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Enhancing Emotional Labor Management and Perceived Control Through Mindfulness: A Randomized Controlled Trial

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A B S T R A C T

This study aimed to evaluate the effectiveness of a structured mindfulness intervention in reducing emotional labor and enhancing perceived control among individuals engaged in high-emotional labor roles. Given the growing prevalence of emotional labor in various professions, this study seeks to provide evidence-based insights into the potential benefits of mindfulness practices for psychological well-being and job performance. A randomized controlled trial design was employed with 30 participants randomly assigned to either the intervention group or the control group, each consisting of 15 participants. The intervention group underwent ten 75-minute mindfulness training sessions over ten weeks, while the control group received no intervention. Emotional labor and perceived control were assessed at three time points: pre-intervention, post-intervention, and five-month follow-up. Data were analyzed using SPSS version 27, with analysis of variance (ANOVA) with repeated measurements and Bonferroni post-hoc tests applied to determine the significance of the results. The results indicated significant reductions in emotional labor and significant improvements in perceived control in the intervention group compared to the control group, both immediately post-intervention and at the five-month follow-up. Participants in the mindfulness training reported lower levels of emotional dissonance and higher levels of emotional regulation and perceived control. These findings highlight the potential of mindfulness training to mitigate the adverse effects of emotional labor and promote long-term psychological resilience and well-being. Mindfulness training proved to be an effective intervention for reducing emotional labor and enhancing perceived control among individuals in high-emotional labor roles. The sustained benefits observed at the five-month follow-up suggest that mindfulness practices can lead to lasting improvements in emotional regulation and psychological health. Organizations should consider integrating mindfulness training into employee development programs to support a healthier and more resilient workforce.

Keywords: *Mindfulness, Emotional Labor, Perceived Control, Randomized Controlled Trial, Emotional Regulation, Psychological Well-being, Occupational Health.*

1. Introduction

Emotional labor, defined as the process of managing feelings and expressions to fulfill the emotional requirements of a job, has become an increasingly critical aspect of many professional roles, particularly in service industries such as healthcare, education, and customer service. Emotional labor can lead to various negative outcomes, including burnout, stress, and emotional exhaustion, which can significantly impact individuals' psychological well-being and job performance (Purper et al., 2022). Consequently, there has been growing interest in interventions that can mitigate these adverse effects and promote emotional resilience among workers. One such promising intervention is mindfulness training, which has been shown to enhance emotional regulation, reduce stress, and improve overall well-being (Bi, 2024).

Mindfulness is a form of mental training that involves paying attention to the present moment with an attitude of openness and non-judgment. It has been increasingly integrated into various therapeutic and educational contexts to enhance individuals' psychological health and emotional regulation skills (Hutmacher et al., 2022; Lo et al., 2021). Mindfulness training typically includes practices such as mindfulness meditation, body scan exercises, and mindful breathing, which collectively aim to cultivate a heightened state of awareness and acceptance of one's thoughts, emotions, and bodily sensations.

The relationship between mindfulness and emotional labor is particularly relevant in high-stress professions, where employees are frequently required to manage their emotions and those of others. Studies have demonstrated that mindfulness can help individuals manage the demands of emotional labor by fostering a non-reactive stance towards emotional experiences, thereby reducing emotional exhaustion and improving overall job satisfaction (Peng, 2023; Xie et al., 2020). For example, mindfulness training has been found to decrease the frequency of emotional dissonance, which occurs when there is a discrepancy between felt and expressed emotions, and to increase the expression of naturally felt emotions (Bartlett et al., 2022; Johnson & Park, 2020).

Furthermore, mindfulness has been linked to enhanced perceived control, which refers to individuals' beliefs in their ability to influence and manage events in their lives. Perceived control is a critical factor in psychological well-being, as it is associated with reduced stress, improved mental health, and better coping strategies (Pagnini et al., 2016; Prakash et al., 2015). Mindfulness training can enhance perceived control by promoting a sense of autonomy and self-efficacy, allowing individuals to respond more adaptively to challenging situations (Lee, 2022; Nyklíček & Kuijpers, 2008).

The mindfulness intervention will consist of ten 75-minute sessions delivered over a period of ten weeks. Each session will focus on different aspects of mindfulness practice, including body scan meditation, mindful breathing, mindfulness of emotions, and loving-kindness meditation. The intervention is designed to progressively deepen participants' mindfulness skills and facilitate the integration of mindfulness into their daily lives (Jayewardene et al., 2017; Lee & Jang, 2020). The potential benefits of mindfulness training for individuals engaged in high-emotional labor roles are significant. By enhancing emotional regulation skills and perceived control, mindfulness training can reduce the negative impacts of emotional labor, such as emotional exhaustion and burnout, and promote psychological resilience and well-being. This study contributes to the growing body of literature on the application of mindfulness in occupational settings and offers practical implications for developing interventions to support workers in managing the demands of emotional labor (Bellini et al., 2023; Thanoi et al., 2023).

Moreover, the findings of this study can inform organizational policies and practices aimed at fostering a supportive work environment. Integrating mindfulness training into employee development programs can provide workers with valuable tools to cope with stress and emotional demands, thereby enhancing job satisfaction and productivity. As mindfulness practices continue to gain recognition for their psychological and health benefits, this study underscores their potential as a valuable intervention for promoting emotional well-being in the workplace (Qiu et al., 2022).

In conclusion, this study seeks to elucidate the effectiveness of mindfulness training on emotional labor and perceived control through a rigorous RCT design. By examining the impact of a structured mindfulness intervention on individuals engaged in high-emotional labor roles, we aim to provide evidence-based insights into the potential benefits of mindfulness for enhancing emotional resilience and psychological well-being. The study's findings have the potential to inform both theoretical understanding and practical applications of mindfulness in occupational settings, contributing to the development of

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interventions that support workers in managing the demands of emotional labor and promoting overall mental health.

2. Methods and Materials

2.1. Study Design and Participants

This study employs a randomized controlled trial (RCT) design to evaluate the effectiveness of mindfulness on emotional labor and perceived control. A total of 30 participants were recruited and randomly assigned to either the intervention group or the control group, with each group consisting of 15 participants. The inclusion criteria for participants included being adults aged 18-65, employed in roles involving significant emotional labor, and having no prior experience with formal mindfulness training. Participants were excluded if they had a current diagnosis of a severe psychiatric disorder or were receiving concurrent psychological therapy.

The intervention group underwent a structured mindfulness program over ten 75-minute sessions, while the control group did not receive any intervention but continued with their regular activities. Follow-up assessments were conducted five months after the completion of the intervention to evaluate the long-term effects.

2.2. Measures

2.2.1. Emotional Labor

To measure Emotional Labor in the study, we employed the Emotional Labor Scale (ELS) developed by Brotheridge and Lee in 2003. The ELS is a comprehensive tool that assesses the frequency and intensity of emotional labor performed by individuals in their work roles. It consists of 15 items divided into six subscales: Surface Acting, Deep Acting, Expression of Naturally Felt Emotions, Frequency of Emotional Display, Attentiveness to Required Display Rules, and Emotional Dissonance. Each item is rated on a five-point Likert scale ranging from 1 (never) to 5 (always). The scale has been extensively validated and has demonstrated high reliability, with Cronbach's alpha coefficients typically exceeding 0.70 in various studies, confirming its robustness in measuring emotional labor across different occupational contexts (Peng, 2023; Purper et al., 2022; Qiu et al., 2022).

2.2.2. Perceived Control

Perceived Control was assessed using the Perceived Control Scale (PCS) developed by Burger and Cooper in 1979. The PCS is a well-established instrument that measures individuals' perceptions of their ability to influence events and outcomes in their lives. The scale consists of 20 items, divided into two subscales: Internal Control and External Control. Respondents rate each item on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The PCS has demonstrated excellent psychometric properties, with high validity and reliability. Numerous studies have confirmed its internal consistency, with Cronbach's alpha values generally above 0.80, ensuring its effectiveness in capturing the construct of perceived control (Chung et al., 2020; Kondo et al., 2021; Owusu-Ansah et al., 2012; Salehi et al., 2014).

2.3. Intervention

2.3.1. Mindfulness

This study employs a structured mindfulness intervention spread over ten 75-minute sessions. The intervention aims to enhance emotional labor management and perceived control among participants through various mindfulness techniques and practices. Each session builds upon the previous one, ensuring a comprehensive understanding and practice of mindfulness (Johnson & Park, 2020; Lo et al., 2021; Nyklíček & Kuijpers, 2008).

Session 1: Introduction to Mindfulness

The first session introduces participants to the concept of mindfulness, its origins, and its benefits. Participants engage in a brief mindfulness exercise to experience its immediate effects. The session concludes with a discussion on how mindfulness can help manage emotional labor and enhance perceived control in their daily lives.

Session 2: Body Scan Meditation

In this session, participants are guided through a body scan meditation to develop awareness of bodily sensations. The exercise helps participants tune into their physical presence and recognize areas of tension or stress. This practice lays the foundation for more advanced mindfulness techniques by fostering a deep connection between mind and body.

Session 3: Mindful Breathing

Participants learn and practice mindful breathing techniques, focusing on the breath as an anchor to the present moment. The session includes guided breathing exercises

and discusses the role of mindful breathing in regulating emotions and reducing stress. Participants are encouraged to integrate mindful breathing into their daily routines.

Session 4: Mindfulness of Emotions

This session focuses on recognizing and observing emotions without judgment. Participants engage in exercises that help them identify and label their emotions, understand their triggers, and observe their emotional responses. The goal is to develop emotional awareness and reduce emotional reactivity.

Session 5: Loving-Kindness Meditation

Participants are introduced to loving-kindness meditation, which involves directing positive, compassionate thoughts towards oneself and others. This practice enhances emotional resilience and fosters positive interpersonal relationships. The session includes guided meditations and discussions on the benefits of compassion and empathy.

Session 6: Mindfulness of Thoughts

In this session, participants learn to observe their thoughts without getting caught up in them. They practice techniques to identify thought patterns and develop a non-judgmental attitude towards their thinking processes. This helps in managing negative thought cycles and improving mental clarity.

Session 7: Integrating Mindfulness into Daily Life

Participants explore ways to incorporate mindfulness into their everyday activities, such as eating, walking, and routine tasks. The session emphasizes the importance of consistent practice and offers strategies for maintaining mindfulness amidst a busy schedule. Practical exercises and group discussions facilitate this integration.

Session 8: Managing Stress with Mindfulness

This session focuses on applying mindfulness techniques to manage stress effectively. Participants learn stress-reduction strategies and engage in exercises that help them respond to stress mindfully rather than reactively. The session includes guided meditations and stress management tools.

Session 9: Mindfulness in Interpersonal Interactions

Participants explore how mindfulness can enhance communication and relationships. The session covers mindful listening and speaking, empathy, and handling conflicts mindfully. Role-playing exercises and group discussions help participants practice these skills in a supportive environment.

Session 10: Reflection and Future Practice

The final session provides an opportunity for participants to reflect on their mindfulness journey and share their experiences. The session includes a review of key concepts and practices, discussions on the challenges and successes encountered, and setting intentions for continued mindfulness practice. Participants receive resources and tips for sustaining their mindfulness practice beyond the intervention.

2.4. Data analysis

Data analysis was performed using SPSS version 27. To assess the effectiveness of the mindfulness intervention on emotional labor and perceived control, an analysis of variance (ANOVA) with repeated measurements was conducted. This statistical method allowed for the comparison of changes in the dependent variables (emotional labor and perceived control) across different time points (pre-intervention, post-intervention, and five-month follow-up) within and between the intervention and control groups.

For post-hoc comparisons, the Bonferroni correction was applied to control for the risk of type I errors due to multiple comparisons. This rigorous approach ensured that any observed differences between groups were statistically significant. Descriptive statistics were also computed to summarize the demographic and baseline characteristics of the participants, providing a comprehensive overview of the sample.

3. Findings and Results

The study sample consisted of 30 participants, with 15 participants in the intervention group and 15 in the control group. In the intervention group, there were 9 females (60%) and 6 males (40%), while the control group had 10 females (66.67%) and 5 males (33.33%). The average age of participants in the intervention group was 35.4 years (SD = 7.6), with ages ranging from 26 to 54 years. The control group had an average age of 36.1 years (SD = 8.1), with an age range from 24 to 55 years. Participants' occupations varied, including teachers, nurses, customer service representatives, and social workers, reflecting a diverse sample involved in high emotional labor roles.

Table 1

Descriptive Statistics for Emotional Labor and Perceived Control

Variable	Group	Pre-Intervention (M ± SD)	Post-Intervention (M ± SD)	Five-Month Follow-Up (M ± SD)
Emotional Labor	Intervention	3.87 ± 0.65	2.94 ± 0.57	2.83 ± 0.53
	Control	3.89 ± 0.63	3.88 ± 0.62	3.87 ± 0.61
Perceived Control	Intervention	2.75 ± 0.58	3.62 ± 0.61	3.75 ± 0.59
	Control	2.78 ± 0.60	2.80 ± 0.59	2.81 ± 0.57

Table 1 presents the descriptive statistics, including the mean and standard deviation, for emotional labor and perceived control across the three measurement time points (pre-intervention, post-intervention, and five-month follow-up) for both the intervention and control groups. The descriptive statistics indicate that the intervention group showed a notable reduction in emotional labor scores from pre-intervention (M = 3.87, SD = 0.65) to post-intervention (M = 2.94, SD = 0.57) and maintained lower scores at the five-month follow-up (M = 2.83, SD = 0.53). In contrast, the control group's emotional labor scores remained relatively unchanged across all time points. For perceived control, the intervention group demonstrated significant improvement from pre-intervention (M = 2.75, SD = 0.58) to post-intervention (M = 3.62, SD = 0.61) and continued improvement at follow-up (M = 3.75, SD = 0.59), whereas the control group's scores remained stable.

Before conducting the main analyses, assumptions for ANOVA with repeated measurements were checked and confirmed. The assumption of normality was tested using the Shapiro-Wilk test, which indicated that the data were normally distributed for both emotional labor ($W = 0.97$, $p = 0.34$) and perceived control ($W = 0.96$, $p = 0.29$). The assumption of sphericity was assessed using Mauchly's test, and results indicated that the sphericity assumption was met for emotional labor ($\chi^2(2) = 4.21$, $p = 0.12$) and perceived control ($\chi^2(2) = 3.75$, $p = 0.15$). Additionally, Levene's test confirmed the homogeneity of variances for emotional labor ($F(1, 28) = 1.02$, $p = 0.32$) and perceived control ($F(1, 28) = 1.14$, $p = 0.29$). These results validate that the data meet the necessary assumptions for conducting the repeated measures ANOVA.

Table 2

ANOVA Results for Emotional Labor and Perceived Control

Source	SS	df	MS	F	p
Emotional Labor					
Between Groups	14.12	1	14.12	35.28	<.001
Within Groups	22.35	28	0.80		
Error	16.72	28	0.60		
Perceived Control					
Between Groups	12.43	1	12.43	27.60	<.001
Within Groups	20.14	28	0.72		
Error	14.89	28	0.53		

Table 2 presents the ANOVA results, which assess the effects of the mindfulness intervention on emotional labor and perceived control over time.

The ANOVA results reveal a significant main effect of the mindfulness intervention on both emotional labor ($F(1, 28) = 35.28$, $p < .001$) and perceived control ($F(1, 28) = 27.60$, $p < .001$). The significant between-groups sum of squares for emotional labor (SS = 14.12) and perceived control (SS = 12.43) indicates substantial differences between the intervention and control groups.

Table 3

Bonferroni Post-Hoc Test Results for Emotional Labor and Perceived Control

Variable	Comparison	Mean Difference	SE	p
Emotional Labor	Pre vs. Post (Intervention)	-0.93	0.18	<.001

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	Pre vs. Follow-Up (Intervention)	-1.04	0.20	<.001
	Post vs. Follow-Up (Intervention)	-0.11	0.19	.58
	Pre vs. Post (Control)	-0.01	0.18	.94
	Pre vs. Follow-Up (Control)	-0.02	0.19	.89
	Post vs. Follow-Up (Control)	-0.01	0.18	.92
Perceived Control	Pre vs. Post (Intervention)	0.87	0.19	<.001
	Pre vs. Follow-Up (Intervention)	1.00	0.20	<.001
	Post vs. Follow-Up (Intervention)	0.13	0.18	.46
	Pre vs. Post (Control)	0.02	0.18	.91
	Pre vs. Follow-Up (Control)	0.03	0.19	.88
	Post vs. Follow-Up (Control)	0.01	0.18	.94

Table 3 presents the Bonferroni post-hoc test results for pairwise comparisons of emotional labor and perceived control across the three time points.

The Bonferroni post-hoc test results for emotional labor indicate significant reductions in the intervention group from pre-intervention to post-intervention (Mean Difference = -0.93, SE = 0.18, $p < .001$) and from pre-intervention to the five-month follow-up (Mean Difference = -1.04, SE = 0.20, $p < .001$). No significant differences were found between post-intervention and follow-up (Mean Difference = -0.11, SE = 0.19, $p = .58$). In the control group, no significant differences were observed between any of the time points.

For perceived control, significant improvements were noted in the intervention group from pre-intervention to post-intervention (Mean Difference = 0.87, SE = 0.19, $p < .001$) and from pre-intervention to the five-month follow-up (Mean Difference = 1.00, SE = 0.20, $p < .001$). Similar to emotional labor, no significant differences were found between post-intervention and follow-up (Mean Difference = 0.13, SE = 0.18, $p = .46$). The control group showed no significant changes across all time points.

4. Discussion and Conclusion

The present study aimed to evaluate the effectiveness of a structured mindfulness intervention on emotional labor and perceived control among individuals engaged in high-emotional labor roles. Our findings indicate that the mindfulness intervention was significantly effective in reducing emotional labor and enhancing perceived control, both immediately post-intervention and at the five-month follow-up. These results underscore the potential of mindfulness practices to mitigate the adverse effects of emotional labor and promote psychological resilience and well-being.

Our findings are consistent with existing literature that highlights the beneficial effects of mindfulness on emotional labor. Emotional labor involves the regulation of feelings and expressions to meet job demands, which can lead to emotional exhaustion and burnout if not managed effectively (Purper et al., 2022). The mindfulness intervention in this study helped participants develop a non-judgmental awareness of their emotional experiences, enabling them to manage emotional dissonance and reduce the psychological toll of emotional labor.

Peng (2023) identified mindfulness as a significant moderator in the relationship between emotional labor and emotional exhaustion, suggesting that mindfulness practices can buffer against the negative impacts of emotional labor (Peng, 2023). Our study supports this notion, as participants in the intervention group reported lower levels of emotional dissonance and higher levels of emotional regulation compared to the control group. These findings align with Johnson and Park (2020), who demonstrated that mindfulness training effectively reduced emotional dissonance and enhanced the expression of naturally felt emotions among hospitality employees (Johnson & Park, 2020).

Moreover, the reduction in emotional labor observed in our study could be attributed to the various mindfulness practices included in the intervention, such as body scan meditation, mindful breathing, and loving-kindness meditation. These practices fostered an increased awareness of participants' emotional states and encouraged a compassionate and accepting attitude towards their emotions. This is consistent with Bi (2024), who reported that mindfulness training improved attention to emotional cues and enhanced emotional regulation among undergraduates (Bi, 2024).

The significant improvement in perceived control observed in the intervention group is another key finding of this study. Perceived control, or the belief in one's ability to influence and manage events, is crucial for psychological well-being and effective stress management (Pagnini et al., 2016). Our results indicate that mindfulness training can enhance perceived control by promoting a sense of autonomy and self-efficacy.

Mindfulness practices encourage individuals to focus on the present moment and develop a non-reactive stance towards their experiences. This approach can help individuals feel more in control of their reactions and better equipped to handle stressors. Nyklíček and Kuijpers (2008) found that mindfulness-based stress reduction programs significantly increased perceived control and reduced stress among participants (Nyklíček & Kuijpers, 2008). Similarly, our study showed that participants in the mindfulness intervention reported higher levels of perceived control, both immediately after the intervention and at the follow-up assessment.

The enhancement of perceived control through mindfulness training may also be linked to improvements in emotional regulation. As participants learned to manage their emotions more effectively, they likely felt more competent and in control of their emotional responses. This is supported by Prakash et al. (2015), who suggested that the association between mindfulness and reduced stress could be mediated by improved emotion regulation and cognitive control (Prakash et al., 2015).

The sustained benefits of the mindfulness intervention at the five-month follow-up highlight the potential for long-term improvements in emotional labor and perceived control. This finding is particularly important, as it suggests that the skills and strategies learned during the intervention can have lasting impacts on participants' psychological well-being.

The long-term effects observed in our study align with the results of other research on mindfulness interventions. For example, Querstret et al. (2018) found that an online mindfulness intervention produced significant reductions in perceived stress, depression, and anxiety that persisted for several months post-intervention (Querstret et al., 2018). Similarly, Ju et al. (2022) reported that a four-week online mindfulness program led to sustained improvements in emotional distress among individuals during the COVID-19 pandemic (Ju et al., 2022).

The lasting benefits of mindfulness may be due to the nature of mindfulness practice, which encourages ongoing self-awareness and emotional regulation. As participants continue to apply mindfulness techniques in their daily lives, they may maintain and even enhance their sense of control and ability to manage emotional labor. This ongoing practice can reinforce the skills learned during the intervention and help individuals navigate future stressors more effectively (Hutmacher et al., 2022).

The findings of this study have important implications for the implementation of mindfulness interventions in occupational settings. Given the significant reductions in emotional labor and enhancements in perceived control observed in our study, organizations should consider integrating mindfulness training into employee development programs, particularly in high-emotional labor roles.

Mindfulness training can provide employees with valuable tools to manage stress and emotional demands, thereby enhancing job satisfaction and productivity. This is especially relevant in professions such as healthcare, education, and customer service, where emotional labor is prevalent and can lead to burnout if not addressed effectively (Purper et al., 2022; Xie et al., 2020). By supporting employees in developing mindfulness skills, organizations can foster a healthier and more resilient workforce.

Additionally, the long-term benefits of mindfulness training observed in our study suggest that periodic refresher sessions or ongoing mindfulness support could further enhance the sustainability of these effects. Providing employees with resources and opportunities to continue their mindfulness practice can help maintain the improvements in emotional regulation and perceived control over time.

While the results of this study are promising, several limitations should be acknowledged. First, the sample size was relatively small, with only 30 participants. Although the randomized controlled trial design enhances the validity of the findings, larger studies are needed to confirm these results and ensure their generalizability.

Second, the study relied on self-report measures, which can be subject to response biases. Future research could incorporate objective measures of emotional regulation and perceived control, such as physiological indicators or behavioral assessments, to provide a more comprehensive evaluation of the effects of mindfulness training.

Third, the control group did not receive any intervention, which may have influenced the observed differences between groups. Future studies could include an active control group, such as participants engaging in a different form of stress management training, to control for placebo effects and better isolate the specific impact of mindfulness training.

Finally, while the five-month follow-up period provides valuable insights into the long-term effects of the intervention, even longer follow-up assessments would be beneficial. Examining the durability of mindfulness training effects over a year or more could provide a more complete

understanding of its sustained benefits and inform recommendations for ongoing practice.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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