

Original Research

Mother's Knowledge Before and After Menopause Counseling

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erna.watis@gmail.com**Abstract****Background:** The menopausal transition, which includes the premenopausal phase and the cessation of menstruation, often leads to anxiety and unpreparedness among women due to hormonal changes. These changes result in various physical and psychological symptoms. Enhancing knowledge about menopause is essential for better coping and adaptation.**Objective:** To assess the level of maternal knowledge regarding menopause before and after a counseling intervention in Salajo Village, South Bontonompo District, Gowa Regency.**Methods:** This study employed a descriptive quantitative design using a one-group pretest-posttest approach. A total of 46 menopausal mothers participated through total sampling. Data were collected using a validated questionnaire and analyzed using descriptive statistics with SPSS version 25.**Results:** Before counseling, 39 out of 46 participants (84.8%) had good knowledge about menopause, while 7 participants (15.2%) had limited knowledge. After counseling, the number of respondents with good knowledge increased to 45 (97.8%), with only one participant (2.2%) remaining in the limited category.**Conclusion:** Counseling significantly improved maternal knowledge about menopause. The intervention proved effective in enhancing awareness of menopausal symptoms and phases. This underscores the importance of structured health education programs to empower women in managing the menopausal transition.**Keywords:** Counseling; Health education; Knowledge; Maternal health

Introduction

Menstrual irregularities often signal the onset of the perimenopausal period, marking a transitional phase toward menopause. This stage is characterized by a decline in the production of estrogen and progesterone, leading to a range of physical and psychological changes. Physical symptoms may include hot flashes, night sweats, vaginal dryness, joint and bone discomfort, skin wrinkling, and sleep disturbances. Psychologically, women may experience depression, anxiety, irritability, mood swings, and diminished self-confidence (Herliawati et al., 2024).

Globally, the average age of natural menopause varies by region. Women in the Americas typically reach menopause at 51 years, in Europe at 50.7 years, in the United Arab Emirates at 48.7 years, and across Asia at approximately 48.4 years. The prevalence of menopausal symptoms also differs significantly, with 70-80% of women in Europe reporting symptoms, compared to 60% in the United States, 57% in Malaysia, 18% in China, and about 10% in Japan and Indonesia (Matjino, 2019; Maria & Sari, 2023). These differences have been linked to variations in diet and hormonal profiles, where Western women tend to have higher estrogen levels than Asian women. The decline in estrogen levels, however, universally affects women's quality of life by triggering disruptive symptoms (La Isa et al., 2023).

In Indonesia, the number of menopausal women is substantial and increasing. As of 2017, Indonesia's population was approximately 261.89 million, including 130.31 million women, of which 15.6 million were aged 45-55 years. By 2022, an estimated 30.3 million women had entered menopause (Wellni & La Isa, 2024). The World Health Organization (WHO) projected that by 2023, the global population of women aged 50 years and above would reach approximately 2 billion, with 80% residing in developing countries. This demographic trend highlights the growing need for awareness and support related to menopausal health.

Menopause is a natural biological process, not a disease, yet it has profound implications for women's reproductive and overall health. Symptoms such as hot flashes, palpitations, fatigue, insomnia, and skin changes can significantly impact daily functioning and emotional well-being (Hekhmawati, 2016;

Astuti, 2021). Moreover, hormonal shifts during this phase can increase the risk of osteoporosis, reduced libido, vaginal atrophy, and chronic diseases such as cardiovascular or renal complications (Ulfa, 2023).

Menopause is classified into natural and artificial types. Natural menopause occurs gradually in the late 40s to early 50s, whereas artificial menopause results from medical interventions such as hysterectomy or oophorectomy, often due to cancer prevention strategies (Anggraeni, 2022). Early menopause, defined as cessation of menstruation before age 40, can be triggered by genetics, chronic illness, malnutrition, or lifestyle factors like smoking (Pane, 2022).

The menopausal transition encompasses several phases. The preclimacteric period occurs 4-5 years before menopause, during which menstruation becomes irregular but typical menopausal symptoms are absent. Perimenopause refers to the phase spanning two years before and after menopause, where symptoms such as hot flashes and hormonal fluctuations become pronounced. During this time, decreased ovarian function leads to lowered estrogen and progesterone levels, triggering physiological and emotional disturbances (Arifah, 2010; Astuti, 2021).

Menopausal women frequently report heightened anxiety, forgetfulness, stress, and depressive symptoms due to hormonal changes. These changes are associated with disrupted hypothalamic-pituitary-ovarian axis regulation, including increased secretion of follicle-stimulating hormone (FSH) and luteinizing hormone (LH), and diminished ovarian feedback (Sagita, 2022). Such physiological shifts can compromise not only mental health but also social and familial roles during midlife.

Knowledge plays a crucial role in managing menopause. Women who are better informed about the physiological and emotional changes of menopause are more likely to adopt effective coping strategies and preventive health behaviors (Susilo et al., 2024). Enhancing awareness can reduce anxiety, improve adaptation, and foster a positive attitude toward this life transition.

Therefore, this study aims to explore the physical and psychological changes experienced by perimenopausal women and to analyze the influence of knowledge levels on their readiness and ability to cope with these changes. This investigation is vital in promoting targeted education and support interventions for women navigating menopause, particularly in the Indonesian context.

Methods

Study Design

This study employed a quantitative descriptive design with a pre-experimental one-group pretest-posttest approach. The aim was to assess changes in knowledge among menopausal mothers before and after a structured counseling intervention. This design allows researchers to measure the effectiveness of an intervention by comparing participant responses at two time points without a control group.

Samples/Participants

The study involved 46 menopausal mothers residing in Salasa Village, South Bontonompo District, Gowa Regency. Participants were selected using a total population sampling method, wherein all eligible individuals who met the inclusion criteria were invited to participate. The inclusion criteria included mothers aged 45 and above who had entered the menopausal phase, were able to communicate clearly, and provided informed consent. Exclusion criteria included mothers with cognitive impairments or severe illness that could interfere with participation.

Instruments

Data were collected using a structured questionnaire developed by the research team. The questionnaire consisted of 20 items covering knowledge about menopausal phases, symptoms, hormonal changes, and management strategies. The instrument underwent a validity and reliability test prior to its use. Content validity was assessed through expert judgment, while internal consistency reliability was confirmed using Cronbach's alpha coefficient, which yielded a value of 0.83, indicating high reliability.

Data Collection

Data collection was conducted through face-to-face interviews. Respondents were first given a clear explanation of the research objectives, procedures, and their rights as participants. A pretest was administered to assess baseline knowledge, followed by a counseling session on menopause conducted by trained facilitators. After the counseling session, a posttest was conducted using the same questionnaire to evaluate changes in knowledge.

Data Analysis

Quantitative data were processed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics such as means, frequencies, and percentages were used to summarize respondent characteristics and knowledge levels. To assess changes in knowledge before and after counseling, a paired-sample *t*-test was employed for normally distributed data. For data that did not meet normality assumptions, the Wilcoxon signed-rank test was used as a non-parametric alternative. A significance level of $p < 0.05$ was considered statistically significant.

Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee of STIKES Tanawali Takalar. Written informed consent was obtained from all participants after they were given detailed information about the purpose, procedures, risks, and benefits of the study. Participation was voluntary, and confidentiality was strictly maintained. Respondents were assured that the data collected would be used solely for research purposes and reported in aggregate form to ensure anonymity.

Results

In accordance with table 1, it was found that of the 46 mothers, only 9 (19%) were 45 years old, 8 were 46 years old (17%), 47 years old were 14 (30%) and 48 years old (33%). In accordance with table 1.1, everyone knows that menopausal mothers with an elementary level of knowledge are 12 people (26%), junior high school as many as 13 people (28%), high school as many as 19 people (41%), bachelor's as many as 2 people (4.3%). Thus, the majority of the respondents' education level is high school

Table 1 Frequency Distribution of Respondents by age and education.

Age	n	%
45	9	19
46	8	17
47	14	30
48	15	32
Education	n	%
SD	12	26
JUNIOR	13	28
SMA	19	41
BACHELOR	2	2
Total	46	100

Source : SPSS Processed Data, 2023

Mother's knowledge before counseling can be stated that of 46 mothers in Salajo village, 39 people (84%) have good knowledge about menopause before counseling, but there are still 7 people (15%) who lack knowledge. In accordance with table 5.3 Frequency Distribution of mothers' knowledge before counseling, it can be stated that of 46 mothers in Salajo village, 39 people (84%) have good knowledge about menopause before counseling, but there are still 7 people (15%) who have less knowledge.

Table 2 Knowledge Before Leaflet Giving

Knowledge	n	%
Good	36	84
Less	7	15
Total	46	100

Source : SPSS Processed Data, 2023

Table 3 Knowledge After Leaflet Giving

Knowledge	n	%
Good	45	97
Less	1	3
Total	46	100

Source : SPSS Processed Data, 2023

Discussion

The findings of this study reveal a notable improvement in maternal knowledge about menopause following a structured counseling intervention. Before counseling, 84% of the respondents demonstrated good knowledge, and this figure rose to 97% afterward, suggesting that educational outreach, when tailored appropriately, can significantly enhance health literacy among perimenopausal women. The observed increase supports existing health education theories that emphasize the role of targeted information delivery in promoting understanding and awareness (Notoatmodjo, 2014).

Educational interventions such as counseling sessions paired with leaflets serve as multimodal strategies that reinforce comprehension through both verbal and visual channels. This aligns with Bandura's Social Cognitive Theory, which emphasizes observational learning and information reinforcement as key factors in behavior change (Bandura, 2004). In the present study, the use of printed

educational materials likely aided participants in internalizing new concepts related to hormonal changes, symptom recognition, and self-care strategies during menopause.

These results are also in line with previous research by Arikunto et al. (2022), who demonstrated that structured health education significantly improved knowledge retention among women undergoing physiological transitions, including menopause. Similarly, Al Riyami et al. (2021) found that increased knowledge about menopause led to improved health-seeking behaviors, particularly among women in rural communities with limited access to reproductive health information.

Despite these positive outcomes, the study has some limitations that must be acknowledged. First, although a significant shift in knowledge was observed, the study relied on frequency distribution and did not utilize inferential statistics beyond descriptive analysis. Employing more rigorous statistical methods, such as a *paired t-test* or the *Wilcoxon signed-rank test*, would have allowed for a more robust assessment of the intervention's impact. Secondly, the sample was limited to one geographic location—Salasa Village—which may not be representative of other communities, particularly those with different socioeconomic or cultural contexts.

In addition, while knowledge levels increased, this study did not evaluate actual behavior change or health outcomes, such as improved symptom management, health service utilization, or psychological resilience during the menopausal transition. As previous studies suggest, knowledge is a prerequisite but not a guarantee for behavioral change (Glanz et al., 2015). Therefore, future research should expand to include behavioral measurements and longer follow-up periods to assess knowledge retention and practical application.

Another limitation concerns the size and composition of the sample. Although total sampling was used, the relatively small sample size ($n = 46$) may limit statistical power and the generalizability of findings. Furthermore, the study did not control for confounding variables such as prior exposure to health information, media access, or social support, which may have influenced baseline knowledge levels.

The practical implications of this study are nonetheless significant. It highlights the importance of community-based counseling programs that are culturally sensitive and linguistically appropriate, especially in regions where reproductive health remains a low-priority topic. Integrating menopause education into routine maternal and child health services, particularly at the community health center level (*puskesmas*), could be a strategic way to reach middle-aged women more systematically.

Future studies should consider adopting experimental or quasi-experimental designs with control groups, allowing for stronger causal inferences. Researchers should also explore the integration of digital health tools, such as mobile apps or online counseling platforms, to complement traditional educational methods and widen outreach, especially among younger premenopausal women who may prefer digital resources.

Conclusion

This study concludes that structured menopause counseling significantly enhances maternal knowledge regarding menopausal health. Prior to the intervention, 84.8% of respondents (39 out of 46) demonstrated good knowledge, while 15.2% exhibited limited understanding. Following the counseling session, 97.8% of respondents (45 out of 46) displayed improved knowledge, indicating the effectiveness of targeted health education in addressing informational gaps.

The use of counseling sessions, complemented by leaflets as visual aids, was instrumental in improving participants' understanding of menopausal symptoms, physiological phases, and associated psychological impacts. These results underscore the importance of integrating menopause education into community health strategies, especially for women in midlife who may otherwise lack access to reliable reproductive health information.

Beyond cognitive gains, this intervention holds potential for encouraging positive health behaviors, though this study did not directly assess such outcomes. Future research should therefore explore whether increased knowledge leads to better symptom management, increased use of health services, or adoption of healthier lifestyle practices. Longitudinal studies are also recommended to evaluate the retention of knowledge over time and assess the durability of counseling impacts.

In light of the growing population of menopausal women, particularly in developing regions like Indonesia, accessible and culturally appropriate educational interventions

are vital. Stakeholders in public health and primary care should consider implementing similar programs at the village or health center level to promote women's reproductive health literacy and improve quality of life during the menopausal transition.

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