



## The impact of mindfulness-based stress reduction on quality of life among menopausal women in selected communities: A quasi-experimental study

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### Abstract

This study investigates the effectiveness of a Mindfulness-Based Stress Reduction (MBSR) program on the quality of life among menopausal women. Menopause is a critical stage in a woman's life characterized by significant physiological, emotional, and psychological changes, leading to symptoms such as hot flashes, mood swings, and sleep disturbances. These symptoms can severely impact overall well-being and quality of life. Traditional interventions often center on pharmacological solutions, which may carry risks and side effects, prompting a search for alternative approaches that are both safe and effective. Utilizing a quasi-experimental non-equivalent control group design, this research involved 60 menopausal women aged 42 to 55, who were recruited from selected community settings. Participants were randomly assigned to either an experimental group receiving MBSR training or a control group receiving standard care. The MBSR program was administered over 30 days and included mindfulness meditation, body awareness practices, and yoga to cultivate present-moment awareness and resilience against stress. To assess changes in quality of life, the Menopause-Specific Quality of Life Questionnaire (MENQOL) was administered to participants before the intervention and again after the 30-day program. Quantitative analysis utilized paired t-tests to evaluate differences in pre-test and post-test scores. The findings revealed statistically significant improvements in overall quality of life and specific dimensions including physical, psychological, and sexual well-being, indicating that participants experienced enhanced coping mechanisms and emotional regulation through MBSR practices. The results suggest that MBSR is a viable complementary therapy for menopausal women, effectively addressing not only the physical symptoms of menopause but also enhancing emotional and psychological well-being. By integrating this mindfulness approach into standard care for menopausal women, healthcare providers can foster improved quality of life, thereby promoting a more holistic and supportive healthcare framework. Future research could expand on these findings, examining long-term benefits and exploring how MBSR may be tailored to meet the individual needs of this population.

**Keywords:** Mindfulness-Based Stress Reduction, Quality of Life, Menopausal Women, Menopause-Specific Quality of Life, Holistic Health

### Introduction

Menopause is a significant life transition for women, marking the end of reproductive age and bringing about a myriad of physiological and psychological changes. Occurring typically between the ages of 45 and 55, menopause is associated with various symptoms, including hot flashes, night sweats, mood changes, sleep disruptions, and cognitive difficulties that considerably impact a woman's quality of life (Santoro *et al.*, 2015) [10]. This period presents unique challenges that can lead to increased stress, anxiety, and depression, necessitating comprehensive strategies for effective management. The menopausal transition is characterized by a decline in estrogen levels, which can lead to numerous vasomotor symptoms, such as hot flashes and night sweats, and urogenital symptoms, including vaginal dryness and urinary incontinence (Freeman, 2010) [3]. In addition to these physical challenges, many women grapple with psychological manifestations. Research indicates that menopausal women often report feelings of irritability, stress, and difficulty concentrating, which can be compounded by societal expectations regarding aging and femininity (Lumsden, 2016) [9]. Symptoms such as mood swings and anxiety can severely detract from one's quality of life, contributing to a pervasive sense of discomfort and emotional instability (Hickey *et al.*, 2022) [5]. Moreover, societal perceptions of menopause can exacerbate these challenges. In many cultures, there exists a

stigma surrounding aging and menopause that can lead to feelings of inadequacy and diminished self-worth (Hoga *et al.*, 2015) [6]. Women may feel pressured by societal norms that prioritize youthfulness, often finding themselves in a conflicting space where they must negotiate their identities in response to biological changes. The provision of healthcare services tailored to menopausal women remains insufficient in a significant number of regions. According to the World Health Organization, by 2030, there will be approximately 1.2 billion postmenopausal women globally (WHO, 2022). However, many of these women lack access to specialized healthcare and education that addresses the unique challenges presented by menopause (Lumsden, 2016) [9]. This lack of access can result in women feeling isolated and uninformed about available treatment options, which may include hormonal therapies, lifestyle changes, and non-pharmacological interventions.

Conventional pharmacological treatments, such as Hormone Replacement Therapy (HRT), although effective for many women, have been subject to scrutiny due to associated health risks, including cardiovascular disease, breast cancer, and thromboembolism (Freeman, 2010) [3]. These potential side effects have led to hesitation among women and healthcare providers regarding the long-term use of HRT. Consequently, there has been a growing interest in exploring non-hormonal and non-pharmacological approaches that offer safe and effective relief from menopausal symptoms.

The rising awareness of the adverse effects of pharmacological treatment has shifted the focus toward holistic approaches that prioritize overall well-being and quality of life (Latthe *et al.*, 2006) [8]. Mindfulness-Based Stress Reduction (MBSR), developed by Jon Kabat-Zinn in the late 1970s [7], represents a promising non-pharmacological intervention to address stress and its repercussions on health (Kabat-Zinn, 1990) [7]. MBSR incorporates mindfulness meditation, yoga, and body awareness techniques to cultivate present-moment awareness and promote emotional regulation. The program has been shown to alleviate symptoms of stress, anxiety, and depression, thereby improving overall well-being (Carson *et al.*, 2006) [2]. MBSR training encourages participants to develop a compassionate awareness of their thoughts, feelings, and bodily sensations without judgment. Through this practice, individuals can gain valuable insights into their stress triggers and develop effective coping mechanisms. Research has demonstrated that MBSR is particularly effective in managing stress-related symptoms experienced by menopausal women, potentially leading to enhancements in both psychological and physical health (Galantino *et al.*, 2005) [4]. Emerging evidence highlights the efficacy of mindfulness practices in reducing menopausal symptoms and improving quality of life. A randomized controlled trial involving postmenopausal women revealed substantial enhancements in quality of life, as measured by the Menopause-Specific Quality of Life Questionnaire (MENQOL), among participants who engaged in MBSR compared to those who did not (Yazdani Aliabadi *et al.*, 2021) [12]. These findings support the notion that MBSR can provide much-needed relief from menopausal discomfort, addressing not only the physical manifestations but also the emotional and psychological aspects as well. Furthermore, mindfulness practice has been linked to improved sleep patterns, reduced anxiety, and enhanced emotional resilience among menopausal women (Bawa *et al.*, 2015) [1]. By fostering a greater understanding of their experiences and encouraging self-compassion, the MBSR program empowers women to navigate the complexities of menopause more effectively. Despite existing evidence supporting the benefits of MBSR for menopausal women, there remains a gap in knowledge regarding its widespread application and accessibility in various populations, particularly in underrepresented regions or communities. As awareness regarding menopause and related health issues continues to evolve, implementing MBSR programs could significantly enhance women's health services, providing an avenue for improved well-being during this critical life transition. This study aims to evaluate the impacts of MBSR on the quality of life among menopausal women, seeking to contribute to the growing body of literature focused on non-pharmacological interventions. By assessing the effectiveness of MBSR, the research hopes to provide valuable insights that can inform healthcare practices, ultimately guiding the integration of mindfulness-based approaches into menopausal care. As menopause marks a pivotal transition in women's lives, it is imperative to address the accompanying challenges holistically. Traditional pharmacological approaches may provide symptomatic relief but do not always cater to the multifaceted experiences of menopausal women. MBSR emerges as a viable alternative, offering a comprehensive framework for managing stress and improving quality of

life. Through mindful practices, women can cultivate resilience and enhance their emotional well-being, empowering them to navigate this life transition with greater ease. By further exploring and validating the efficacy of MBSR in this context, we can pave the way for more holistic, patient-centered healthcare strategies that prioritize the unique needs of menopausal women.

### Research Methodology

**Research Design:** This study utilized a quasi-experimental non-equivalent control group design to evaluate the effectiveness of a Mindfulness-Based Stress Reduction (MBSR) program on the quality of life among menopausal women. This research design is particularly suitable when random assignment to treatment and control groups is not feasible, allowing for a comparison of outcomes between participants receiving the intervention and those in a control group. By examining changes in quality of life pre- and post-intervention, the study aimed to provide valuable insights into the effectiveness of MBSR in alleviating menopausal symptoms and enhancing overall well-being.

**Sample and Setting:** The sample for the study consisted of 60 menopausal women aged between 42 and 55 years. This age range was selected to capture the core demographic experiencing menopausal symptoms, as menopause typically occurs within this period. Participants were randomly assigned to either the experimental group, which participated in the MBSR program, or the control group, which continued with standard care without receiving the mindfulness intervention. Each group included 30 participants, ensuring a balanced comparison that was manageable yet statistically robust. The research was conducted in selected community settings to enhance accessibility for participants and to create a comfortable environment for discussing menopausal issues. Community-based settings are crucial for fostering open dialogue and reducing stigma surrounding menopause. Participants were recruited through community outreach and were required to provide informed consent, thereby acknowledging their understanding of the study's objectives, procedures, and potential benefits.

**Tools:** To assess quality of life, the Menopause-Specific Quality of Life Questionnaire (MENQOL) was employed. This validated instrument evaluates the impact of menopausal symptoms across several dimensions, including physical, psychosocial, and sexual health. With 29 items addressing various aspects of menopause, the MENQOL enables researchers to capture the multifaceted experiences of women during this transition. Baseline assessments were conducted prior to the MBSR program, with follow-up assessments completed after the 30-day intervention, allowing researchers to measure changes effectively. The MBSR program itself was designed as a structured and comprehensive intervention, incorporating mindfulness meditation, yoga, and body awareness exercises. Each session aimed to cultivate present-moment awareness and help participants manage their stress levels more effectively. The intervention lasted 30 days, with participants engaging in mindfulness practices for approximately 70 minutes daily. Techniques included mindful breathing, body scans, mindful walking, and loving-kindness meditation, all aimed

at reducing stress and enhancing participants' self-awareness regarding their bodily sensations and emotional states.

**Data Collection and Validity:** To ensure the reliability and validity of the data collected during the study, several key measures were implemented. The MENQOL has demonstrated strong internal consistency and reliability, making it a relevant tool for assessing the quality of life specifically related to menopausal symptoms. Additionally, the Perceived Stress Scale (PSS) may have been employed to further outline the relationship between stress levels and quality of life outcomes. A pilot study was carried out prior to the main study to refine the assessment tools and the mindfulness intervention based on initial participant feedback.

**Ethical Considerations:** Ethical considerations were paramount throughout the study. Approval was obtained from the relevant ethics committee, ensuring compliance with ethical standards for human research. Informed consent was sought from every participant, clearly outlining their rights and the nature of the study, along with an assurance of confidentiality to protect their identities throughout the research process.

**Data Analysis:** Data collection was conducted systematically, involving initial demographic assessments, followed by the administration of the MENQOL and PSS tools at both pre- and post-intervention stages. Descriptive statistics were employed to summarize participant characteristics, while the effectiveness of the MBSR program was analyzed using paired t-tests to detect

significant changes in quality of life scores. Furthermore, correlation analyses were performed to explore the relationship between changes in stress levels and improvements in quality of life. The research methodology encapsulates a well-structured approach to evaluating the impacts of a Mindfulness-Based Stress Reduction program on menopausal women's quality of life. The quasi-experimental design, careful selection of sample participants, utilization of validated assessment tools, and strict adherence to ethical guidelines collectively contribute to the robustness of the study. The findings from this research are anticipated to enhance understanding of non-pharmacological interventions in menopausal care, offering critical insights for healthcare providers dedicated to improving women's health and well-being during this significant life transition.

**Results and Discussion**

The results of this study indicate that participation in the Mindfulness-Based Stress Reduction (MBSR) program significantly improved the quality of life for menopausal women, as measured by the Menopause-Specific Quality of Life Questionnaire (MENQOL). Statistical analyses, particularly paired t-tests, were conducted to assess changes in quality of life scores pre- and post-intervention for the experimental group compared to the control group. This section presents a summary of the findings along with explanations of the corresponding tables and graphs, followed by a discussion of the implications of these results in relation to existing literature.

**Table 1:** Quality of Life Scores Pre- and Post-Intervention

Parameter	Pre-Test Mean (SD)	Post-Test Mean (SD)	p-value
Physical Dimension	31.5 (5.6)	22.1 (4.3)	<0.001
Psychosocial Dimension	28.3 (5.4)	19.6 (3.8)	<0.001
Sexual Dimension	25.4 (4.7)	18.0 (3.5)	<0.001
Total MENQOL Score	85.2 (15.5)	59.7 (10.2)	<0.001

Table 1 summarizes the quality of life scores across different dimensions as reported by participants in the MBSR experimental group. The mean scores for each dimension, including physical, psychosocial, and sexual health, declined significantly from pre-test to post-test, indicating improvements in all areas assessed. The total MENQOL score also revealed a notable reduction, suggesting an overall enhancement in quality of life following the MBSR intervention. The statistical significance of these results is confirmed by the p-value of <0.001, demonstrating strong evidence of MBSR's effectiveness.

**Comparative Analysis**

The findings align with the results of other studies exploring the impacts of mindfulness interventions on menopausal women. For instance, Yazdani Aliabadi *et al.* (2021) [12] found significant improvements in quality of life indicators among postmenopausal women who participated in an MBSR program, similarly reporting enhanced physical and psychosocial well-being. Their study corroborated the notion that mindfulness can provide considerable relief from menopause-related symptoms, supporting the findings of the present research. Additionally, Carson *et al.* (2006) [2] reported notable improvements in psychological outcomes

among women undergoing mindfulness training, reinforcing the premise that holistic approaches to managing menopausal symptoms can effectively alleviate psychological distress and enhance overall well-being. The implications of our study's findings are profound. The significant improvements observed in quality of life scores among menopausal women participating in the MBSR program emphasize the program's potential as a viable intervention for addressing the complex challenges associated with menopause. The reduction in symptoms across physical, psychosocial, and sexual dimensions highlights MBSR's holistic approach to treatment, promoting not only relief from distressing symptoms but also fostering emotional resilience. Previous research has consistently indicated that psychological symptoms, including anxiety and depression, are prevalent among menopausal women and can exacerbate the experience of physical symptoms (Freeman, 2010) [3]. The reduction in psychosocial dimension scores in particular from a mean of 28.3 to 19.6—illustrates the potential for mindfulness practices to cultivate emotional regulation and self-compassion. This finding aligns with past studies indicating mindfulness as an effective tool for enhancing emotional regulation (Bawa *et al.*, 2015 [1]; Hickey *et al.*, 2022) [5]. Moreover, our results concerning sexual health—where

scores decreased from a mean of 25.4 to 18.0—suggest that the MBSR program may also play a significant role in addressing libido and sexual function, factors often overlooked in menopause-related care. This is particularly noteworthy, as many traditional treatments do not adequately address these dimensions, leaving many women without effective solutions. The comprehensive benefits of MBSR are further corroborated by the work of Galantino *et al.* (2005) <sup>[4]</sup>, who demonstrated that mindfulness practices can significantly improve coping mechanisms in women during their climacteric period. By addressing both the psychological and physiological aspects of menopause, MBSR offers a robust framework for symptom management during this transition. The findings of this study lend strong support to the implementation of Mindfulness-Based Stress Reduction as a key intervention for improving the quality of life among menopausal women. The results highlight the importance of adopting holistic approaches in menopause care, moving away from solely pharmacological treatments toward inclusive, evidence-based strategies. These strategies can empower women to navigate this life phase more effectively and improve their overall well-being.

### Conclusion

This study demonstrates that Mindfulness-Based Stress Reduction (MBSR) serves as an effective intervention for improving the quality of life in menopausal women. The significant enhancements observed across various dimensions of the Menopause-Specific Quality of Life Questionnaire (MENQOL) highlight MBSR's potential to alleviate the psychological, physical, and sexual symptoms commonly associated with menopause. By fostering present-moment awareness and emotional resilience, MBSR equips women with valuable tools to navigate the challenges of this transitional life stage. The findings reinforce the need to explore and integrate holistic approaches within menopausal care strategies as viable alternatives to traditional therapies, which often rely heavily on hormone replacement therapy (HRT) and other pharmacological interventions. Many women are increasingly seeking non-pharmacological options due to concerns about the side effects and risks associated with hormonal treatments. Incorporating mindfulness practices into clinical settings can lead to substantial improvements in women's overall well-being, as evidenced by the marked reductions in stress and improvements in quality of life reported in this study. Therefore, healthcare providers are encouraged to consider implementing MBSR programs as part of a comprehensive approach to menopause care, ultimately fostering a supportive environment for women to enhance their health and quality of life during this critical phase. The positive outcomes associated with MBSR not only enrich our understanding of effective menopause management but also pave the way for further research into the long-term benefits of mindfulness practices for women's health.

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