

# Profile Analysis of Menopause Knowledge: The Roles of Age, Marital Status, and Interactions with Healthcare Providers

Leah, O. Oyedele<sup>1</sup>, Oladunmoye, E.O<sup>2</sup>, Faith, O., Nakalema<sup>3</sup>, Tolulope, O. Olayiwola-Adedaja<sup>4</sup>

Correspondence Email: [droyeyemioyedele@gmail.com](mailto:droyeyemioyedele@gmail.com) ORCID id 0009-0006-7875-5173<sup>1</sup>

Applied Psychology Department, Kampala International University, Uganda

[oladunmoyetomenoch@gmail.com](mailto:oladunmoyetomenoch@gmail.com) ORCID id 0000-0002-2721-2391<sup>2</sup>

Applied Psychology Department, Kampala International University, Uganda

[faith.nakalema@kiu.ac.ug](mailto:faith.nakalema@kiu.ac.ug) ORCID id 0000-0002-2209-0890<sup>4</sup>

Applied Psychology Department, Kampala International University, Uganda

[tolulope.olayiwola-adedoja@fuoye.edu.ng](mailto:tolulope.olayiwola-adedoja@fuoye.edu.ng) ORCID id 0000-0003-1914-957X<sup>2</sup>

Department of Guidance and Counseling, Federal University Oye-Ekiti, Nigeria

**Abstract:** Menopause is a significant phase in a woman's life, marking the end of reproductive capability and the beginning of several physiological, emotional, and psychological changes. This study aims to analyze the knowledge of menopause among different groups based on age, marital status, and interactions with healthcare providers. The sample population comprises 174 women. Three hypotheses based on the variables of the study were formulated and tested. One-way ANOVA was employed to test the differences in profile analysis of menopause knowledge of women using age, marital status, and interactions with healthcare providers as variables of the study. The results show that there is a statistically significant difference in the menopausal knowledge of women based on healthcare interaction  $F_{(2,84)} = 5.47, p < 0.05, \eta^2 = 0.12$  and the effect size accounted for 12%. Also, age  $F_{(4,82)} = 0.88, p > 0.05, \eta^2 = 0.04$  and marital status  $F_{(3,83)} = 0.33, p > 0.05, \eta^2 = 0.01$  were not significant. Although, women under 40 years ( $x = 8.67$ ) tend to have a better menopausal knowledge with effect size accounted for 4% and that single and married women have a higher tendency to record better level of menopausal knowledge with effect size of 1%. The effect sizes are minimal, these imply that age and marital status do not have a significant impact on a woman's menopausal knowledge. The findings suggest that healthcare providers should be trained to ensure effective communication strategies tailored to women's specific needs irrespective of their status. Future research is recommended to examine additional factors such as socioeconomic status, cultural background, access to healthcare services and level of education to have a better understanding of women menopause knowledge.

**Keywords:** menopause knowledge, age, marital status, healthcare providers.

## Introduction

Menopause is a significant biological transition in a woman's life, marked by the cessation of menstrual cycles and a decline in ovarian function. This phase, which typically occurs between the ages of 45 and 55, is accompanied by various physiological, emotional, and psychological changes, including hot flashes, mood swings, sleep disturbances, and an increased risk of certain chronic diseases such as osteoporosis and cardiovascular disorders (National Institute on Aging, 2021). Despite its universal occurrence, women's knowledge and perception of menopause vary significantly based on sociodemographic factors and their interactions with healthcare providers. Knowledge of menopause plays a crucial role in how women navigate this life stage. Adequate understanding can empower women to manage symptoms effectively and make informed decisions about their health. However, studies indicate that many women have limited or inaccurate knowledge about menopause, often influenced by cultural taboos and stigmatization surrounding aging and reproductive health (Gebretatynos, Ghirmai, Amanuel, et al., 2020; Patel, Ross, & Sydora, 2023; Tariq, Phillips, Biswakarma, et al., 2023). Again, Duralde, Sobel and Manson (2023) observed that menopausal symptoms remain substantially undertreated by healthcare providers.

Age and marital status significantly shape women's awareness and attitudes toward menopause. Younger women often perceive menopause as a distant and abstract concept, while older women may associate it with aging and the loss of fertility (Avis & McKinlay, 1995). Marital status also influences knowledge and experiences; married women may engage more in discussions about menopause due to shared health concerns with partners, whereas single or widowed women might lack a supportive social framework (Sydora et al., 2016). Also, research emphasizes the role of education and socio-economic factors in shaping menopausal knowledge. For instance, a study by Musa et al. (2020) highlighted that women with higher education and those residing in urban areas demonstrated significantly better knowledge about menopause compared to their rural and less-educated counterparts. While studies

have examined various demographic factors affecting menopause knowledge, the specific impact of marital status remains underexplored. Understanding how being single, married, divorced, or widowed influences women's awareness and attitudes toward menopause could inform targeted educational interventions.

Healthcare providers play a pivotal role in shaping women's understanding and management of menopause. Positive and proactive interactions with healthcare professionals, including discussions about symptoms, lifestyle modifications, and hormone replacement therapies (HRT), can significantly improve women's knowledge and quality of life during menopause (Daley et al., 2014). Again, the management of menopausal symptoms, such as hot flashes, mood swings, and sleep disturbances, is highly influenced by healthcare providers' guidance. Providers can offer a range of treatments, from hormone therapies to non-hormonal alternatives, and support for lifestyle changes such as diet, exercise, and stress reduction. Across the globe, healthcare providers play a crucial role in shaping women's knowledge, management, and mental health during this period. However, the approach to menopausal care varies widely across different cultural, socioeconomic, and healthcare contexts, influencing women's experiences and outcomes during menopause (Chan, Gomes, & Singh, 2020; MacLellan, Dixon, Bi, et al, 2023; Blackson, McCarthy, Bell, Ramirez, et al, 2024).

Globally, there are disparities in the level of knowledge women have about menopause, and healthcare providers are often the primary source of information. In high-income countries, where access to healthcare services is generally more robust, women tend to receive more accurate and comprehensive information about menopause and its management (Hunter & Rendall, 2021). Studies suggest that women who receive clear, empathetic guidance from healthcare professionals are better equipped to manage menopause-related changes (Barber, & Charles, 2023; Lega, Fine, Antoniadis, & Jacobson, 2023). In North America and parts of Europe, healthcare professionals typically provide evidence-based guidance on hormone replacement therapy (HRT), lifestyle adjustments, and mental health support during menopause (Money, MacKenzie, Norman, et al., 2024). Similarly, in well-developed healthcare systems such as those in the UK, Australia, and parts of Asia, there is an increasing emphasis on personalized care, where treatment is tailored to individual needs and preferences (Minvielle, Fourcade, Ricketts, et al., 2021; Wong, Mavondo, Horvat, et al., 2022; Johnson, Kirk, Clark, et al., 2023).

In contrast, in low- and middle-income countries like Nigeria, there is often limited access to healthcare services, and misinformation or lack of awareness about menopause persists. A study in sub-Saharan Africa found that many women had little to no knowledge of what menopause entails, often relying on cultural myths or informal sources for information, which can lead to increased anxiety and confusion during this phase of life (Shifren & Gass, 2014). In such contexts, healthcare providers may face challenges in delivering accurate information due to resource constraints and cultural barriers. Conversely, inadequate communication or dismissive attitudes from providers may leave women feeling unprepared and unsupported. Also, availability of treatment options can be limited in resource-poor settings, where women may not have access to HRT or specialized care. A study from India highlighted that many women relied on traditional or home remedies due to the limited availability of medical options, with healthcare providers often focusing on addressing immediate physical symptoms rather than offering holistic care that includes mental health support (Bagga, 2020).

In Africa, the role of healthcare providers is essential in shaping women's knowledge, management, and mental health during menopause, but it is often influenced by cultural, social, and healthcare system limitations. Menopause is generally seen as a natural and inevitable part of aging, yet the lack of information and support services has left many women inadequately prepared for managing the associated symptoms. Healthcare providers, including doctors, nurses, and traditional healers, play a critical role in addressing these gaps, although challenges persist in terms of accessibility, education, and cultural sensitivity. Many African women have limited knowledge about menopause, and healthcare providers are often their primary source of formal information (Adebusoye et al., 2016). Research shows that women in Africa often approach menopause with misconceptions, frequently associating it with illness rather than as a natural life stage (Kabir et al., 2020). Healthcare providers can bridge this knowledge gap by offering accurate information, but many women do not access these services due to cultural stigmas surrounding reproductive health and aging (Ojeda et al., 2019). Additionally, the scarcity of specialized menopause care in many African countries further limits the dissemination of necessary information.

Additionally, research indicates that many women feel unprepared for menopause and often seek information from non-medical sources. The quality and depth of interactions between women and healthcare providers regarding menopause education are not well-documented. Investigating these interactions could reveal barriers to effective communication and help develop strategies to enhance patient-provider discussions about menopause. In addition, there is a lack of comprehensive studies examining how age and marital status together influence women's interactions with healthcare providers about menopause. Exploring this intersection could identify specific groups that may benefit from tailored educational resources and support.

Despite growing awareness, there remain gaps in understanding the interplay between sociodemographic factors such as age and marital status, and how healthcare provider interactions influence menopause knowledge. A profile analysis of these factors can offer valuable insights into tailoring educational interventions and healthcare strategies to enhance women's experiences during menopause.

## Objectives

1. To examine the significant different in the menopause knowledge of women based on healthcare providers interactions.
2. To investigate the significant difference in the menopause knowledge of women based on age.
3. To assess the significant difference in the menopause knowledge of women based on marital status.

## Hypothesis

1. There will be no significant difference in the menopause knowledge of women based on healthcare providers interactions.
2. There will be no significant difference in the menopause knowledge of women based on age.
3. There will be no significant difference in the menopause knowledge of women based on marital status.

## Methodology

The study employed one-way ANOVA to test the differences in profile analysis of menopause knowledge of women using age, marital status, and interactions with healthcare providers as variables of the study. The data collection technique used Google Forms, distributed via WhatsApp and WhatsApp groups of young and older women aged between under 40-56 years in Oyo State and Ekiti State, Nigeria. The selection was purely of interest and 174 participants participated in filling out the Google forms.

Self-structure questions based on literature on menopause knowledge were used to collect data; age and marital status were built as part of demographic information. Withing the demographics section, participants demographics such as age, marital status, educational levels, employment status and menopausal status were included. The questions on menopause knowledge include: how well do you understand menopause and its symptoms? Where did you receive most of your information about menopause? (Check all that apply) Do you feel healthcare providers have adequately informed you about managing menopause? Which menopausal symptoms have you experienced? (Check all that apply) How frequently have you discussed menopause with a healthcare providers? e.t.c. Some items on these questions were knowledge and opinion-based questions using multichoice and short answers. The last item was open-ended question: In what areas would you like to receive more information or support regarding menopause? (Open-ended).

## Results

**Hypothesis 1:** There will be no significant difference in the menopause knowledge of women based on healthcare providers interactions.

Table 1: One-way ANOVA summary showing difference between menopause knowledge and healthcare interactions

| Variables                        | Mean | Std.dv | SS     | Df | MS    | F     | Sig. | $\eta^2$ |
|----------------------------------|------|--------|--------|----|-------|-------|------|----------|
| Low health-care interaction      | 7.50 | 1.50   | 25.60  | 2  | 12.80 | 5.468 | 0.01 | 0.12     |
| Moderate health-care interaction | 6.45 | 1.59   | 196.63 | 84 | 2.34  |       |      |          |
| High health-care interaction     | 7.77 | 1.51   | 222.23 | 86 |       |       |      |          |

Source: Field Survey, 2024

Table 1 reveals that there is a significant difference in the menopausal knowledge of women based on healthcare interaction;  $F_{(2,84)} = 5.47$ ,  $p < 0.05$ ,  $\eta^2 = 0.12$ . Thus, the null hypothesis is rejected. The table further reveals that women with high health-care interaction ( $x = 7.77$ ) are found to have the highest level of menopausal knowledge, followed by low healthcare interaction ( $x = 7.50$ ) and moderate healthcare interaction ( $x = 6.45$ ). By implication, having considered the grand mean to be 7.24, it indicates that women with high health-care interaction and low health-care interaction have a higher tendency to record better menopausal knowledge. Effect size ( $\eta^2 = 0.12$ ) reveals that healthcare interaction accounts for 12% of the menopausal knowledge of women.

**Hypothesis 2:** There will be no significant difference in the menopause knowledge of women based on age.

Table 2: One-way ANOVA summary showing difference between knowledge management and age

| Variable       | Mean | Std.dv | SS     | Df | MS   | F    | Sig. | $\eta^2$    |
|----------------|------|--------|--------|----|------|------|------|-------------|
| 40-45 years    | 7.10 | 1.89   | 9.12   | 4  | 2.28 | 0.88 | 0.48 | <b>0.04</b> |
| 46-50 years    | 7.48 | 1.36   | 213.11 | 82 | 2.59 |      |      |             |
| 51-56 years    | 7.54 | 1.58   | 222.23 | 86 |      |      |      |             |
| 56+ years      | 7.06 | 1.68   |        |    |      |      |      |             |
| Under 40 years | 8.67 | 0.58   |        |    |      |      |      |             |

Source: Field Survey, 2024

Table 2 reveals that there is no significant difference in the menopausal knowledge of women based on their age;  $F_{(4,82)} = 0.88$ ,  $p > 0.05$ ,  $\eta^2 = 0.04$ . Thus, the null hypothesis is accepted. The table further reveals that women under 40 years of age ( $x = 8.67$ ) are found to have the highest level of menopausal knowledge, followed by women that are 51-56 years old ( $x = 7.54$ ), women that are 46-50 years ( $x = 7.48$ ), women that are 40-45 years ( $x = 7.10$ ) and women that are 56 plus in age ( $x = 7.06$ ). By implication, based on the grand mean (7.57), it indicates that women under 40 years have a higher tendency to record a better menopausal knowledge. Effect size ( $\eta^2 = 0.04$ ) reveals that age accounts for 4% of menopausal knowledge of women.

Hypothesis 3: There will be no significant difference in the menopause knowledge of women based on marital status.

Table 3: ANOVA summary showing difference between knowledge management

| Variable | Mean | Std.dv | SS     | Df | MS   | F    | Sig. | $\eta^2$    |
|----------|------|--------|--------|----|------|------|------|-------------|
| Divorced | 7.00 | 1.41   | 2.64   | 3  | 0.88 | 0.33 | 0.80 | <b>0.01</b> |
| Married  | 7.39 | 1.66   | 219.59 | 83 | 2.65 |      |      |             |
| Single   | 8.00 | 0.00   | 222.23 | 86 |      |      |      |             |
| Widow    | 6.75 | 0.96   |        |    |      |      |      |             |

Source: Field Survey, 2024

Table 3 reveals that there is no significant difference in the menopausal knowledge of women based on marital status;  $F(3,83) = 0.33$ ,  $p > 0.05$ ,  $\eta^2 = 0.01$ . Thus, the null hypothesis is accepted. The table further reveals that single women ( $x = 8.00$ ) are found to have the highest level of menopausal knowledge, followed by the married ones ( $x = 7.39$ ), divorced women ( $x = 7.00$ ) and women that are widow ( $x = 6.75$ ). By implication, based on the grand mean (7.29), it indicates that single and married women have a higher tendency to record better level of menopausal knowledge. Effect size ( $\eta^2 = 0.01$ ) reveals that marital status accounts for 1% of the menopausal knowledge of women.

### Discussion of Findings

Research hypothesis one examined the difference in the menopause knowledge of women based on healthcare providers interactions. This finding supports the rejection of the null hypothesis, highlighting that healthcare interaction plays a meaningful role in shaping menopausal knowledge management among women. Studies have consistently demonstrated that frequent and quality healthcare interactions enhance health literacy, including knowledge about menopause. Nappi et al. (2019) highlights that women who engage in regular consultations with healthcare providers exhibit higher awareness and understanding of menopausal symptoms and management strategies. Also, Harper et al., (2023) submits that positive and consistent interactions with healthcare professionals enhance patient knowledge and decision-making. Again, women who actively seek and receive comprehensive advice from providers often demonstrate better health literacy and self-management skills (Munn et al., 2022). This aligns with the finding that women with high healthcare interaction have the highest menopausal knowledge. Smail et al., (2020) also highlights the benefits of high engagement, where direct and frequent consultations improve awareness and application of health-related knowledge.

Further still, women with low healthcare interaction also exhibit relatively high menopausal knowledge, which may be attributed to external factors such as self-education through online resources or community support, friends and family as well as books and articles. This is in congruent with the growing body of evidence suggest that women who cannot frequently access healthcare services may compensate by seeking alternative knowledge sources, contributing to better-than-expected awareness (Smith et al., 2020; Tariq, Phillips, Biswakarma, et al., 2023). Meanwhile, women with moderate healthcare interaction exhibit the lowest menopausal knowledge among the groups, potentially due to inconsistent information or partial engagement with healthcare providers. Knight et al. (2021) emphasizes the importance of sustained and comprehensive communication to build health knowledge, which may be lacking in this group. The effect size also reveals that healthcare interaction accounts for 12% of the variance in menopausal knowledge. While moderate, this effect is significant and supports findings from literature (e.g. Hossein, et. al., 2022) reported a slightly different in the posttest mean scores of Quality of life and self-care intervention and the control groups of menopausal women. Also, McFeeters, et al (2024) found inconsistent report on menopause education programmes for adults, and studies reporting menopause-related outcomes.

However, this result negates the findings of Olopha and Ibrahim (2023) and Nisar (2008) who found that menopausal women attending outpatient clinics are not knowledgeable about menopause and its symptoms both locally and internationally. In a nutshell, women's knowledge of menopause has dual aspects that depend on factors outside the scope of this study.

Research hypothesis two examine the difference in the menopause knowledge of women based on age. The findings reveal that there is no statistically significant difference in the menopausal knowledge of women based on their age. The analysis suggests that age does not play a decisive role in shaping women's knowledge of menopause, as the null hypothesis is accepted. However, the descriptive statistics provide nuanced insights into patterns across age groups. Women below 40 years of age recorded the highest mean knowledge score suggesting that younger women may have better exposure to information about menopause. This finding could be attributed to the growing accessibility of digital health resources and increased health awareness among younger generations. Also, knowledge scores gradually decrease with age, with women aged 56 years and above scoring the lowest. This decline could reflect generational differences in health literacy, access to education, or societal attitudes toward discussing menopause in older age groups. Additionally, the grand mean highlights that while menopausal knowledge across all age groups is relatively comparable, women under 40 years perform slightly better; and the effect size indicates that only 4% of the variance in menopausal knowledge can be attributed to age. This is a small effect size, reinforcing that age alone is not a strong determinant of menopausal knowledge. It suggests that other variables, such as marital status, education, cultural norms, and healthcare interactions, may play more significant roles in determining menopausal knowledge.

Although this study finds no significant age-related differences, existing literature provides mixed insights. The finding that women under 40 years of age recorded the highest level of menopausal knowledge aligns with studies suggesting that younger women may have greater access to health information through digital platforms, social media, and educational initiatives. Harper et al. (2023) in submits that younger populations often engage more with online health resources through digital platforms, which could explain their better understanding of health-related topics, including menopause. Also, Munn et al. (2022) noted that younger women are more likely to seek proactive health information, which aligns with the observed trend.

In the same vein, while older women are directly experiencing menopause and its symptoms, their menopausal knowledge may not necessarily be higher. Studies indicate that many women in peri- and post-menopausal age groups rely on experiential knowledge and cultural norms rather than formal education about menopause. Also, factors such as self-efficacy, health literacy, marriage age, type of delivery, vitamin D consumption, dairy consumption and fruit were predictors of quality of life in menopausal women (Jafari, et al., 2020). This reliance can lead to disparities in knowledge across age groups. This reliance can lead to disparities in knowledge across age groups. This is in line with Smail et al. (2020) who found cultural and generational barriers limiting older women's understanding of menopause, aligning with the lower scores for women aged 56+. Also, barriers such cultural taboos, limited access to healthcare information, and educational disparities may explain older women scored lower. Nkwo (2019) study on women in sub-Saharan Africa reveal that societal stigma and inadequate health education significantly affect menopausal awareness. In nutshell, the small effect size underscores the limited role of age in influencing menopausal knowledge. This aligns with Simons et al. (2021), who laid emphasis on targeted health education programs and healthcare provider interventions than to demographic factors like age.

Research hypothesis three evaluate the difference in the menopause knowledge of women based on marital status. The analysis of menopausal knowledge among women based on marital status shows that there is no statistically significant difference, as indicated by the ANOVA results. The null hypothesis is therefore accepted, implying that marital status does not significantly influence menopausal knowledge. This finding aligns with the small effect size, which suggests that marital status accounts for only 1% of the variance in menopausal knowledge, a negligible contribution. Although, the grand mean score and subgroup means indicate that single women exhibit slightly higher menopausal knowledge compared to married, divorced, and widowed women. These differences, however, lack statistical significance. Studies have similarly noted that menopausal knowledge tends to be influenced

more by factors like educational attainment, access to healthcare information, and cultural norms rather than marital status (Ogu, 2022; Adekunle & Ogundele, 2021; Munn et al., 2022). This suggests that while some demographic variables may be related to knowledge levels, marital status itself might not be a determining factor. This aligns with the findings of the current analysis, where marital status, despite minor differences in means, does not appear to be a significant predictor.

In another way round, the slightly higher scores among single women might reflect greater autonomy in seeking health-related information or a tendency to engage more with educational content about menopause, which might not be constrained by familial or spousal obligations. This is in line with Harper et al. (2023) who submitted that single women may have greater autonomy and more time to engage with health information compared to their married or widowed counterparts. Also, Chatterjee et al. (2019) suggested that single women may rely more on public health campaigns and peer networks for health education. However, this interpretation should be made cautiously, as the effect size here remains minimal. Married women demonstrated the second-highest level of knowledge. This result could be linked to spousal support or shared health discussions within the family setting. However, the slight difference compared to single women suggests that marriage might not be a significant determinant of accessing menopause-related information. Divorced women and widows had the lowest levels of menopausal knowledge. Social isolation or reduced access to health information following marital dissolution or bereavement could partly explain this disparity. These findings align with studies indicating that widows and divorced women may face barriers in health-seeking behaviors (Smail et al., 2020).

However, the last item which was open-ended question: *In what areas would you like to receive more information or support regarding menopause?* (Open-ended). Majority of the participants response was on fibroid which is outside the scope of this study.

## Conclusion

This study highlights the profile analysis of menopause knowledge on the roles of age, marital status, and interactions with healthcare providers. The results show that there is a significant difference in the menopausal knowledge of women based on healthcare interactions and it accounts for 12% of the menopausal knowledge of women. Also, the study reveals that there is no statistically significant difference in the menopause knowledge of women based on age and marital status as indicated by the ANOVA results. This means that beyond age and marital status there are other variables accountable for menopause knowledge among women in Nigeria.

## Recommendations

- ✓ Healthcare providers should be trained to ensure effective communication strategies tailored to women's specific needs irrespective of their status.
- ✓ Community outreach that could bridge the knowledge gap for women in midlife and older age groups should be developed through peer-support programs to leverage marital networks or community groups for knowledge dissemination.
- ✓ Policy makers should advocate for accessible educational resources and equitable healthcare services for all demographic groups.
- ✓ Since age and marital status have minimal influence, efforts should focus on broader determinants such as socioeconomic status, education, and access to healthcare services.
- ✓ Future studies could explore the intersection of marital status with other demographic variables, such as cultural background, to better understand the nuances of menopausal knowledge. Also, studies on fibroid should be delved into in Nigeria.
- ✓ Future studies should focus on fibroid in a place like Nigeria environment since it is the answer given by the majority of the participants on the open-ended question asked.

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