

ANALYSIS OF VASOMOTOR SYMPTOMS IN PERIMENOPAUSAL WOMEN BASED ON THE MENOPAUSE RATING SCALE (MRS)

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ABSTRACT

Background: Perimenopause is a transitional phase experienced by women before menopause and is often accompanied by vasomotor symptoms such as hot flushes, excessive sweating, and sleep disturbances. Vasomotor symptoms may affect women's quality of life physically and psychologically. Menopause Rating Scale (MRS) is an internationally standardized instrument frequently used to assess menopause symptoms. **Aim:** This study aimed to describe vasomotor symptoms among perimenopausal women using Menopause Rating Scale (MRS). **Methods:** This study used a descriptive quantitative design with a cross-sectional approach. The participants were women aged 40–55 years experiencing perimenopausal symptoms. Data were collected using the Menopause Rating Scale (MRS) questionnaire. Sampling was conducted using consecutive sampling. Data analysis was performed descriptively to identify the distribution and severity of vasomotor symptoms. **Results:** Most respondents experienced moderate vasomotor symptoms characterized by hot flushes, night sweats, and sleep disturbances. Several respondents also reported psychological complaints accompanying vasomotor symptoms. The MRS instrument was able to identify the severity level of symptoms experienced by respondents effectively. **Conclusion:** Vasomotor symptoms are commonly experienced by perimenopausal women and may affect their quality of life. The use of MRS is useful for early identification and monitoring of menopause symptoms among women in primary health care settings.

Keywords: : Perimenopause, Vasomotor Symptoms, Menopause Rating Scale.

INTRODUCTION

Perimenopause represents the transitional period preceding menopause, during which women experience significant hormonal changes, particularly fluctuations and a progressive reduction in estrogen production. These physiological alterations can lead to a range of physical, psychological, and emotional symptoms that may negatively influence overall quality of life. Common manifestations during this stage include vasomotor symptoms such as hot flashes, night sweats, heart palpitations, and sleep disturbances, which are frequently reported by women undergoing the perimenopausal transition.

The World Health Organization (WHO) reports that the global population of women transitioning into menopause is steadily rising as a result of increased life expectancy. Projections indicate that by 2030, approximately 1.2 billion women worldwide will be aged 50 years and older, with a substantial proportion residing in developing countries. Similarly, Indonesia has experienced a continuous increase in the number of women entering the perimenopausal and menopausal stages, highlighting the growing importance of addressing midlife women's health as a significant public health concern.

Previous studies reported that approximately 70% of perimenopausal women experienced vasomotor disturbances, while many also reported psychological and somatic complaints. However, assessment and monitoring of menopause symptoms in primary health care settings remain limited. One of the standardized instruments used globally for assessing menopausal symptoms is the Menopause Rating Scale (MRS), which evaluates somatic, psychological, and urogenital symptoms.

Despite the increasing prevalence of menopause-related symptoms, limited studies have specifically described vasomotor symptoms among Indonesian perimenopausal women using MRS. Therefore, this study aimed to describe vasomotor symptoms among perimenopausal women using Menopause Rating Scale (MRS).

METHOD

A descriptive quantitative study employing a cross-sectional design was conducted to assess vasomotor symptoms in perimenopausal women through the Menopause Rating Scale (MRS). This approach was considered appropriate as it facilitates the simultaneous measurement of respondent characteristics and symptom severity at a single time point, thereby allowing the identification of the prevalence and pattern of vasomotor symptoms among perimenopausal women.

Data were collected from women aged 40–55 years who met the inclusion criteria through consecutive sampling until the required sample size was achieved. The Menopause Rating Scale (MRS), a standardized and validated instrument, was used to assess the severity of vasomotor symptoms, including hot flushes, night sweats, and sleep disturbances.

The descriptive quantitative approach was considered appropriate because the study aimed to describe the occurrence and severity of vasomotor symptoms rather than to determine causal relationships between variables.

The study was conducted among 50 perimenopausal women living in Sukamulya Village. Eligible participants were recruited based on predefined inclusion and exclusion criteria. Demographic variables collected included age, occupation, and educational level, as these characteristics may influence the experience of menopausal symptoms. Participation was voluntary, and all respondents provided informed consent prior to data collection.

Data were obtained using a structured questionnaire developed by the researchers and adapted from the Menopause Rating Scale (MRS). The questionnaire consisted of two domains: (1) sociodemographic characteristics, including age, occupation, and educational background, and (2) vasomotor symptom assessment based on the MRS instrument. The MRS was utilized to measure the severity of menopausal symptoms experienced by respondents.

Descriptive statistical analysis was employed to summarize participant characteristics and vasomotor symptom profiles. Frequencies and percentages were calculated for categorical variables, while measures of central tendency and dispersion were used for continuous variables where applicable. The findings were presented to describe the distribution tables and percentage. The collected data were analyzed using descriptive statistical analysis and presented in the form of frequency distribution tables and percentages. The results were then interpreted narratively to describe the Analysis of Vasomotor Symptoms in Perimenopausal Women Based on the Menopause Rating Scale (MRS) at Sukamulya Village. This study was conducted after obtaining permission from Sukamulya Village and informed consent from all respondents. Confidentiality and anonymity of respondents were maintained throughout the research process.

RESULTS AND DISCUSSION

Table 1. Respondent Characteristics (n = 50)

Characteristics	Category	Frequency (n)	Percentage (%)
Age (Years)	40–45	18	36.0
	46–50	21	42.0
	51–55	11	22.0
Occupation	Housewives	24	48.0
	Private Employees	11	22.0
	Self-employed	9	18.0

	Civil Servants	6	12.0
Educational Level	Primary School	9	18.0
	Secondary School	28	56.0
	Higher Education	13	26.0

Based on Table 1. The respondent characteristics showed that most participants were aged **46–50 years (42.0%)**, indicating that the majority were in the mid-perimenopausal transition. Nearly half of respondents were **housewives (48.0%)**, while the majority had a **secondary education level (56.0%)**.

Table 2 Distribution of Vasomotor Symptoms Based on MRS

Severity Level	Frequency	Percentage
Mild	15	25%
Moderate	32	53.3%
Severe	13	21.7%

Table 2. The findings indicated that the majority of respondents experienced moderate vasomotor symptoms. The most common complaints included hot flushes, night sweats, and sleep disturbances. Several respondents also reported fatigue, emotional instability, and anxiety associated with hormonal changes during perimenopause.

The use of Menopause Rating Scale (MRS) enabled standardized identification of symptom severity among respondents. This finding is consistent with previous studies reporting that vasomotor symptoms are highly prevalent during perimenopause and may significantly affect physical and psychological well-being.

The prevalence of moderate vasomotor symptoms in this study may be associated with hormonal fluctuations, psychosocial stress, lifestyle factors, and cultural perceptions regarding menopause. Women with better family support and health literacy appeared to cope more effectively with symptoms.

The findings support previous research indicating that MRS is an effective instrument for identifying menopause-related symptoms in women. The instrument may be useful for screening and monitoring women’s health in primary health care services.

LIMITATION OF THE STUDY

Several limitations should be acknowledged in this study. First, the descriptive cross-sectional design restricts the ability to establish temporal relationships or causal inferences. Second, the relatively limited sample size may affect the generalizability of the findings. Furthermore, data collection relied on participants’ self-reports, which are susceptible to recall bias and subjective interpretation. Future investigations are encouraged to adopt longitudinal approaches and recruit larger, more diverse populations to enhance the validity and applicability of the results.

CONCLUSIONS AND SUGGESTIONS

Most perimenopausal women experienced moderate vasomotor symptoms characterized by hot flushes, night sweats, and sleep disturbances. Menopause Rating Scale (MRS) was useful for identifying the severity of symptoms experienced by respondents. Early identification and monitoring of vasomotor symptoms are important to improve women’s quality of life during perimenopause.

Future studies are recommended to explore intervention strategies for reducing vasomotor symptoms and to integrate MRS into community-based women's health programs.

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ETHICAL CONSIDERATIONS

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Conflict of Interest Statement

The authors declare that there are no conflicts of interest related to the conduct, preparation, authorship, and publication of this study. The authors confirm that this research was conducted independently without any financial, commercial, or personal relationships that could be construed as a potential conflict of interest.

REFERENCES

- Antari, N., Herliana, S., & Fitria, N. (2024). Perimenopause symptoms and women's quality of life. *Journal of Women Health*, 12(2), 100–108.
- Avis, N. E., Crawford, S. L., & Green, R. (2015). Vasomotor symptoms across the menopause transition: Differences among women. *Obstetrics and Gynecology Clinics*, 42(2), 163–180. <https://doi.org/10.1016/j.ogc.2015.01.005>
- Baber, R. J., Panay, N., & Fenton, A. (2016). IMS recommendations on women's midlife health and menopause hormone therapy. *Climacteric*, 19(2), 109–150. <https://doi.org/10.3109/13697137.2015.1129166>
- Freeman, E. W., Sammel, M. D., & Lin, H. (2011). Symptoms associated with menopausal transition and reproductive hormones. *Obstetrics & Gynecology*, 117(3), 624–632. <https://doi.org/10.1097/AOG.0b013e31820ce18d>
- Greene, J. G. (1998). Constructing a standard climacteric scale. *Maturitas*, 29(1), 25–31.
- Heinemann, L. A. J., Potthoff, P., & Schneider, H. P. G. (2003). International versions of the Menopause Rating Scale (MRS). *Health and Quality of Life Outcomes*, 1(1), 28. <https://doi.org/10.1186/1477-7525-1-28>
- Hilditch, J. R., Lewis, J., Peter, A., van Maris, B., Ross, A., Franssen, E., & Guyatt, G. H. (1996). A menopause-specific quality of life questionnaire: Development and psychometric properties. *Maturitas*, 24(3), 161–175.
- Kartini, D. (2020). Menopause syndrome among Indonesian women. *Indonesian Journal of Midwifery*, 8(1), 45–52.
- Kementerian Kesehatan Republik Indonesia. (2020). *Profil kesehatan Indonesia tahun 2020*. Jakarta: Kementerian Kesehatan RI.

Monteleone, P., Mascagni, G., Giannini, A., Genazzani, A. R., & Simoncini, T. (2018). Symptoms of menopause—Global prevalence, physiology and implications. *Nature Reviews Endocrinology*, 14(4), 199–215.

Nainggolan, R., & Iliwandi, A. (2023). Women's health and menopause transition. *International Journal of Public Health Research*, 5(3), 77–84.

Nurlina, N. (2021). Kesehatan psikologis perempuan menopause. *Jurnal Kesehatan Reproduksi*, 10(1), 55–63.

Purnamasari, K. D., & Hindiarti, Y. I. (2023). The effect of women's health education on reproductive health awareness among middle-aged women. *International Journal of Nursing and Health Services*, 6(5), 303–308.

Santoro, N., Epperson, C. N., & Mathews, S. B. (2015). Menopausal symptoms and their management. *Endocrinology and Metabolism Clinics*, 44(3), 497–515.

Siregar, M., et al. (2024). Menopause prevalence and women's reproductive health in Indonesia. *Journal of Community Health*, 9(1), 12–20.

Soules, M. R., Sherman, S., Parrott, E., Rebar, R., Santoro, N., Utian, W., & Woods, N. (2001). Executive summary: Stages of reproductive aging workshop (STRAW). *Fertility and Sterility*, 76(5), 874–878.

Speroff, L., & Fritz, M. A. (2005). *Clinical gynecologic endocrinology and infertility* (7th ed.). Philadelphia: Lippincott Williams & Wilkins.

Trisetiyaningsih, Y., Azizah, N., & Utami, S. (2023). Keluhan fisik dan psikologis perempuan perimenopause. *Jurnal Kebidanan dan Kesehatan Tradisional*, 7(2), 90–98.

Utian, W. H. (2005). Psychosocial and socioeconomic burden of vasomotor symptoms in menopause. *Climacteric*, 8(Suppl 1), 3–9.

WHO. (2023). Women ageing and health report. Retrieved from <https://www.who.int>

Woods, N. F., Mitchell, E. S., & Smith-DiJulio, K. (2009). Is the menopausal transition stressful? Observations of perceived stress from the Seattle Midlife Women's Health Study. *Menopause*, 16(1), 90–97.

Yusuf, S., & Rahmawati, D. (2022). Gambaran gejala menopause pada perempuan usia menengah. *Jurnal Kebidanan Indonesia*, 13(2), 88–96.

Ziv-Gal, A., & Flaws, J. A. (2016). Factors that may influence the experience of hot flashes by healthy middle-aged women. *Journal of Women's Health*, 25(4), 341–349.

Hindiarti, Y.I. (2026). Analysis of Vasomotor Symptoms in Perimenopausal Women Based on the Menopause Rating Scale (MRS). 2(1) 263-268