using the Menopause Rating Scale (MRS), 96.11% (n = 173) of the patients presented a severe impairment in their quality of life (total score > 16), while only 3.89% (n = 7) registered a mild condition. By domain, the severe impairment was distributed as follows: the psychological domain was the most affected, with 94.44% (n = 170; score > 6), followed by the somatic domain, with 67.22% (n = 121; score > 8), and the urogenital domain, with 56.67% (n = 102; score > 4). (Table 1).

Table 1. Symptoms in menopausal women by domains.

	Symptom	No feels discomfort	Mild	Moderate	Severe	Very Severe
Somatic	Hot flashes – Suffocation	0.0%	9 (5.0%)	27 (15.0%)	36 (20.0%)	108 (60.00%)
	Annoyances to heart	9 (5.0%)	81 (45.0%)	54 (30.0%)	27 (15.0%)	9 (5.0%)
	Difficulties in he dream	9 (5.0%)	36 (20.0%)	108 (60.00%)	27 (15.0%)	0.0%
	Muscle discomfort	0.0%	36 (20.0%)	72 (40.0%)	72 (40.0%)	0.00%
Psychologica	Depression	0.0%	18 (10.0%)	54 (30.0%)	108 (60.00%)	0.00%
	Anxiety	0.0%	27 (15.0%)	108 (60.0%)	36 (20.0%)	9 (5.0%)
	Irritability	0.0%	18 (10.0%)	36 (20.0%)	54 (30.0%)	72 (40.0%)
	Physical/mental fatigue	0.0%	126 (70.0%)	36 (20.0%)	18 (10.0%)	0.0%
Urogenite	Sexual problems	9 (5.0%)	27 (15.0%)	45 (25.0%)	90 (50.0%)	9 (5.0%)
	Problems of the bladder	54 (30.0%)	108 (60.00%)	18 (10.0%)	0.0%	54 (30.0%)
	Vaginal dryness	36 (20.0%)	54 (30.0%)	50.0%	0.0%	36 (20.0%)

Somatic domain: Hot flashes were the most acute manifestation, reported as very severe by 60% (n = 108) and as severe by 20% (n = 36). Muscular and joint discomfort was present with moderate (40%; n = 72) and severe (40%; n = 72) intensity. Sleep difficulties were predominantly moderate (60%; n = 108), and cardiac discomfort was concentrated in mild (45.00%; n = 81) and moderate (30%; n = 54) intensity. Psychological domain: Depressed mood reached severe intensity in 60% (n = 108) and moderate intensity in 30% (n = 54). Irritability was categorized

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as very severe by 40.00% (n = 72) and severe by 30.00% (n = 54). Anxiety was predominant at moderate (60%; n = 108) and severe (20%; n = 36) levels, while physical and mental fatigue was mostly mild (70%; n = 126). Urogenital domain: Sexual problems were severe in 50% (n = 90) and moderate in 25% (n = 45). Vaginal dryness was reported as moderate in 50% (n = 90) and very severe in 20% (n = 36), while bladder problems were mild in 60% (n = 108) and very severe in 30% (n = 54).

Discussion

The findings of this study show that almost all menopausal women seen in the outpatient clinic of the Teodoro Maldonado Carbo Specialty Hospital (96.11%) experience a severe impairment in their health-related quality of life, with a predominant impact on the psychological sphere (94.44%), followed by the somatic (67.22%) and urogenital (56.67%) domains. This clinical pattern reflects a high symptom burden in patients attending tertiary-level outpatient care, primarily due to acute manifestations that interfere with their daily functioning. From a sociodemographic perspective, the predominance of the 40-44 age group (52.78%), with a mean age of 44.64 ± 3.64 years, contrasts with the findings reported by Jalal in Saudi Arabia [5], where the highest proportion of symptomatic women was concentrated in the 51-60 age group (mean age of 55.01 years). This difference suggests that, in the Guayaquil population studied, the search for specialized medical care occurs in the early stages of the climacteric transition, possibly driven by an initial lack of awareness of the symptoms and geographical accessibility to the hospital, given that 60% of the participants resided in the southern part of the city. Furthermore, the high proportion of women with secondary education (60%) and with a stable partner (90.56% among married and cohabiting women) differs from Asian cohorts with greater educational heterogeneity, such as the one described by Lee and Park in Korea [6], and constitutes a favorable environment both for understanding the self-administered instruments and for family support in clinical follow-up. In the somatic domain, the high frequency of very severe hot flashes (60%) exceeds the percentages of moderate to severe vasomotor symptoms documented in the multinational European survey by Nappi et al. (31% to 52%) [7]. Similarly, moderate sleep difficulties (60%) and moderate to severe musculoskeletal discomfort (80% cumulative) exceed the prevalences reported by Hou et al. in Taiwan [8] (33% to 42% for sleep disturbances) and are consistent with the findings of Espírito Santo et al. [9] in Iberian women, in whom the intensity of somatic symptoms compromises functional stability and mobility. The coexistence of intense vasomotor symptoms and sleep disorders explains the early physical deterioration that leads these patients to seek medical evaluation. Regarding the psychological component, the presence of a severe depressive mood in 60% of the sample almost doubles the overall pooled prevalence of depression in menopausal women estimated in the meta-analysis by Jia et al. [10] (35.6%). Likewise, very severe irritability (40%) and moderate to severe anxiety (80% cumulative) exceed the rates reported by Nagda et al. [11] in perimenopausal and postmenopausal women in India (21.9% with moderate anxiety and 24.8% with clinical depression). While local sociocultural and healthcare factors may modulate perception and the threshold for emotional reporting, these results confirm that estrogen fluctuation and its impact on central neurotransmitter systems constitute the most vulnerable axis in this cohort. In the urogenital sphere, the high proportion of severe sexual dysfunction (50%), associated with moderate to very severe vaginal dryness (70% cumulative), exceeds the prevalence of moderate to severe sexual symptoms reported by Jahangirifar et al. [12] in Australia (16.9%). These data highlight

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that, although patients often initially consult for vasomotor or affective symptoms, genitourinary syndrome of menopause constitutes a high-impact, silent morbidity that requires active investigation and a comprehensive therapeutic approach. Among the study's strengths is the use of the Menopause Rating Scale (MRS), a cross-culturally validated tool that allowed for the standardization of the multidimensional measurement of symptoms and facilitated their comparison with international references. However, some limitations must be acknowledged: the descriptive and cross-sectional design prevents establishing causal relationships or evaluating the longitudinal evolution of symptoms; furthermore, since it was carried out in a single social security specialty hospital, the results could reflect a selection bias towards women with a higher symptom burden who seek specialized care, which limits its extrapolation to the general community population.

Among the study's limitations, firstly, its observational, descriptive, and cross-sectional design should be noted, which prevents establishing causal relationships or evaluating the longitudinal evolution and variability of symptoms throughout the different phases of the menopausal transition. Secondly, because it was conducted in a single specialized hospital within the public healthcare system and using a sample of patients actively seeking care for symptoms (ICD-10 N95), there is a potential selection bias toward women with a higher symptom burden, which limits the extrapolation of the results to the general female population. Finally, the exclusively descriptive scope of the analysis and the absence of relevant clinical covariates—such as body mass index, biochemical confirmation of the hormonal profile, prior use of hormone therapy, or level of physical activity—limit the possibility of adjusting for confounding factors that could modulate the severity of perceived quality of life.

To continue this line of research, we propose developing an analytical, longitudinal, and multicenter study, either a prospective cohort study or a randomized, controlled clinical trial, that includes a control group of asymptomatic premenopausal women or patients in menopausal transition treated under the conventional outpatient model. This design would allow for a controlled comparison of the impact of a structured, multidisciplinary intervention—comprising educational counseling, psychological support, prescribed physical activity, and individualized hormone therapy based on clinical profile—versus standard management. The study would evaluate, through serial measurements using the Menopause Rating Scale (MRS) and anthropometric and cardiometabolic markers, the actual magnitude of symptom reduction in the medium and long term.

Conclusion

The menopausal women studied in this cohort presented a severe impairment in their health-related quality of life in 96.11% of cases, with a predominant impact on the psychological sphere (94.44%), followed by the somatic (67.22%) and urogenital (56.67%) domains. The clinical profile of this cohort is characterized by an early onset of symptoms in the 40-44 age group (52.78%), driven by very severe hot flashes, severe depressive mood, extreme irritability, and sexual dysfunction associated with vaginal dryness.

Abbreviations

MRS: Menopause Rating Scale.

Supplementary information

Supplementary materials have not been declared.

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Authors' contributions
Erika Gloria Alache Aguilera: Conceptualization, data curation, research, methodology, visualization, original draft writing.
María José Botto Olivo : Conceptualization, data curation, research, methodology, visualization, original draft writing.
Kristy Glenda Franco Poveda : Conceptualization, methodology, visualization, writing-corrections, project management.
All authors read and approved the final version of the manuscript.

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Availability of data or materials
The data are not public; they may be shared under a justified academic request to the corresponding author.

Statements

Ethics committee approval and consent to participate

The research protocol was approved by the ethics committee of the Catholic University of Santiago de Guayaquil on January 14, 2025. It also received institutional authorization from the Teodoro Maldonado Carbo Specialty Hospital of the Ecuadorian Social Security Institute (IESS), IESS-HTMC-CGI-2025-0036-FDQ, dated February 19, 2025. The study was conducted in strict compliance with the bioethical principles of autonomy, beneficence, and justice applicable to research with human subjects. All participants received detailed information about the study objectives and provided their written informed consent before the survey was administered, guaranteeing the confidentiality and anonymity of their personal data.

Consent for publication
Not required when no photographic, MRI, or CT scan images are published patient-specific x-rays .

Conflicts of interest
The authors declare no conflicts of interest.

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