

Mindfulness, Perceived Stress, and Emotional Regulation among Middle-Aged Women in Kerala

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Abstract: *This study investigated associations among dispositional mindfulness, perceived stress, and emotion regulation in 124 women aged 40 to 60 years living in Kerala, India. A quantitative descriptive correlational design and purposive sampling were used. Mindfulness, stress, and emotion regulation were assessed using the MAAS, PSS-10, and ERQ. Higher mindfulness was significantly associated with lower perceived stress, with $r = -0.228$ and $p = 0.011$, and mindfulness significantly predicted perceived stress. Mindfulness was not significantly associated with overall emotion regulation, cognitive reappraisal, or expressive suppression. Perceived stress was positively associated with overall emotion regulation and cognitive reappraisal. These findings provide population-specific evidence concerning mindfulness, perceived stress, and emotion regulation among middle-aged women in Kerala.*

Keywords: Mindfulness; Perceived Stress; Emotional Regulation; Middle-Aged Women in Kerala; Cognitive Reappraisal

1. Introduction

Mental health changes as a person grows, shaped by biological, psychological and social factors. Midlife is characterised by shifts in family setups, job pressures, relationships, physical health and, for many women, the menopausal transition. This study focuses on women aged 40 to 60 years, who may face overlapping demands including occupational, household, parenting and caregiving responsibilities.

Stress is not just about what is happening around a person; it is about how it is processed. Lazarus and Folkman [1] showed that stress depends on how a person appraises a situation and whether they feel they have the resources to handle it. Perceived stress refers to how unpredictable, uncontrollable and overwhelming a person finds their life circumstances [2]. Mindfulness has become important in modern psychology because it helps people focus, stay aware and control their reactions. Brown and Ryan [3] described dispositional mindfulness as a receptive attention to what is happening in the present moment and found that people who are naturally mindful reported greater self-regulation and mental health. Although mindfulness, perceived stress and emotion regulation have been widely studied, fewer studies have examined their interrelationships specifically in middle-aged women, particularly within the Indian context. Examining these variables among women aged 40 to 60 years in Kerala may provide a more contextually relevant understanding of their interrelationships.

2. Literature Survey

Liu et al. [4] conducted a systematic review and meta-analysis of mindfulness-based interventions among menopausal women involving 1,138 women across thirteen studies and found a significant reduction in stress following mindfulness-based interventions. Gordon et al. [5] found that an eight-week mindfulness-based stress reduction programme was associated with lower perceived stress and trait anxiety among women undergoing the menopausal transition. Weinstein et al. [6] found that higher mindfulness was

associated with more adaptive appraisal and coping responses and with lower levels of perceived stress.

Rough et al. [7] conducted a systematic review and meta-analysis of 110 studies involving 8,105 participants and found a significant overall effect of mindfulness-based strategies on emotion regulation, although the authors noted methodological limitations. Garland et al. [8] proposed the Mindfulness to Meaning Theory, suggesting that mindful attention can interrupt habitual patterns of responding and facilitate positive reappraisal of difficult experiences.

Nissy et al. [9] examined menopause-specific quality of life among rural women in Kerala and highlighted the influence of social and health-related circumstances on women's experiences of menopause. Park and Choi [10] examined an eight-session MBSR programme among women aged 40 to 59 years and found reductions in stress, depression, and anger compared with the control group.

The literature reviewed indicates a generally consistent relationship between mindfulness and psychological well-being; however, relatively fewer studies have focused specifically on middle-aged women in the Indian context, and research examining mindfulness, perceived stress and emotion regulation together among middle-aged women in Kerala remains particularly limited.

3. Problem Definition

The present study examined the relationships among dispositional mindfulness, perceived stress and emotional regulation among middle-aged women aged 40 to 60 years in Kerala, and whether mindfulness significantly predicted these variables.

The objectives of the study were to:

- 1) Examine the relationship between mindfulness and perceived stress
- 2) Examine the relationship between mindfulness and emotional regulation

- 3) Examine the relationship between perceived stress and emotional regulation
- 4) Determine whether dispositional mindfulness significantly predicts perceived stress and emotional regulation.

The following hypotheses were proposed:

H₁ - there is a significant relationship between mindfulness and perceived stress;

H₂ - there is a significant relationship between mindfulness and emotional regulation;

H₃ - there is a significant relationship between perceived stress and emotional regulation;

H₄ - mindfulness significantly predicts perceived stress and emotional regulation among middle-aged women.

4. Methodology

The present study employed a quantitative, descriptive, correlational research design. The population comprised middle-aged women aged 40 to 60 years residing in Kerala, India. The final sample consisted of 124 women recruited using a non-probability purposive sampling technique. Participants were included if they were literate in English and provided informed consent. Participants were excluded if they had a diagnosed severe psychiatric disorder, were undergoing intensive psychiatric treatment, or had cognitive impairments that could interfere with their ability to complete the questionnaires.

Dispositional mindfulness was measured using the Mindful Attention Awareness Scale (MAAS) [3], a 15-item scale rated on a 6-point Likert scale, with higher scores reflecting greater mindfulness. Perceived stress was measured using the 10-item Perceived Stress Scale (PSS-10) [2], rated on a 5-point scale, with higher scores indicating greater perceived stress. Emotion regulation was assessed using the 10-item Emotion Regulation Questionnaire (ERQ) [11], which comprises two subscales: Cognitive Reappraisal (6 items) and Expressive Suppression (4 items). Both subscales are rated on a 7-point Likert scale, with higher scores indicating greater use of the respective emotion-regulation strategy.

All instruments were administered in English. No Malayalam versions of the instruments were used in the present study, and therefore no translation, back-translation, or separate validation procedure for Malayalam versions was undertaken. Study-specific reliability coefficients for the MAAS, PSS-10, Cognitive Reappraisal, and Expressive Suppression were not available for the present sample. Therefore, no study-specific reliability coefficients are reported in this dissertation. The instruments were administered and scored in accordance with their established scoring procedures.

Data collection followed a structured, stepwise procedure. Formal ethical approval was obtained from the relevant institutional ethics committee/review body prior to commencement of data collection. The purpose and nature of the study were explained to the participants, and informed consent was obtained from all participants before data collection. Participation was voluntary, and participants were informed of their right to withdraw from the study at any stage without adverse consequences.

The questionnaire battery consisted of a demographic information section followed by the MAAS, PSS-10, and ERQ. The questionnaires were administered in printed or digital format, and participants completed them independently. Clarifications, when required, were provided without influencing participants' responses. The completed questionnaires were checked for completeness, and the responses were subsequently coded and entered for statistical analysis. The final dataset consisted of 124 valid responses. Ethical principles governing psychological research were followed throughout the study. Anonymity and confidentiality of participant information were maintained, and the collected data were used solely for academic and research purposes. Appropriate measures were taken to ensure the secure handling of the data and to restrict access to the research information.

5. Results and Discussion

Table 1: Mean and Standard Deviation of Mindfulness, Perceived Stress and Emotional Regulation among Middle-Aged Women (N = 124)

Variable	N	Mean	SD
Emotional Regulation	124	45.76	8.42
Cognitive Reappraisal	124	30.6	5.87
Expressive Suppression	124	15.15	4.87
Dispositional Mindfulness	124	69.7	11.85
Perceived Stress	124	21.04	5.5

Table 1 shows that participants (N = 124) had a mean score of 45.76 (SD = 8.42) for overall emotional regulation, 30.60 (SD = 5.87) for cognitive reappraisal, and 15.15 (SD = 4.87) for expressive suppression. Dispositional mindfulness had a mean score of 69.70 (SD = 11.85), and perceived stress had a mean score of 21.04 (SD = 5.50).

Pearson's product-moment correlation showed a significant negative correlation between mindfulness and perceived stress ($r = -.228$, $p = .011$), indicating that individuals with higher levels of dispositional mindfulness tend to experience lower levels of perceived stress. There was no significant relationship between mindfulness and overall emotional regulation ($r = -.092$, $p = .312$), cognitive reappraisal ($r = -.020$, $p = .823$), or expressive suppression ($r = -.134$, $p = .138$). A significant positive correlation was found between perceived stress and overall emotional regulation ($r = .234$, $p = .009$) and cognitive reappraisal ($r = .220$, $p = .014$), while the relationship between perceived stress and expressive suppression was not significant ($r = .138$, $p = .126$). Dispositional mindfulness significantly predicted perceived stress, with higher levels of mindfulness associated with lower perceived stress; however, it accounted for only a small proportion of the variance in perceived stress. In contrast, it did not significantly predict overall emotional regulation.

The significant negative relationship between mindfulness and perceived stress is consistent with previous research. Weinstein et al. [6] found that higher mindfulness was associated with more adaptive stress appraisal and coping and with lower perceived stress. Similarly, Liu et al. [4] reported significant reductions in stress following mindfulness-based interventions among menopausal women, and Gordon et al. [5] found reductions in perceived stress among women

undergoing the menopausal transition following an MBSR programme. However, the present study examined dispositional mindfulness rather than participation in a mindfulness-based intervention, suggesting that the relationship between mindfulness and stress may also be evident at the dispositional level.

The findings concerning mindfulness and emotional regulation differed from some previous literature. Chiesa et al. [12] proposed that mindfulness may influence emotional responses through attention, awareness and acceptance, while Garland et al. [8] suggested through the Mindfulness to Meaning Theory that mindful awareness may facilitate positive reappraisal. However, the present study did not identify a significant relationship between dispositional mindfulness and either cognitive reappraisal or expressive suppression, suggesting that mindfulness and emotion regulation, although conceptually related, may represent distinct psychological processes.

The positive relationship between perceived stress and cognitive reappraisal may indicate that women experiencing greater stress engage more frequently in cognitive reappraisal as an attempt to manage or adapt to stressful circumstances, rather than reappraisal reflecting poorer emotional functioning.

6. Conclusion

Among middle-aged women in Kerala, greater dispositional mindfulness was associated with lower perceived stress and significantly predicted stress levels, although the observed association was modest. Mindfulness was not significantly related to overall emotion regulation, cognitive reappraisal, or expressive suppression. Perceived stress showed positive associations with overall emotion regulation and cognitive reappraisal. These findings suggest that mindfulness may be particularly relevant to perceived stress in this population while also indicating that mindfulness and commonly measured emotion-regulation strategies should not be treated as interchangeable constructs. Further research with larger and more diverse samples and longitudinal designs is warranted.

7. Future Scope

The study's 124 participants were drawn only from Kerala; a larger, more diverse sample from other regions would improve generalisability. As dispositional mindfulness rather than a structured intervention was examined, the findings cannot establish whether actively increasing mindfulness would reduce stress or alter emotional regulation. Future research could use larger samples, examine differences by occupational status, socioeconomic background or menopausal stage, adopt longitudinal designs, and include variables such as social support, coping styles, resilience, sleep quality and caregiving burden.

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