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RESEARCH ARTICLE

PROFILE OF MENOPAUSAL SYMPTOMS AMONG NURSES AND MIDWIVES AT DR. SAIFUL ANWAR HOSPITAL USING THE MENOPAUSE RATING SCALE (*PROFIL GEJALA MENOPAUSE PADA PERAWAT DAN BIDAN DI RS DR. SAIFUL ANWAR MENGGUNAKAN MENOPAUSE RATING SCALE*)

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ABSTRACT

Menopause is a natural biological transition that typically occurs between 45 and 55 years of age and is often accompanied by somatic, psychological, and urogenital symptoms that may affect quality of life and work performance. Healthcare workers may be particularly vulnerable due to occupational stress and high physical and emotional demands. This descriptive cross-sectional study aimed to describe the profile of menopausal symptoms among nurses and midwives working in IRNA 3 at Dr. Saiful Anwar General Hospital, East Java, and was conducted from February to April 2025 using the Menopause Rating Scale (MRS). Of the 213 questionnaires collected, 121 eligible nurses and midwives aged 40–60 years were included after applying the inclusion and exclusion criteria. Data were collected using a demographic questionnaire and the validated Indonesian version of the MRS. Descriptive statistical analysis was performed. The mean age of participants was 46.94 ± 4.27 years. Most respondents were midwives (56.2%) and married (89.3%). Somatic and psychological symptoms were predominantly mild to moderate. The most frequently reported symptoms were joint and muscle pain, sleep disturbances, physical and mental exhaustion, and irritability. Hot flashes were commonly reported but less frequent than musculoskeletal and psychological complaints. Most participants reported no sexual problems, although moderate to severe vaginal dryness was relatively common. Menopausal symptoms among nurses and midwives were predominantly somatic and psychological in nature. Workplace monitoring and targeted support strategies are needed to maintain quality of life and professional performance during the menopausal transition.

Keywords: healthcare workers, menopause, Menopause Rating Scale, midwives, nurses,

ABSTRAK

Menopause adalah transisi biologis alami yang biasanya terjadi antara usia 45–55 tahun dan seringkali disertai dengan gejala somatik (fisik), psikologis, dan urogenital yang dapat memengaruhi kualitas hidup serta kinerja pekerjaan. Pekerja layanan kesehatan mungkin sangat rentan mengalami hal ini karena tekanan pekerjaan serta tingginya tuntutan fisik dan emosional. Sebuah studi deskriptif cross-sectional untuk menggambarkan profil gejala menopause pada perawat dan bidan yang bekerja di IRNA 3 RSUD Dr. Saiful Anwar, Jawa Timur, telah dilakukan dari bulan Februari hingga April 2025 dengan menggunakan Skala Penilaian Menopause (MRS). Dari 213 kuesioner yang terkumpul, sebanyak 121 perawat dan bidan yang memenuhi syarat, berusia 40–60 tahun, diikutsertakan setelah menerapkan kriteria inklusi dan eksklusi. Pengumpulan data menggunakan kuesioner demografi dan MRS versi Indonesia yang telah tervalidasi. Analisis statistik deskriptif dilakukan. Rata-rata usia partisipan adalah 46,94 ± 4,27 tahun. Sebagian besar responden adalah bidan (56,2%) dan berstatus menikah (89,3%). Gejala somatik dan psikologis umumnya berada pada tingkat ringan hingga sedang. Gejala yang paling sering dilaporkan adalah nyeri sendi dan otot, gangguan tidur, kelelahan fisik dan mental, serta mudah marah. Sensasi panas (hot flashes) umum dilaporkan tetapi frekuensinya lebih rendah dibandingkan keluhan muskuloskeletal dan psikologis. Sebagian besar partisipan melaporkan tidak memiliki masalah seksual, meskipun kekeringan pada vagina dengan tingkat sedang hingga berat relatif umum terjadi. Gejala menopause pada perawat dan bidan sebagian besar bersifat somatik dan psikologis. Pemantauan di tempat kerja dan strategi dukungan yang tepat sasaran diperlukan untuk mempertahankan kualitas hidup dan kinerja profesional selama masa transisi menopause.

*Kata Kunci**:** bidan, menopause, menopause rating scale, perawat, tenaga kesehatan*

INTRODUCTION

Menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity, typically occurring between 45 and 55 years of age as a natural part of biological aging.[1] The diagnosis is confirmed retrospectively after 12 consecutive months of amenorrhea without identifiable pathological or physiological cause.[1] Perimenopause represents the transitional phase characterized by significant endocrinological, biological, and clinical changes that continue until one year after the final menstrual period (FMP).[2] This transitional period is commonly associated with vasomotor instability, decreased bone density, genitourinary changes, anxiety, and depression.[3] Although menopause is a natural physiological process, it is frequently accompanied by substantial morbidity, particularly vasomotor symptoms such as hot flashes and night sweats, which can significantly impair quality of life.[4]

Globally, the number of postmenopausal women continues to rise in parallel with increasing life expectancy. In 2021, women aged 50 years and older accounted for 26% of the global female population, representing a 22% increase compared to the previous decade.[1] The United Nations estimated that, in 2020,

there were 985 million women aged 50 years and older worldwide, and this number is projected to reach 1.65 billion by 2050.[5] In the United States, approximately 1.3 million women enter menopause annually, and 5% experience early natural menopause between 40 and 45 years of age.[4] In Indonesia, data from the Central Statistics Agency (BPS) in 2023 showed that 52.28% of the older population were women, with nearly 30% of Indonesian women having reached menopausal age.[6] In East Java, the proportion of menopausal women increased from 14.09% in 2020 to 14.22% in 2022.[7]

Menopausal symptoms affect the somatic, psychological, and urogenital domains, with musculoskeletal discomfort, fatigue, and irritability being the most commonly reported manisfestations.[8] Vasomotor symptoms can significantly impair quality of life and may persist for more than seven years, whereas urogenital symptoms are often chronic. Symptom severity varies across the menopausal stages and is associated with reduced quality of life.[8–10] In Nepal, 51.4% of menopausal women reported poor quality of life, which was influenced by educational level, health behaviors, and physical activity. Menopausal symptoms have also been associated with reduced work productivity and increased healthcare utilization, with 65% of women reporting work-related impairment due to fatigue, difficulty in concentrating, and memory problems.[11–14] Given the substantial physical and mental demands of healthcare professions, menopause is a particularly important issue among nurses, who are predominantly women and largely within the 45–54-year group.[15–17]

Menopausal healthcare workers have been reported to experience reduced productivity and increased absenteeism, with clinical staff exhibiting higher rates of anxiety, irritability, and hot flashes than their administrative counterparts.[18,19] The Menopause Rating Scale (MRS) is a validated instrument for assessing menopausal symptom severity and its impact on quality of life. It consists of 11 items across three domains, and the Indonesian version has demonstrated good reliability and validity.[20,21] Despite the growing number of menopausal healthcare workers, studies involving nurses and midwives in Indonesia remain limited. Therefore, this study aimed to describe the profile of menopausal symptoms among nurses and midwifes at Dr. Saiful Anwar General Hospital using the MRS.

MATERIALS AND METHODS

Study Design and Setting

This descriptive cross-sectional study was conducted in IRNA 3 (Inpatient Ward 3) at Dr. Saiful Anwar General Hospital (RSSA), East Java, Indonesia,

from February to April 2025. The study aimed to describe the profile of menopausal symptoms among nurses and midwives using the Menopause Rating Scale (MRS).

Participants

The target population consisted of nurses and midwives, while the study population comprised all nurses and midwives working in IRNA 3 at RSSA. Eligible participants were aged 40–60 years, were actively working during the study period, were willing to participate, provided informed consent, and were able to complete the questionnaire independently. The exclusion criteria included incomplete questionnaires, a history of surgical menopause, current use of hormone replacement therapy, and absence during the data collection period. Purposive sampling was employed, and all eligible participants were included because of the limited population size.

Variables and Measurements

The data collected included sociodemographic and clinical characteristics, including age, profession, length of employment, monthly income, age at menarche, marital status, age at first marriage and first childbirth, body mass index (BMI), physical activity level, current health conditions, and weekly working hours.

Menopausal symptoms were assessed using the validated Indonesian version of the Menopause Rating Scale (MRS), which consists of 11 items across three domains: somatic, psychological, and urogenital. Each item is scored on a 5-point Likert scale (0–4), yielding a total score of 0–44. Scores were categorized as no or minimal impairment (0–4), mild impairment (5–8), moderate impairment (9–16), and severe impairment (17–44), with moderate-to-severe scores indicating poor health-related quality of life.

Data Collection Procedure

Primary data were collected using an online self-administered questionnaire distributed through Google Forms. The questionnaire link was shared with the nursing units and directly with eligible participants. Respondents provided electronic informed consent before completing the demographic form and the MRS questionnaire.

Data Analysis

The collected data were downloaded into Microsoft Excel and processed through data editing, coding, scoring, and tabulation. Descriptive (univariate) analysis was performed to summarize frequencies, percentages, and measures of central tendency. The results are presented in tables to describe the distribution and severity of menopausal symptoms among the participants.

RESULTS AND DISCUSSION

Participant Characteristics

A total of 213 questionnaires were collected, of which 92 respondents were excluded because they were outside the eligible age range (40–60 years). The final sample comprised 121 participants. The mean age was 46.94 ± 4.27 years, and the mean length of employment was 24.95 ± 5.10 years. The mean ages at menarche, marriage, and first childbirth were 13.04 ± 1.27, 28.48 ± 5.38, and 25.46 ± 4.51 years, respectively. Most respondents were midwives (56.2%), whereas 43.8% were nurses. Nearly half (47.1%) reported a monthly income >6 million IDR, 39.7% earned 4–6 million IDR, and 13.2% earned <4 million IDR. The majority were married (89.3%), while 10.7% were divorced or widowed (Table 1).

Distribution of Menopausal Symptoms

In the somatic domain, hot flashes were most commonly reported as mild (38.8%) or moderate (29.8%), whereas nearly half of the respondents (49.6%) reported no palpitations. Sleep disturbances and joint or muscle discomfort were predominantly mild to moderate. Similarly, psychological symptoms, including depressive mood, irritability, anxiety, and physical and mental exhaustion, were primarily reported as mild to moderate.

In the urogenital domain, most respondents reported no sexual problems (75.2%), whereas bladder problems were predominantly mild (46.3%) or moderate (25.6%). Vaginal dryness showed relatively higher proportions of moderate (29.8%) and severe (33.1%) symptoms (Table 2). Overall, menopausal symptoms were predominantly mild to moderate in the somatic and psychological domains, whereas the urogenital domain was characterized by a relatively high prevalence of moderate-to-severe vaginal dryness.

Most healthcare workers in this study, including midwives and nurses, experienced at least one menopausal symptom. This finding is consistent with previous studies reporting that up to 98% of women experience menopausal symptoms.[8,22,23] The prevalence observed in the present study appears higher than that reported in China, where the prevalence of menopausal symptoms ranged from 21% to 70%. This difference may be attributable to variations in age distribution, demographic characteristics, and methods used to assess menopausal symptoms.[8,23]

The study population consisted of healthcare workers (56.2% midwives and 43.8% nurses), a group exposed to substantial physical and emotional demands. Occupational stress, shift work, and emotional labor may contribute to the severity of menopausal symptoms. Previous studies have suggested that menopausal experiences among nurses are influenced by

workplace factors and family support, whereas repeated exposure to patient suffering may result in empathy fatigue, adversely affecting physical and mental health and increasing the risk of professional errors.[24]

Table 1 Characteristic of the respondent

Characteristic	**Mean ± SD**	
Age	46.94 ± 4.27	
Years of Employment	24.95 ± 5.10	
Age at Menarche	13.04 ± 1.27	
Age at Marriage	28.48 ± 5.38	
Age at First Childbirth	25.46 ± 4.51	
	N	**%**
Profession		
Midwife	68	56.2%
Nurse	53	43.8%
Monthly Income		
< 4 million IDR	16	13.2%
≥ 4 – 6 million IDR	48	39.7%
≥ 6 million IDR	57	47.1%
Marriage status		
Married	108	89.3%
Divorced / widowed	13	10.7%
BMI		
Underweight (<18.5)	8	6.6%
Normal (18.5 – 22.9)	71	58.7%
Overweight (23.0-24.9	10	8.3%
Obesity (≥ 25.0)	32	26.4%
Physical Activity		
Low (<150 minutes/week)	72	59.5%
Moderate (≥ 150 minutes/week)	35	28.9%
High (≥ 300 minutes/week)	14	11.6%

Table 2 Distribution of menopausal symptoms according to the Menopause Rating Scale (MRS) across the somatic, psychological, and urogenital domains

Symptom	**None n (%)**	**Mild n (%)**	**Moderate n (%)**	**Severe n (%)**	**Very Severe n(%)**	**Total n (%)**
Somatic						
Hot Flashes	23 (19.0)	47 (38.8)	36 (29.8)	13 (10.7)	2 (1.7)	121 (100)
Palpitations	60 (49.6)	37 (30.6)	22 (18.2)	2 (1.7)	0 (0)	121 (100)
Sleep disturbances	15 (12.4)	44 (36.4)	46 (38.0)	16 (13.2)	0 (0)	121 (100)
Joint and muscle pain	17 (14.0)	60 (49.6)	34 (28.1)	10 (8.3)	0 (0)	121 (100)
Psychological						
Depressive Mood	22 (18.2)	47 (38.8)	43 (35.5)	7 (5.8)	2 (1.7)	121 (100)
Irritability	32 (26.4)	49 (40.5)	33 (27.3)	6 (5.0)	1 (0.8)	121 (100)
Anxiety	28 (23.1)	41 (33.9)	38 (31.4)	14 (11.6)	0 (0)	121 (100)
Physical and mental exhaustion	35 (28.9)	48 (39.7)	30 (24.8)	7 (5.8)	1 (0.8)	121 (100)
Urogenital						
Sexual Problems	91 (75.2)	22 (18.2)	8 (6.6)	0 (0)	0 (0)	121 (100)
Bladder Problems	30 (24.8)	56 (46.3)	31 (25.6)	4 (3.3)	0 (0)	121 (100)
Vaginal Dryness	17 (14.0)	23 (19.0)	36 (29.8)	40 (33.1)	5 (4.1)	121 (100)

The mean duration of employment (24.95 ± 5.10 years) indicates that most participants were experienced healthcare workers. High workloads, unclear task distribution, and supervisory responsibilities toward junior staff may exacerbate perimenopausal symptoms. Managerial support and rational task allocation have been suggested as important strategies to mitigate this burden.[24]

Nearly half of respondents (47.1%) reported monthly incomes exceeding 6 million IDR. Higher socioeconomic status has been associated with better access to health information, healthcare services, and healthier lifestyles, which may contribute to milder vasomotor, sleep-related, and musculoskeletal symptoms. Conversely, lower income levels have been linked to limited access to healthcare and social support, which may intensify psychological and urogenital symptoms.[25,26]

The mean age at menarche (13.04 ± 1.27 years) suggests that most participants experienced menarche after the age of 12. Later menarche has been associated with long-term hormonal patterns that may influence vasomotor symptoms and sleep disturbances during menopause.[27] Additionally, reproductive factors such as age at marriage (28.48 ± 5.38 years) and age at first childbirth (25.46 ± 4.51 years) may also influence hormonal trajectories. Multiparity has been reported to provide relative protection against hot flashes but may increase musculoskeletal pain and fatigue due to cumulative physical and hormonal stress.[26,28]

In this study, 26.4% of the respondents were obese, and 59.5% reported low levels of physical. Elevated BMI has been associated with increased vasomotor symptoms, sleep disturbances, and musculoskeletal pain through peripheral estrogen conversion and metabolic dysregulation. Low levels of physical activity have likewise been associated with greater psychological and somatic symptom severity, whereas moderate to high levels of physical activity may reduce hot flashes, improve sleep quality, and lower metabolic risk.[25]

The mean age of participants (46.94 ± 4.27 years) falls within the perimenopausal age range, a period characterized by hormonal fluctuations. Advancing age and declining estrogen levels are strongly associated with vasomotor symptoms and sleep disturbances.[29] Cultural and climatic factors may also influence symptom reporting. In tropical countries, such as Indonesia, hot flashes may be perceived as less distinguishable from environmental heat, potentially resulting in symptoms being reported predominantly mild to moderate.

Most somatic and psychological symptoms in this study were reported as

mild to moderate. Hot flashes and joint and muscle pain were the most frequently reported somatic symptoms, which is comparable to findings among healthcare workers and evidence from meta-analyses identifying musculoskeletal pain as the most prevalent menopausal symptom.[8,19,26] Declining estrogen levels contribute to vasomotor instability and reduced bone density, which may account for the prominence of these symptoms.[8]

Sleep disturbances and physical and mental exhaustion were also commonly reported. Sleep disturbances are closely associated with vasomotor symptoms and may increase cardiovascular risk through oxidative stress and sympathetic activation.[26] Psychological symptoms during menopause are influenced not only by hormonal changes but also by psychosocial stressors, including occupational demands and dual responsibilities in professional and domestic settings.

In the urogenital domain, most respondents reported no sexual problems (75.2%), although bladder symptoms and vaginal dryness were frequently reported as mild to moderate (18.2% mild and 6.6% moderate). Cultural norms and stigma in conservative Asian societies may contribute to the underreporting of sexual and urogenital symptoms. These manifestations are consistent with Genitourinary Syndrome of Menopause (GSM), which encompasses vaginal atrophy, sexual dysfunction, urinary incontinence, and an increased susceptibility to urinary tract infections.[30]

Overall, menopausal symptoms among healthcare workers in this study were predominantly mild to moderate, with somatic and psychological symptoms being more prominent than urogenital symptoms. Occupational, metabolic, reproductive, and sociocultural factors may have contributed to the observed symptom patterns.

CONCLUSION

Based on the Menopause Rating Scale (MRS), menopausal symptoms among nurses and midwives working in IRNA 3 at Dr. Saiful Anwar General Hospital were predominantly somatic and psychological in nature. The most frequently reported symptoms were joint and muscle pain, sleep disturbances, physical and mental exhaustion, and irritability. Vasomotor symptoms, such as hot flashes, were also reported but were less prevalent than somatic and psychological symptoms. These findings highlight the need for routine monitoring, psychosocial support, and targeted symptom management strategies for female healthcare workers undergoing the menopausal transition. Workplace-based interventions may help maintain health-

related quality of life and professional performance.

Recommendations

Future studies should include larger and more diverse hospital populations to improve the generalizability of the findings. Interventional studies are also recommended to evaluate effective strategies for reducing the impact of menopausal symptoms on the quality of life and work performance of female healthcare professionals.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest related to this study. No financial or personal relationships influenced the work reported in this manuscript.

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