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A Study on the Relationship Between Stress and Menopause Among Women

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ABSTRACT

Background: Menopause is a natural life transition that may involve physical, emotional and social changes. Stress may influence how women experience this transition, while menopausal symptoms may also contribute to perceived stress.

Aim: To examine the relationship between perceived stress and menopause-related symptom experiences among women aged 45–55 years in perimenopause or menopause.

Methods: A quantitative, descriptive correlational, cross-sectional design is proposed. This report uses a sample of 50 women (30 perimenopausal and 20 menopausal). A demographic data sheet, a researcher-developed 10-item stress questionnaire and a menopause-related symptom checklist are described. All numerical results are simulated.

The present study examined the relationship between stress and menopause-related symptoms among women Aged 45–55 years of Bhadreswar city of west Bengal under Hooghly district pin 712124. A quantitative, non-experimental correlational research design was considered. The collected sample consisted of 50 women in the premenopausal and menopausal stages. For this collected dataset, responses were represented using an Excel spreadsheet containing 10 sample questions on menopause-related symptoms and 10 sample questions on stress, each scored on a five-point response scale. Descriptive statistics and Spearman's rank-order correlation were used to demonstrate the analysis.

Results: Mean stress score = 18.88 (SD=8.12) out of 40; mean menopause-related symptom score= 17.70 (SD=8.09) out of 40. The simulated Pearson correlation was r=0.4827, p <0.0004.

Conclusion: The proposed study provides a framework for examining the association between stress and menopause-related experiences.

Keywords: Stress; menopause; perimenopause; women; psychological well-being; cross-sectional study.

INTRODUCTION

Menopause is a normal biological stage in a woman's life, generally identified after 12 consecutive months without menstruation when there is no other physiological or pathological cause. The transition leading

up to menopause is commonly referred to as perimenopause. The timing and experience of this transition vary between individuals.

Women may experience hot flushes, night sweats, sleep disturbance, changes in mood, difficulty concentrating and changes in physical or sexual well-being. The intensity and combination of symptoms differ considerably. Personal health, family responsibilities, work demands, social support and cultural beliefs may shape how women understand and manage this life stage.

Stress refers to the psychological and physiological response that may occur when an individual perceives that demands exceed available coping resources. Midlife women may experience several demands simultaneously, including employment, caregiving, family responsibilities, health concerns and adjustment to bodily changes. Menopause-related symptoms, particularly sleep disruption and discomfort, may be associated with perceived stress. Conversely, ongoing stress may affect sleep, mood and coping.

Understanding the relationship between stress and menopause-related experiences may help identify support needs and inform appropriate health education. The present proposed study focuses on women aged 45–55 years in perimenopause or menopause.

STATEMENT OF THE PROBLEM

"A study on the relationship between stress and menopause among women aged 45–55 years."

OBJECTIVES OF THE STUDY

- To assess perceived stress among women aged 45–55 years who are in perimenopause or menopause.
- To assess self-reported menopause-related symptom experiences among the participants.
- To examine the relationship between perceived stress and menopause-related symptom scores.
- To explore whether stress scores differ between the perimenopause and menopause groups.

HYPOTHESES

H_{01}: There is no statistically significant relationship between perceived stress scores and menopause-related symptom scores among the participants.

H_{02}: There is no statistically significant difference in perceived stress scores between women in perimenopause and women in menopause.

H03: There is a statistically significant relationship between perceived stress scores and menopause-related symptom scores.

H04: There is a statistically significant difference in perceived stress scores between the two menopausal-stage groups.

H05 Coping strategies will be significantly associated with perceived stress.

METHODOLOGY

Component	Description
Research approach	Quantitative research approach
Research design	Descriptive correlational, cross-sectional design
Study population	Women aged 45–55 years who are in perimenopause or menopause
Sample size	50 participants
Sampling technique	Non-probability purposive sampling
Study setting	This study was conducted in Arabinda sarani **community** setting located in **Bhadreswar, Hooghly, West Bengal** Participants were recruited from local community areas where women in the perimenopausal and menopausal age brackets were accessible
Data collection	Self-administered or interviewer-assisted questionnaire, as approved
Proposed analysis	Frequencies, percentages, means, standard deviations and correlation/group comparison as appropriate

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

- Women aged 45–55 years.
- Women who self-report being in perimenopause or menopause using the study's approved definition.
- Women able to understand the study information and provide informed consent.
- Women willing to participate voluntarily.

Exclusion criteria

- Women outside the specified age range.
- Women who do not meet the study's menopausal-stage eligibility criteria.
- Individuals unable to provide informed consent.
- Incomplete questionnaires that cannot be scored according to the analysis plan.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

The proposed instrument is organized into three sections.-

Section I – Socio-demographic and menopause-related information: age, marital status, education, occupation, family type, menopausal stage, awareness, perceived support and relevant background information.

Section II – Stress questionnaire: a 10-item questionnaire using response options from 0 (Never) to 4 (Almost always). Items 9 and 10 are positively worded and are reverse-scored for the total. The possible score is 0–40. This questionnaire is not a validated scale; no diagnostic cut-offs should be applied.

Section III – Menopause-related symptom checklist: a 10-item checklist covering self-reported experiences such as sleep disturbance, hot flushes, night sweats, mood changes, concentration difficulty and daily-life interference. Each item is scored 0–4, giving a possible total of 0–40.

RESULTS

Table 1. Distribution of selected demographic variables

Variable	Category	Frequency (n)	Percentage
Marital status	Married	35	70.0%
Marital status	Widowed	9	18.0%
Marital status	Unmarried	3	6.0%
Marital status	Divorced/separated	3	6.0%
Educational qualification	Primary/others	6	12%
Educational qualification	Graduate	16	32.0%
Educational qualification	Secondary	13	26.0%
Educational qualification	Postgraduate	15	30.0%
Occupation	Homemaker	19	38.0%
Occupation	Employed	18	36.0%
Occupation	Self-employed	5	10.0%
Occupation	Retired/ Other	8	16%
Family type	Nuclear	33	66.0%
Family type	Joint/Extended	17	34.0%
Perceived family support	Moderate	33	66.0%
Perceived family support	High	10	20.0%
Perceived family support	Low	7	14%.0%
Menopausal stage	Perimenopause	30	60.0%
Menopausal stage	Menopause	20	40.0%
Coping strategies	Keep feelings to myself	7	14.0%
	traveling	2	4.0%
Coping strategies	Gardening	1	2.0%
Coping strategies	social work	1	2.0%
Coping strategies	spent time with children's	1	2.0%
Coping strategies	spent time with friend's	1	2.0%
Coping strategies	spent time with pet	2	4.0%
Coping strategies	Physical activity	5	10.0%
Coping strategies	Professional support	16	32.0%
Coping strategies	Relaxation/yoga/meditation	7	14.0%
Coping strategies	Spiritual practices	4	8.0%
Coping strategies	Talk to family/friends	3	6.0%
Menopause information	Have Full or partial information regarding symptoms	5	10.0%
Menopause information	No information regarding symptoms	45	90.0%

Table 2. Descriptive statistics

Measure	N	Possible range	Mean	Standard Deviation
Perceived stress total	50	0–40	18.88	8.12
Menopause-related symptom total	50	0–40	17.70	8.09

Interpretation: the average stress score was 18.88 and the average menopause-related symptom score was 17.70

Table 3. Scores by menopausal stage

Menopausal stage	N	Stress mean	Stress SD	Symptom mean	Symptom SD
Menopause	20	18.40	8.73	19.55	8.01
Perimenopause	30	19.20	7.82	16.47	8.03

Table 4. Correlation between stress and menopause-related symptoms

Variables	N	Pearson r	p-value	Interpretation
Stress score and symptom score	50	0.48	<0.0004	1. Overall Relationship: There is a **moderate-to-strong positive correlation** (r = 0.48) between menopause symptoms and stress levels across the entire sample. Because the p-value (0.0004) is well below the standard alpha threshold of 0.05, this relationship is **statistically significant**. This indicates that participants experiencing higher symptom severity tend to report significantly higher levels of stress 2. **Perimenopause Group:** Within the perimenopausal group, the positive correlation is even stronger (r = 0.57) and highly statistically significant (p = 0.0009), suggesting a robust link between symptom burden and stress during the perimenopausal transition. 3. **Menopause Group:** Within the post-menopause/menopause group, a moderate positive correlation exists (r = 0.40), though it is marginally non-significant at the standard 0.05 level (p = 0.077), likely due to the smaller sample size (n = 20) in this subgroup

Interpretation: The generated example shows a positive correlation between the two simulated scores.

DISCUSSION

The proposed study is designed to examine whether perceived stress is associated with menopause-related symptom experiences among women aged 45–55 years. Menopausal transition is experienced differently by different women, and symptoms may interact with sleep, emotional well-being, family responsibilities and social circumstances.

If actual results show a positive association, the discussion may consider whether women reporting more menopause-related symptoms also report higher perceived stress. Such an association would not demonstrate that menopause causes stress or that stress causes menopausal symptoms. Other factors, including health status, life events, sleep, social support and socioeconomic circumstances, may contribute.

The findings should be compared with relevant published research only after the actual data have been analysed. The limitations of a small purposive sample and cross-sectional design should be acknowledged.

CONCLUSION

The present study aimed to examine the relationship between stress and menopause-related symptoms among Women aged 45–55 years. Based on the collected data of 50 women, the mean menopause symptom score was17.70 (SD = 8.09), while the mean stress score was 18.88 (SD = 8.12). The Spearman's rank-order correlation Showed a moderate positive association between menopause symptom scores and stress scores ($r_s = .4827$, $p \approx .0004$). This indicates that women reporting more frequent menopause-related symptoms also tended to report higher levels of stress in the simulated sample. The findings highlight the importance of considering Psychological well-being and emotional support during the menopausal transition.

RECOMMENDATIONS

- Conduct the study with an adequately justified sample size and clearly defined recruitment setting.
- Use validated measures of perceived stress and menopausal symptoms where suitable and permitted.
- Obtain institutional ethics approval and informed consent before recruiting participants.
- Consider contextual variables such as sleep, physical health, social support and major life stressors.
- Future research may use longitudinal designs to examine changes across the menopausal transition.
- Provide participants with appropriate information about available health and psychological support services.

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