

The Effect of Mindfulness Based Intervention on Dispositional Mindfulness and Cognitive Emotions Regulation Strategies among Female Teachers

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Abstract

Background: Teachers, often experience intellectual and emotional exhaustion due to the significant emotional demands of their profession, which negatively affects their well-being and job performance (Chang & Davis, 2009). To manage stress and prevent burnout, it is essential for teachers to become aware of their thought patterns, as this awareness helps them develop coping strategies to handle negative emotions and express them constructively (Chang, 2013). Awareness, as a core mindfulness skill, can be developed through training (Brown & Ryan, 2003; Dane, 2011; Leroy et al., 2013), and mindfulness-based interventions have been shown to effectively reduce workplace stress and provide health benefits (Aikens et al., 2014; Hülshager et al., 2015).

Objective: This study aims to explore the effect of mindfulness-based intervention on dispositional mindfulness and cognitive emotion regulation strategies among female teachers.

Method: One group pretest posttest design has been used. The study involved 53 female CBSE primary school teachers from Pune, who were assessed twice by using the Freiburg Mindfulness Inventory and Cognitive Emotion Regulation Questionnaire before and after 21 days of mindfulness-based intervention.

Results: A paired samples t-test revealed a significant increase in dispositional mindfulness from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test data ($M = 40.56$, $SD = 5.84$; $t = 7.07$, $p < .001$, $df=52$). The obtained results showed no significant impact on positive reappraisal cognitive emotion regulation but showed a significant decrease in rumination from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test data ($M = 14.77$, $SD = 2.66$; $t = 3.55$, $p < .001$, $df=52$).

Conclusions: mindfulness training is a valuable intervention for increasing dispositional mindfulness and reducing ruminative thinking which helps to maintain teachers' well-being.

Key words: *Dispositional Mindfulness, Cognitive emotion regulation, Mindfulness Based Intervention*

Introduction

A 2023 survey conducted by Zamit reveals that 55% of teachers in India faces challenges while completing daily tasks due to psycho-emotional factors like irritability and anxiety, half of the respondents acknowledged these challenges. Additionally, 47% reported a decline in performance linked to emotional factors, while only 23% felt that such factors improved their performance. The findings highlight the significant impact of emotional stress on teachers' effectiveness in their roles.

Female teachers face higher stress levels due to the dual demands of their professional and personal lives, including home responsibilities and familial expectations (Hobfoll, 2010). Many feel overwhelmed by their workload, encompassing teaching, administrative tasks, and maintaining student relationships, leading to increased anxiety and burnout (Sarwar & Haider, 2022). Addressing these psychological and emotional challenges is crucial for enhancing female teachers' well-being and effectiveness in the classroom. Research indicates that teachers with higher levels of dispositional mindfulness tend to employ more effective emotion regulation strategies, which can enhance their overall well-being and teaching effectiveness (Brown & Ryan, 2003; Chambers et al., 2009). Mindfulness, defined as the non-judgmental awareness of the present moment, has expanded from its medical applications to education and workplace settings, where it aims to improve employee mental health and performance (Kabat-Zinn, 2003; Shonin et

al., 2014). Practicing mindfulness enhances focused attention, emotional intelligence, resilience, and interpersonal relationships, all of which are vital for managing work-related stress and preventing burnout (Lutz et al., 2008; Wayne, 2019). Many of the research studies on mindfulness-based intervention are from health-based settings (Allen et al., 2015). Most mindfulness programs in education settings are targeted at students (Broderick and Metz 2009; Cohen and Miller 2009; Flook et al. 2010; Mendelson et al. 2010). With a paucity of programs geared toward promoting the wellbeing of teachers. So, there is need to study effect of mindfulness-based intervention on school teachers' well-being and performance. Hence, present study intends to investigate effect of mindfulness-based intervention on dispositional mindfulness and cognitive emotion regulation among female teachers. Mindfulness awareness practice by improving their emotional awareness, developing techniques for regulating and responding to their own emotions, and coping with inevitable negative emotional experiences (Roeser et al., 2013). Reducing and managing teacher stress is part of a formula for supporting teachers' ability to cope with the demands of the classroom and bolstering their own well-being is a necessity, with implications for students' learning and school success.

The literature review highlights the significant role of mindfulness-based interventions (MBIs) in supporting teachers, particularly in high-stress environments. MBIs,

such as Mindfulness-Based Stress Reduction (MBSR), Stress Management and Relaxation Techniques in Education (SMART), and Cultivating Awareness and Resilience in Education (CARE), have demonstrated effectiveness in reducing stress and burnout, while improving teaching practices and teacher-student relationships across diverse cultural contexts (de Carvalho et al., 2021; Flook et al., 2013; Roeser et al., 2012; Taylor et al., 2021; Tsang et al., 2021; Song et al., 2020). However, time constraints can limit the feasibility of MBSR in workplace settings (Bartlett et al., 2019), and there remains a notable research gap regarding MBIs' effects on Indian school teachers (Klingbeil & Renshaw, 2018). The review also discusses dispositional mindfulness, defined as a general tendency for nonjudgmental present-moment awareness, which is associated with flexible responses, enhanced well-being, and reduced psychological symptoms (Krägeloh, 2020; Baer et al., 2008; Brown & Ryan, 2003; Epel et al., 2009; Keng et al., 2011; Silberstein et al., 2012). Higher trait mindfulness enables individuals to manage distressing thoughts and emotions more effectively (Garland, 2007; Garland et al., 2010; McCraty & Childre, 2010), and interventions can increase both dispositional and state mindfulness, leading to improved affective distress tolerance (Lotan et al., 2013; Quaglia et al., 2016; Shapiro et al., 2011). Furthermore, MBIs have been shown to enhance cognitive emotion regulation, with key mindfulness facets-acting with awareness, non-

judging, and non-reactivity-linked to better emotional regulation (Haydon et al., 2019; Van der Merwe, 2015). Cognitive emotion regulation strategies, such as positive reappraisal and reduced rumination, are crucial for teacher well-being and engagement (Garnefski et al., 2002; Balzarotti et al., 2016; Blanco-Encomienda et al., 2020; Wimmer et al., 2019). Mindfulness training has been found to foster adaptive strategies like reappraisal and acceptance, while reducing maladaptive ones such as rumination, which is particularly relevant for teacher resilience and classroom effectiveness (Querstret et al., 2017; Keng et al., 2016; Iani et al., 2019; Min et al., 2013; Ersay et al., 2014; Garland et al., 2011; Hanley & Garland, 2014). The review concludes by emphasizing the need for further research on the efficacy of brief mindfulness-based training for enhancing cognitive emotion regulation among school teachers, especially in the Indian context.

Method

The method section may include the following headings

Study Design

The study employs a one-group pretest-posttest design, a quasi-experimental approach where outcomes are measured in a single group before (pretest) and after (posttest) an intervention. This design is chosen to evaluate the impact of a mindfulness-based intervention (MBI) on dispositional mindfulness and cognitive emotion regulation strategies among female teachers, as it directly measures changes within the same cohort

over time. The design is non-randomized and lacks a control group, making it feasible for settings where random assignment is impractical or ethically challenging (e.g., delivering interventions to specific groups without withholding potential benefits). By focusing on a single group, researchers can efficiently assess whether the MBI correlates with changes in mindfulness and emotional regulation, aligning with the study's objective to explore causal relationships in a naturalistic educational environment.

Participants

In the present study, N=53 Female teachers in the experimental are female teachers who are working as primary school teachers', type of sampling: Convenient sampling.

Sample Description: Age:25 to 35 years, Gender: female primary school teachers, Marital status: married, Work experience: Not more than 7 years. Location: Pune (Urban area).

Inclusion Criteria: CBSE board school, temporary, working Hours (5hrs. to 8hrs.)

Exclusion Criteria: Participants going through the therapy or medicine for their mental health and has never been practices meditation practices.

Tools Used

1. Freiburg Mindfulness Inventory (FMI) – (Walach et al., 2006)

FMI is a Likert-type self-report scale consisting of 14 items with a rating between 1 (rarely) and 4 (always). The 30-item form of scale was developed in 2001 and the 14-item final form of FMI was developed in 2006 by and colleagues an

internal consistency of Cronbach alpha = .86 was able to significantly demonstrate the increase in mindfulness after the retreat Questionnaire has good construct validity.

2. The Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski & Kraaij, 2007)

The CERQ is a self-report questionnaire measuring cognitive coping strategies of adults and adolescents aged 12 years and more. It has 36 items. alpha coefficients of the various subscales across the diverse populations can be called good to very good (in most cases well over .70 and in many cases even over .80) The test-retest correlations range between .48 (Refocus on Planning) and .65 (Other-blame). The questionnaire has good factorial and constructs validity. Positive reappraisal and rumination cognitive emotion regulation strategies are part of the present study among nine strategies.

Procedure

Data collection has been done by using self-reported measures and by implementing convenient sampling method. Rapport establishes with the group and filled self-reported measures by all participants twice. The environment was calm and relax. 15-20 min required to complete filling of self-report measures.

Intervention

Mindfulness-Based Training: It refers to 21 days of mindfulness-based training which will include mindfulness awareness and relaxation practices based on Kabat-Zinn's

conceptualization of mindfulness. 21-day mindfulness-based intervention designed for school teachers. Focuses on regulating emotions, and increasing awareness of present moment. Participants must engage in daily 30-minute meditation sessions and related orientation. Minimum 80% attendance required; 100% attendance is preferred. Four psychological test forms must be filled before and after the program to evaluate its impact.

Program structure:

Days 1–3: Body awareness through group activities, grounding exercises, and body scan meditation (with silence breaks).

Days 4–6: Breath awareness with group activities, breathing exercises, and mindfulness of breath (with silence breaks).

Days 7–11: Being present with thoughts and emotions via labeling exercises, mindfulness of sound, breath, and body (with silence breaks).

Days 12–14: Awareness and acceptance using mindfulness of sound and thoughts, and breathing space.

Days 15–17: Continued awareness and acceptance through mindfulness of sound, breath, and body, and breathing space.

Days 18–21: Open awareness practices, including group activities and mindfulness of open awareness, with breathing space.

Ethical Considerations

Consent of participants has been taken for 21 days Mindfulness based Intervention. Researcher ensured that filled information of psychological assessment will be used only for research purpose.

Data Analysis

Paired sample t test has been used for statistical analysis where obtained pre and post test scores compared and studied the difference of experiment group only.

Result

Results are shown in the following Tables and Figures.

Table 1.1 Descriptives

Pairs	Mean	N	Std. Deviation	S.E. Mean
Pre-FMI	32.132	53	8.357	1.148
Post-FMI	40.566	53	5.849	0.803
Pre-PR	15.679	53	3.043	0.418
Post-PR	15.755	53	2.941	0.404
Pre-RU	14.774	53	2.665	0.366
Post-RU	13.377	53	3.065	0.421

Table 1.2 Paired Sample Test

Pairs	Mean	SD	Mean Diff.	Df	t	P
Pre-FMI	32.132	8.357	8.434	52	7.071	< .001
Post-FMI	40.566	5.849		52		
Pre-PR	15.679	3.043	0.076	52	0.17	0.866
Post-PR	15.755	2.941		52		
Pre-RU	14.774	2.665	1.397	52	3.557	< .001
Post-RU	13.377	3.065		52		

A paired samples t-test revealed a significant increase in dispositional mindfulness from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test data ($M = 40.56$, $SD = 5.84$; $t = 7.07$, $p < .001$, $df=52$). The obtained results showed no significant impact on positive reappraisal cognitive emotion regulation but showed a significant decrease in rumination from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test data ($M = 14.77$, $SD = 2.66$; $t = 3.55$, $p < .001$, $df=52$). (Table 1.1 and Table 1.2)

Discussion

In the present study, the main objective was to find the effect of Mindfulness based intervention on dispositional mindfulness and cognitive emotion regulation among female teachers.

The paired samples t-test analysis of data from 53 CBSE schools' female teachers on pre and posttests obtained score on single experimental group found that the mindfulness-based intervention has significant effect on dispositional mindfulness and rumination (cognitive emotion regulation strategy). It also added in the finding that the mindfulness-based intervention has no significant effect on positive reappraisal among female teachers.

Hypothesis 1 The obtained pre-test scores will be significantly higher than the post-test score on dispositional mindfulness of the female teachers as result of implementation of mindfulness-based intervention. A paired samples t-test revealed a significant increase in dispositional mindfulness from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test data ($M = 40.56$, $SD = 5.84$; $t = 7.07$, $p < .001$, $df=52$). Which supported the hypothesis.

Consistent with previous research which concluded that the development of dispositional and state mindfulness throughout the intervention, was observed (Lotan et al., 2013). MBSR participants with higher levels of pre-treatment mindfulness showed a large increase in mindfulness, subjective well-being, empathy, and hope, and large declines in perceived stress up to 1 year after treatment. (Shapiro et al.,2011).

Hypothesis 2 The obtained pre-test scores will be significantly higher than the post-test score on positive reappraisal (cognitive emotion regulation strategy) of the female teachers as result of implementation of mindfulness-based intervention. A paired samples t-test revealed from pre-test data ($M = 15.67$, $SD = 3.04$) to post-test data ($M = 15.75$, $SD = 2.94$; $t = 0.170$, $p = 0.866$, $df=52$). Which not supported the hypothesis. In consistent with previous research which concluded that A correlational study about dispositional mindfulness and positive reappraisal of American adults from a diverse background provided evidence that mindfulness is uniquely associated with self-reported positive reappraisal. (Hanleyand Garland, 2014).

Hypothesis 3 The obtained pre-test scores will be significantly lower than the post-test score on rumination (cognitive emotion regulation strategy) of the female teachers as result of implementation of mindfulness-based intervention. A paired samples t-test revealed That a significant decrease in rumination from pre-test data ($M = 32.13$, $SD = 8.35$) to post-test

data ($M = 14.77$, $SD = 2.66$; $t = 3.55$, $p < .001$, $df=52$). Which supported the hypothesis. Consistent with previous research which concluded that A Study reported significantly lower levels of work-related rumination and fatigue, and significantly higher levels of sleep quality when compared with waitlist control participants. (Querstret et al.,2017).

Practical Implications

Mindfulness meditation practice can be part of teacher's daily routine to maintain teachers' well-being.

- Mindfulness is being used as effective tool to deal with emotional job demand.
- Emotions regulation is critical part of teacher's well-being and classroom performance and that has to be addressed effectively.

Limitations

Positive reappraisal and rumination are two strategies under cognitive emotion regulation scale So that it may be limited measure of this two strategies.

- The sample size is relatively small, and caution is needed when generalizing findings.
- Single group experimental design has been used .The obtained results couldn't compare with control group.
- Female teaching population has only been studied.

Future Research Directions

Conduct randomized controlled trials (RCTs) with active control groups to minimize bias and strengthen causal inferences

Implement follow-up evaluations to assess the long-term effects of MBIs.

Competing interests

The authors declare no competing interests.

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