

A Study on Anxiety in Perimenopausal Women

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Abstract: Perimenopause is a period characterized by physical, psychological, and emotional changes. Anxiety experienced by women during this period can impact their day-to-day activities and may go unnoticed. This study aimed to assess the level and severity of anxiety and evaluate its association with selected demographic and menstrual factors including age, employment status, education, and menstrual irregularities. A descriptive study was conducted among 108 perimenopausal women aged between 45 and 55 years. Data were collected using a demographic and reproductive information questionnaire and the Beck Anxiety Inventory (BAI). Descriptive statistics, chi-square test, Pearson correlation, and independent-samples t-test were performed. Results: The mean age of the participants was 48.16 years (SD = 2.54). Sixty-three percent of the women had severe anxiety, 10.2% had moderate anxiety, 18.5% had mild anxiety, and 8.3% had minimal anxiety. Employment status had a significant association with the level of anxiety ($\chi^2 = 15.689$, $df = 3$, $p = 0.001$). Working women reported higher levels of anxiety compared to housewives (30.94 vs. 20.22; $p = 0.001$). No significant association was found between age, education, and menstrual irregularity and anxiety. Severe anxiety was highly prevalent among perimenopausal women, especially working women. Screening and psychological support should be provided to women going through perimenopause.

Keywords: Perimenopause, anxiety, Beck Anxiety Inventory, working women, mental health

1. Introduction

Perimenopause is a significant phase in a woman's life, marked by hormonal, physical, and psychological changes. In this transitional period women can have emotional changes, mood disturbances, sleep difficulties and anxiety. Since some women are not fully aware of the psychological changes connected with perimenopause, they may see these experiences as being a normal aspect of aging. Anxiety experienced during perimenopause can be affected by several personal, social and health factors such as age, employment status and physical changes. Yet psychological symptoms at this time may be ignored or accepted as normal. It is therefore possible for anxiety to go unnoticed even though it might have an impact on daily functioning and general well-being.

Understanding emotional changes during perimenopause is important for early identification and psychological intervention. If the anxiety is left without proper diagnosing, it may seriously affect functioning and overall well-being of the person. Despite their impact, these symptoms are often left unnoticed as normal aspects of aging. This study focuses on anxiety in women going through perimenopause. The findings may help in improving mental health awareness, assessment, and intervention for women during the perimenopausal period.

2. Literature survey

Perimenopause is an inevitable stage in a woman's life, characterized by physiological and psychological changes. During this stage, women may experience anxiety, mood changes, sleep disturbances, and cognitive difficulties. Fluctuations in ovarian hormones may increase susceptibility to anxiety, while symptoms such as hot flushes, night sweats, and disturbed sleep can further affect emotional well-being (Babu et al., 2026; Marano et al., 2026; Fan et al., 2025). a general lack of awareness of perimenopause among women

which further exacerbates uncertainty, anxiety, and a loss of sense of control as they experience these changes. (McElhany et al., 2026). This explains the need of education and early detection of perimenopause

During this period, they are going through an emotional rollercoaster due to the fluctuations in hormonal and physical changes. Some are not at all aware of the psychological changes occurring at this stage. Anxiety is one of the most important and commonly seen cognitive changes during the perimenopausal period. Kuck and Hogervorst (2024) found that women in early perimenopause experienced the highest levels of stress and were most affected by depression and anxiety, showing the poorest psychosocial quality of life among the menopausal stages studied- this shows that the early, sometimes unrecognised phase of the transition may cause particular psychological risk. Musial et al. (2021) describe perimenopause as a window of vulnerability in which hormonal fluctuation can produce both physical and psychiatric symptoms, noting that more than half of perimenopausal women report anxiety symptoms

Although psychological symptoms during perimenopause have received increasing attention, anxiety is often considered along with depression, stress, and other symptoms rather than examined as a separate concern. Anxiety may also affect concentration, memory, confidence, and work-related functioning, making it an important concern for personal and professional well-being (Griffiths et al., 2013).

Despite growing evidence on psychological changes during perimenopause, anxiety as a specific psychological concern remains relatively less explored. Further understanding of anxiety during this transition may help improve awareness of women's psychological experiences and support the need for early recognition and appropriate care.

2.1 Research gap

While there has been a significant amount of research on psychological changes that occur throughout the transition period of menopause, there is a lack of information on anxiety. The current study attempts to fill the research gap by assessing anxiety in perimenopausal women as it relates to screening and intervention.

2.2 Need & rationale of the study

Anxiety is a prevalent psychological symptom that is frequent during the menopause transition but is often overlooked and normalized within the context of aging. However, compared to physical symptoms, anxiety experiences are rarely acknowledged as a part of the climacteric period.

Therefore, the current study will assess the levels of anxiety and identify the influence of selected variables on women's psychological well-being during the menopause transition. The study will employ the Beck Anxiety Inventory to operationalize and measure the levels of anxiety and explore their determinants. In turn, the study will contribute to recognise and address the often-ignored mental health concerns experienced by menopausal women.

3. Aim, Objectives and Hypothesis

3.1 Aim of the study

The aim of the present study is to assess the level and severity of anxiety among perimenopausal women and to examine its association with selected demographic and menstrual-related factors.

3.2 Objectives of the study

- 1) To identify the factors associated with anxiety among perimenopausal women.
- 2) To assess the level and severity of anxiety among perimenopausal women.
- 3) To examine the association of anxiety with age and working status among perimenopausal women.

3.3 Hypotheses

- H₁: There is a significant association between the selected factors (age, employment status, education, and menstrual irregularity) and the level of anxiety among perimenopausal women.
- H₂: There is a significant relationship between age and the level of anxiety among perimenopausal women.
- H₃: There is a significant difference in the level of anxiety between working women and housewives among perimenopausal women.

4. Method

4.1 Research Design

The quantitative type of descriptive comparative study was conducted to determine the severity level of anxiety of

perimenopausal women and compare the effect of selected variables such as age and working status on them.

4.2 Participants and Sampling

The study was conducted among 108 perimenopausal women aged between 45 and 55 years selected from Thrissur district in Kerala. The sampling method used was purposive. However, women diagnosed with psychiatric illness or those who had hysterectomy were excluded.

4.3 Measures

Beck Anxiety Inventory (BAI) The BAI developed by Beck et al. (1988) consists of 21 items assessing anxiety symptoms experienced during the previous week. Each item is rated from 0 to 3, with total scores ranging from 0 to 63. Higher scores indicate greater anxiety severity.

4.4 Procedure & Ethics

The data was collected from perimenopausal women using both online (by means of Google Forms) and printed questionnaires. Before the data collection began, the participants were informed about the purpose of the research. The purpose of the study was made clear to them, after which they were told that participating the study was entirely voluntary. Those who wished to take part were then given an informed consent form before completing the questionnaire, ensuring that confidentiality was maintained during the study. The participants were given the instructions for completing the questionnaire, and any questions or doubts they had been clarified

4.5 Statistical Analysis

The statistical analysis was performed for the collective of 108 perimenopausal women by applying descriptive and inferential statistics. The frequencies and percentages were calculated for describing the sample and its features, while the mean scores and standard deviations were applied to describe the data set. Notably, the score from the BAI was divided into minimal, mild, moderate, and severe, with the chi-square test indicating an association between selected variables and levels of anxiety. Besides, the Pearson's correlation analysis was conducted to assess the relationship between women's ages and their anxiety scores, whereas the independent-samples t-test was conducted to compare anxiety scores of working women and housewives. For all statistical tests, a p-value of 0.05 was statistically significant.

5. Results

5.1 Demographic Profile of Respondents

Table 5.1 presents the demographic and reproductive characteristics of the 108 women who participated in the study. The mean age of respondents was 48.16 years (SD = 2.54), with the largest proportion (44.4%) falling in the 45–47-year age band. Educationally, the sample was fairly well qualified, with 42.6% postgraduates and 40.7% graduates. Three-quarters of the sample (75.0%) were employed in some occupation, while the remaining 25.0% identified as

housewives. Just over a quarter of respondents (25.9%) reported currently experiencing menstrual irregularities, consistent with the perimenopausal status required for inclusion.

Table 5.1: Demographic and Reproductive Profile of Respondents (N = 108)

Characteristic	Category	Frequency	Percentage
Age (years)	45–47	48	44.40%
	48–50	41	38.00%
	51–55	19	17.60%
Education	Postgraduate	46	42.60%
	Graduate	44	40.70%
	Other	12	11.10%
	Higher Secondary/ Other High School	4	3.70%
Employment status	Working	81	75.00%
	Housewife	27	25.00%
Menstrual irregularity	Yes	28	25.90%
	No	80	74.10%

Note: Mean age = 48.16 years, SD = 2.54, range 45–55 years.

5.2 Level of Anxiety among Perimenopausal Women

Total BAI scores across the sample ranged from 0 to 53 (out of a possible 63), with a mean of 28.26 (SD = 14.49) and a median of 33.5, indicating a wide spread of anxiety severity but a distribution skewed toward the higher end of the scale. When categorised using standard BAI cut-offs, the majority of respondents (63.0%) fell into the severe anxiety category, while only 8.3% reported minimal anxiety. This distribution is presented in Table 5.2.

Table 5.2: Distribution of Anxiety Levels among Respondents (N = 108)

Anxiety Level	BAI Score Range	Frequency	Percentage
Minimal	0–7	9	8.30%
Mild	8–15	20	18.50%
Moderate	16–25	11	10.20%
Severe	26–63	68	63.00%
Total	—	108	100.00%

5.3 Testing of Hypotheses

5.3.1 Hypothesis 1: Association between Selected Factors and Anxiety Level

H1 stated that there is a significant association between the selected factors (age, employment status, education, and menstrual irregularity) and the level of anxiety among perimenopausal women. This was tested separately for each factor using the chi-square test of association, with results summarised in Table 5.3.

Table 5.3: Chi-Square Test of Association between Selected Factors and Anxiety Level

Factor	χ^2 value	df	p-value	Result
Age group	2.262	6	0.894	Not significant
Employment status	15.689	3	0.001*	Significant
Education	13.479	12	0.335	Not significant
Menstrual irregularity	7.255	3	0.064	Not significant

*Significant at $p < 0.05$.

Of the four factors examined, only employment status showed a statistically significant association with anxiety level ($\chi^2 = 15.689$, $df = 3$, $p = 0.001$). Age group, education, and menstrual irregularity were not significantly associated with anxiety level in this sample, although the association with menstrual irregularity approached conventional significance ($p = 0.064$). Hypothesis H1 is therefore partially supported: it holds for employment status but not for age, education, or menstrual irregularity.

Table 5.4: Cross-tabulation of Employment Status and Anxiety Level

Employment Status	Minimal	Mild	Moderate/Severe*
Housewife (n = 27)	5 (18.5%)	7 (25.9%)	15 (55.6%)
Working (n = 81)	4 (4.9%)	13 (16.0%)	64 (79.0%)

*Moderate and severe categories combined for illustrative presentation; the chi-square test itself was computed on all four original categories.

5.3.2 Hypothesis 2: Relationship between Age and Anxiety

H2 stated that there is a significant relationship between age and the level of anxiety among perimenopausal women. A Pearson correlation was computed between age (in years) and total BAI score.

Table 5.5: Correlation between Age and Total Anxiety Score

Variables	r	p-value	Result
Age and Total Anxiety Score	0.041	0.673	Not significant

The correlation between age and total anxiety score was weak and positive but not statistically significant ($r = 0.041$, $p = 0.673$). This indicates that, within the narrow 45–55-year age band studied, anxiety severity did not increase or decrease systematically with age. Hypothesis H2 is therefore not supported by the data.

5.3.3 Hypothesis 3: Difference in Anxiety between Working Women and Housewives

H3 stated that there is a significant difference in the level of anxiety between working women and housewives among perimenopausal women. An independent-samples t-test was conducted to compare mean total BAI scores between the two groups.

Table 5.6: Independent-Samples t-Test Comparing Anxiety Scores of Working Women and Housewives

Group	n	Mean	SD	t-value	p-value
Working women	81	30.94	13.6		
Housewives	27	20.22	14.35	3.5	0.001*

*Significant at $p < 0.05$ ($df = 106$).

Working women reported a significantly higher mean anxiety score ($M = 30.94$, $SD = 13.60$) than housewives ($M = 20.22$, $SD = 14.35$), $t(106) = 3.50$, $p = 0.001$. This represents a substantial difference of nearly 11 points on the BAI scale. Hypothesis H3 is therefore supported: employment status is associated with a statistically significant difference in anxiety level among perimenopausal women.

6. Discussion

The present study aimed to determine the prevalence of anxiety among perimenopausal women and assess the effect

of age, employment status, education, and menstrual irregularity on anxiety symptoms. One of the results of the study is that 63.0% of participants experienced severe symptoms of anxiety. As such, it is critical to note that anxiety can be a significant problem in perimenopausal women. The association between employment status and anxiety was also evident in the results, as women who were employed reported significantly higher anxiety scores than housewives. This result echoes Griffiths et al. (2013), who found that the inability to concentrate, tiredness, forgetfulness, low mood, and reduced confidence during the menopausal transition could impact a woman's work. Indeed, Kuck and Hogervorst (2024) also found that those women who experienced higher psychosocial stress had poorer psychosocial well-being. Therefore, it can be argued that higher anxiety levels among working women can be explained by attempts to balance their work and perimenopausal concerns.

However, the present study did not find any significant associations between anxiety and age or educational level. One reason for this outcome might be that most participants were between 45 and 55, meaning that they were at different stages of menopausal transition. Finally, while the study also found that menstrual irregularity was associated with higher anxiety levels, the result was not statistically significant ($p = 0.064$). To conclude, the manuscript demonstrated that anxiety was common among perimenopausal women, with working women being especially vulnerable. It can be posited that early recognition of anxiety symptoms and psychological help, as well as women's understanding of the menopausal transition, might improve women's quality of life during the perimenopausal period.

7. Conclusion

Anxiety is a significant concern for women undergoing perimenopause due to various hormonal and psychosocial changes. The Beck anxiety inventory was used to screen 108 women aged between 45 and 55 years who were selected through a purposive sampling technique. The results revealed that almost two-thirds of the participants had severe anxiety. Among the selected variables, only the source of employment was significantly associated with anxiety, with working women being more anxious than their homemaker counterparts. The rest of the variables including age, education, and irregular menstruation had no significant association with anxiety.

The current findings can help future researchers identify the scope and scale of the problem and develop effective interventions to improve the quality of life of perimenopausal women. The results can also help various organizations and employers develop appropriate interventions to address the high prevalence of anxiety and depression in this population. Additionally, the current study can help future researchers understand the need to pay more attention to working women, who are more likely to experience anxiety than homemakers.

7.1 Limitations

- 1) The current study was based on self-reports and can have various biases.

- 2) The findings might not be generalizable because the study was done on a small sample size.

7.2 Recommendations

Conducting anxiety screening using the Beck Anxiety Inventory (BAI) for females aged 45 years and older is essential.

Employers should be encouraged to create supportive policies and programs for menopausal females, especially working women.

Community awareness initiatives should be implemented to increase understanding of menopause, including its symptoms and the importance of seeking help.

Health care practitioners should conduct comprehensive physical examinations for females presenting with menstrual irregularities, including mental health screening.

Further interventional studies are needed to assess the association between irregularity of menstrual flow and anxiety and establish adequate intervention strategies.

8. Scope for Future Research

Conduct research with bigger and diverse populations to achieve better results.

Explore the connection between irregular periods and anxiety further.

Conduct a longitudinal study to understand anxiety's progression during menopausal transition better.

Investigate working women's encounters and conditions that may trigger anxiety.

Analyse the impact of occupation and work surroundings on the mental state and psychological stability of women.

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