

# Evaluation of Menopause-Specific Quality of Life among Agricultural Women Workers in Jalgaon District-An Observational Study

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**Abstract:** Menopause is a natural physiological transition that can significantly affect women's physical, psychological, and social well-being, particularly among those engaged in physically demanding occupations. Agricultural women workers represent a vulnerable group due to continuous manual labor, dual domestic responsibilities, and limited access to healthcare services. This observational cross-sectional study aimed to evaluate menopause-specific quality of life among agricultural women workers in Jalgaon district using the Menopause-Specific Quality of Life (MENQOL) questionnaire. A total of 55 postmenopausal women aged 45–60 years were selected through purposive sampling. Data were collected via face-to-face interviews and analyzed using descriptive statistics. The mean age of participants was  $52.85 \pm 4.23$  years, with most women having more than 16 years of farming experience. The overall MENQOL mean score was  $1.18 \pm 0.79$ , indicating minimal impact of menopausal symptoms on quality of life. The majority of participants (90.91%) reported no significant decline in quality of life, while only 9.09% experienced mild impairment; no moderate or severe decline was observed. The findings suggest that despite physically demanding work, agricultural women workers in Jalgaon district generally maintain good menopause-specific quality of life, possibly due to adaptive lifestyle patterns and occupational physical activity. The study highlights the importance of early assessment, health education, and physiotherapy-based interventions to support menopausal health and enhance functional well-being among rural working women.

**Keywords - Menopause, MENQOL, Quality of Life, Agricultural Women Workers, Rural Health.**

## INTRODUCTION

Menopause is a natural biological transition characterized by the permanent cessation of menstruation due to the loss of ovarian follicular activity and is clinically diagnosed after twelve consecutive months of amenorrhea<sup>1</sup>. It represents a major physiological milestone in a woman's life and usually occurs between the ages of 45 and 55 years<sup>14</sup>. This transition is accompanied by a progressive decline in ovarian hormone production, particularly estrogen, which leads to multiple systemic changes affecting physical, psychological, and social well-being<sup>14</sup>. The menopausal period is not merely a reproductive event but a complex biopsychosocial process that significantly influences a woman's overall health status and quality of life<sup>2</sup>.

Women experiencing menopause commonly report a wide range of symptoms including hot flashes, night sweats, sleep disturbances, fatigue, mood swings, irritability, anxiety, depression, joint and muscle pain, and urogenital problems<sup>2, 14</sup>. These symptoms vary in severity and duration among individuals and are influenced by genetic, cultural, environmental, and lifestyle factors<sup>10, 20</sup>. Vasomotor symptoms such as hot flashes and night sweats are reported to be among the most distressing, often leading to sleep disruption and impaired daytime functioning<sup>2, 14</sup>. Psychological symptoms including low mood, emotional instability, and decreased concentration further contribute to reduced functional capacity and social engagement<sup>13, 19</sup>. These cumulative effects can significantly interfere with personal, social, and occupational roles, thereby negatively impacting women's quality of life<sup>4, 11</sup>.

Quality of life (QoL) is a broad, multidimensional concept that reflects an individual's perception of their position in life in the context of their culture, value systems, personal goals, expectations, and concerns<sup>7</sup>. The World Health Organization emphasizes that quality of life encompasses physical health, psychological well-being, level of independence, social relationships, and interaction with the environment<sup>7</sup>. During menopause, the interplay of biological changes and psychosocial factors can disrupt these domains, leading to deterioration in health-related quality of life<sup>8</sup>. Research has consistently reported a strong association between menopausal symptoms and poor quality of life among middle-aged and older women<sup>4, 5, 10, 11</sup>. Population-based studies from different regions have demonstrated that a substantial proportion of menopausal women experience moderate to severe impairment in physical, emotional, and social aspects of daily living<sup>4, 11, 12</sup>.

Women residing in rural areas and engaged in agricultural occupations represent a particularly vulnerable group during the menopausal transition. Agricultural women workers are routinely exposed to physically demanding labor that includes prolonged working hours, repetitive movements, squatting, bending, heavy load lifting, and continuous exposure to extreme weather conditions<sup>18</sup>. These occupational demands place excessive strain on the musculoskeletal system and contribute to chronic fatigue

and physical exhaustion. During the menopausal period, when women are already experiencing physiological vulnerability, these work-related stressors may intensify symptom severity and further compromise their overall quality of life<sup>5, 18, 23</sup>.

Studies conducted in rural settings have consistently shown that women involved in manual agricultural labor report poorer health outcomes during menopause compared to their urban or non-working counterparts<sup>5, 23, 24</sup>. Rural menopausal women often experience higher levels of physical discomfort, sleep disturbances, and psychological distress, which can adversely affect their productivity and functional independence<sup>5, 23</sup>. In addition to occupational demands, agricultural women workers carry a dual burden of professional and domestic responsibilities. Alongside farming activities, they are predominantly responsible for household chores, childcare, elderly care, cooking, and water and fuel collection, which significantly increases their physical workload and limits opportunities for rest and recovery<sup>24, 25</sup>. This continuous cycle of labor reduces their capacity for self-care and delays health-seeking behavior. Socioeconomic disadvantages, including low literacy levels, financial constraints, inadequate nutritional intake, and limited access to healthcare facilities, further contribute to the compromised health and well-being of rural working women<sup>16</sup>.

Cultural beliefs, myths, and social taboos associated with menopause also play a significant role in shaping women's experiences. In many rural communities, menopause is considered a private or stigmatized topic, leading to underreporting of symptoms and reluctance to seek medical help<sup>13, 21</sup>. Women often perceive menopausal symptoms as a normal part of aging and tend to tolerate discomfort silently, which delays diagnosis and management. Lack of awareness regarding available health services and treatment options further widens the gap in healthcare utilization among rural menopausal women<sup>13, 21</sup>. Community-based studies carried out in India and other countries have highlighted the substantial impact of menopause on the quality of life of rural women. Research conducted in West Bengal, Karnataka, and rural Sindh has reported a high prevalence and severity of vasomotor, psychosocial, and physical symptoms among rural menopausal women<sup>5, 23, 24, 25</sup>. These symptoms were found to significantly interfere with daily activities, work efficiency, and social interactions. Similar findings have been reported from other countries, indicating that menopausal women in low-resource settings experience a greater burden of symptoms and poorer quality of life<sup>11, 16</sup>.

To systematically evaluate the impact of menopause on women's lives, standardized assessment tools have been developed. The Menopause-Specific Quality of Life (MENQOL) questionnaire is a validated instrument designed specifically to measure the effects of menopausal symptoms on quality of life across four domains: vasomotor, psychosocial, physical, and sexual<sup>9</sup>. This tool has demonstrated strong reliability and validity and has been widely used in both clinical and community-based studies across different cultural settings<sup>9, 10, 12</sup>. It provides a comprehensive understanding of symptom burden and its impact on daily living, making it a valuable instrument for research in menopausal health<sup>27</sup>. Although numerous studies have explored general menopausal quality of life, limited research has specifically focused on agricultural women workers as a distinct occupational group<sup>5, 24, 25</sup>. These women form the backbone of the rural agricultural workforce, yet their health concerns often remain underrepresented in research and policy planning. The physically demanding nature of their work, combined with social and economic vulnerabilities, may lead to a unique pattern of menopausal symptoms and quality of life issues. Understanding menopause-specific quality of life among agricultural women workers is therefore essential for developing targeted health education programs, workplace support strategies, and appropriate health interventions<sup>1, 9, 2</sup>.

## NEED OF THE STUDY.

Menopause is commonly associated with physical, psychological, and social changes that can adversely affect a woman's quality of life, and these effects may be more pronounced among women engaged in physically demanding occupations such as agriculture. Agricultural women workers are exposed to prolonged manual labor, repetitive movements, and heavy workloads, which, when combined with menopausal changes, can further compromise functional health and well-being. Despite their significant contribution to the rural workforce, there is limited region-specific research from Jalgaon district assessing menopause-specific quality of life in this population, resulting in a lack of localized evidence to guide physiotherapy and community-based interventions. Evaluating quality of life across vasomotor, psychosocial, physical, and sexual domains using a standardized tool like the MENQOL questionnaire is essential to identify symptom burden and functional limitations. Understanding these aspects will help physiotherapists design targeted, culturally appropriate interventions, promote awareness, support rural health planning, and empower menopausal agricultural women to manage symptoms effectively and maintain work capacity with improved comfort and confidence.

## RESEARCH METHODOLOGY

### 3.1 Population and Sample

The study population consisted of postmenopausal agricultural women workers residing in the Jalgaon district. Women aged between 45 and 60 years who had attained natural menopause (absence of menstruation for at least 12 consecutive months) and were actively engaged in agricultural work were included in the study. A total sample size of 55 participants was selected using purposive sampling. The sample size was determined based on standard statistical formulae with a confidence level of 95% and appropriate precision. All participants met the inclusion criteria and voluntarily provided informed consent prior to participation.

### 3.2 Data and Sources of Data

The data for the present study were collected directly from postmenopausal agricultural women workers residing in the Jalgaon district. Primary data were obtained through face-to-face interviews using the Menopause-Specific Quality of Life (MENQOL) questionnaire, a standardized and validated assessment tool. Information related to demographic characteristics, age,

years of farming experience, and menopausal status was recorded using a structured data collection form. All responses were obtained after explaining the purpose of the study and securing informed consent from the participants. The collected data was added to Microsoft excel for next step in analysis

### 3.3 Theoretical framework

The theoretical framework of the present study is based on the biopsychosocial model of health, which explains that a woman’s quality of life during menopause is influenced by the interaction of biological, psychological, and social factors. Biological changes such as the decline in oestrogen levels during menopause lead to vasomotor, physical, and sexual symptoms. Psychological factors, including mood changes, anxiety, stress, and coping ability, further affect emotional well-being. Social and occupational factors, particularly the physically demanding nature of agricultural work, dual household responsibilities, socioeconomic status, cultural beliefs, and access to healthcare services, play a significant role in modifying the severity and perception of menopausal symptoms. These combined factors influence menopause-specific quality of life, which is measured in this study using the Menopause-Specific Quality of Life (MENQOL) questionnaire across vasomotor, psychosocial, physical, and sexual domains. Understanding this framework helps explain how menopausal changes and occupational demands collectively impact the functional health and well-being of agricultural women workers.

### 3.4 Statistical tools and econometric models

The collected data were entered and organized in Microsoft Excel before statistical analysis. Descriptive statistical tools were used to analyze the data. Mean and standard deviation were calculated for continuous variables such as age, years of farming experience, and MENQOL scores. Frequency and percentage were used to describe categorical variables. Statistical analysis was performed using Minitab version 17 software. The results were interpreted based on MENQOL scoring guidelines, where higher scores indicated poorer quality of life.

#### 3.4.1 Descriptive Statistics

Descriptive statistics were used to summarize the demographic characteristics and menopause-specific quality of life of the study participants. A total of 55 postmenopausal agricultural women workers were included in the study. Age distribution showed that 27.27% of participants were below 50 years, 40% were between 51–55 years, and 32.73% were above 55 years, with a mean age of  $52.85 \pm 4.23$  years. Regarding farming experience, 14.55% had 0–15 years, 41.82% had 16–30 years, and 43.64% had more than 31 years of farming experience, with a mean of  $30.22 \pm 10.66$  years. Menopause-specific quality of life assessed using the MENQOL questionnaire revealed a mean total score of  $1.18 \pm 0.79$ . Most participants (90.91%) reported no effect on quality of life, while 9.09% experienced a mild decline. No participants reported moderate or severe decline in quality of life. Frequency, percentage, mean, and standard deviation were used to describe the data.

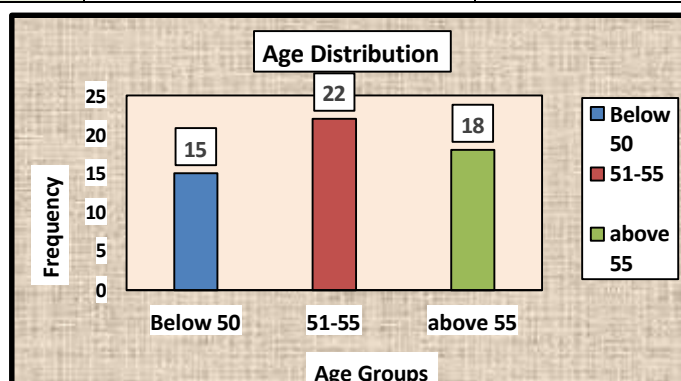
## IV. RESULTS AND DISCUSSION

### 4.1 Results

**Table no: 1 Age Distribution**

Sr. No.	Variable	Groups	Frequency	Percentage
1	Age (in years)	Below 50	15	27.27
		51-55	22	40.00
		above 55	18	32.73

Age	Mean	SD
	52.85	4.23

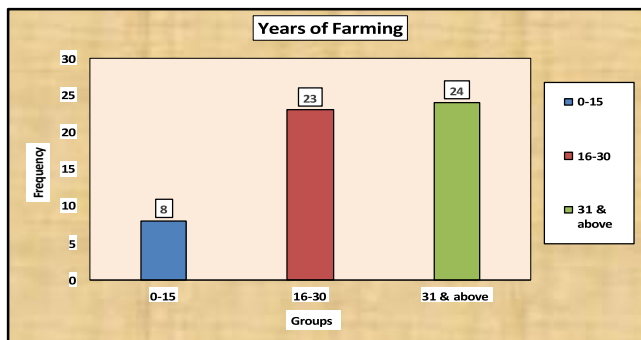


**Interpretation:**

Majority of the study population 40% were in age group of 51-55 years of age group. About one-third (32.73%) were above 55 years, and 27.27% were below 50 years. The mean age of participants was  $52.85 \pm 4.23$  years, indicating a middle-aged postmenopausal population

**Table no: 2 Years of farming**

Sr. No.	Variable	Groups	Frequency	Percentage
2	Years of Farming	0-15	8	14.55
		16-30	23	41.82
		31 & above	24	43.64

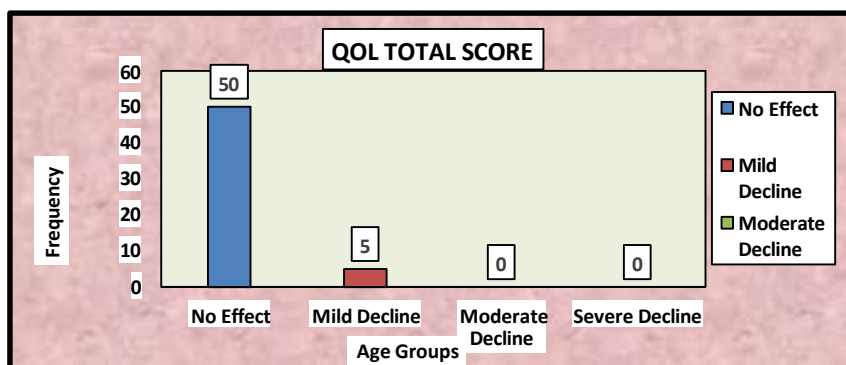


Years of Farming	Mean	SD
	30.22	10.66

Interpretation: A significant portion of the participants 43.64% have 31 or more years of farming experience

**Table No 3: Descriptive statistics of the MENOOL total score**

QOL	Mean	SD
	1.18	0.79



**Interpretation:**

The mean QOL score was  $1.18 \pm 0.79$ , indicating that overall quality of life is largely unaffected. Most participants (90.91%) reported “No Effect,” while a small proportion (9.09%) experienced a mild decline. No participants reported moderate or severe decline, suggesting that menopausal symptoms had minimal impact on the majority of the studied population

### Discussion:

The present study aimed to assess menopause-specific QOL in this population using the Menopause-Specific Quality of Life Questionnaire (MENQOL), a validated tool covering vasomotor, psychosocial, physical, and sexual domains of menopausal health. The mean age of participants was  $52.85 \pm 4.23$  years, with most women (40%) aged 51–55 years, representing a typical mid-postmenopausal population<sup>1, 2</sup>.

The MENQOL results showed that the majority of participants (90.91%) reported “No Effect” on their quality of life, while 9.09% experienced a mild decline. No participants reported moderate or severe decline, and the mean QOL score was  $1.18 \pm 0.79$ , indicating minimal impact of menopausal symptoms on daily functioning. These findings suggest that most women in this rural, agricultural population maintain good health-related quality of life despite physically demanding work<sup>16, 18</sup>.

The mild decline observed in a small proportion of women may be influenced by individual factors such as workload, psychosocial stress, nutrition, and access to healthcare<sup>1, 7, 14</sup>. Compared to urban and clinical populations, where menopausal symptoms often have a greater impact, rural women may benefit from active lifestyles, cultural resilience, and community support<sup>2, 12</sup>. The mother studies by Soni et al.<sup>1</sup> and Smail et al.<sup>2</sup> also emphasize that occupational and cultural factors can influence symptom perception and quality of life.

These findings highlight the usefulness of the MENQOL questionnaire in evaluating physical, psychosocial, vasomotor, and sexual domains<sup>7, 9</sup>. While the overall quality of life was largely unaffected, targeted health education and physiotherapy interventions could help the small group experiencing mild decline and provide preventive care for all postmenopausal women. In summary, agricultural women in Jalgaon district generally maintain good menopause-specific quality of life, and these results can guide community-based health programs, physiotherapy awareness, and strategies to improve postmenopausal well-being

### Conclusion:

The study found that menopause-specific quality of life among agricultural women workers in Jalgaon district is largely maintained, with most participants reporting minimal impact of menopausal symptoms. Only a small proportion experienced mild decline, primarily in physical and psychosocial domains. These findings suggest that despite physically demanding work, rural agricultural women generally adapt well to menopausal changes.

### Future Scope:

1. The study can be extended to larger and diverse populations to enhance generalizability and applicability of findings.
2. Longitudinal studies could provide insights into the progression of menopausal symptoms and their long-term impact on quality of life.
3. Incorporating objective clinical and physiological assessments alongside MENQOL can strengthen the evaluation of health-related outcomes.
4. The findings can inform the development of evidence-based physiotherapy interventions, community wellness programs, and policy strategies to improve the well-being of postmenopausal women in rural and occupational settings

### Limitations:

1. The study only looks at one point in time, so it cannot show how menopause symptoms and quality of life change over the years.
2. Women may not report all their symptoms honestly, especially private ones, because of cultural reasons or embarrassment.
3. The study group may be small and from one area, so the results might not represent all rural women.
4. The outcome measures were subjective not objective

### Clinical implications:

1. Community health programs can improve awareness and management of menopausal symptoms.
2. Physiotherapy interventions can target physical, psychosocial, and functional health.
3. Early assessment using MENQOL helps identify women at risk of symptom-related decline. Health education empowers women to manage symptoms and maintain work capacity.
4. Findings can guide rural health planning and improve overall quality of life.

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