



Mindfulness As A Tool For Managing Aggression In Schools: Exploring Intervention Outcomes In Female Students

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Abstract

Aggression among school students is a growing concern, with implications for academic performance, mental health, and social relationships. This study investigated the effectiveness of mindfulness-based interventions (MBIs) in reducing aggression among adolescents aged 14-18 years in Delhi NCR. A sample of 60 female students was divided into experimental and control groups. The experimental group underwent an 8-week mindfulness training program, while the control group received no intervention. Pre- and post-intervention data were collected using the Child and Adolescent Mindfulness Measure (CAMM) and Buss-Perry Aggression Scale (BPAS). Results indicated a significant reduction in aggression levels and improvement in mindfulness among the experimental group compared to the control group. These findings suggest that MBIs are effective tools for managing aggression in school settings. The study highlights the potential of mindfulness as a preventive and therapeutic strategy for adolescent aggression, contributing to the growing body of literature on school-based mental health interventions.

Keywords: mindfulness, aggression, adolescents, school interventions, mindfulness-based interventions

Introduction

Aggression among adolescents is a growing concern in educational settings, with significant implications for students' academic performance, peer relationships, and psychological well-being. Defined as any behaviour intended to harm another individual, aggression can manifest in various forms, including physical aggression, verbal hostility, relational aggression, and impulsive outbursts (Zare et al., 2016; Fix & Fix, 2013). The prevalence of aggressive behaviour in schools has prompted educators, psychologists, and policymakers to explore effective interventions aimed at fostering emotional regulation and social harmony. Traditional disciplinary approaches, such as punitive measures and zero-tolerance policies, have shown limited success in addressing the root causes of aggression and may even exacerbate behavioural problems by reinforcing feelings of alienation and resentment among students (Kim et al., 2022). Consequently, there is a pressing need for evidence-based interventions that promote self-regulation, empathy, and emotional resilience in adolescents.

Mindfulness-based interventions (MBIs) have emerged as a promising approach for mitigating aggression by enhancing self-awareness, emotional regulation, and cognitive flexibility (Franco et al., 2016; Tao et al., 2021). Rooted in ancient contemplative traditions, mindfulness involves the practice of focused attention and nonjudgemental awareness of present-moment experiences. Contemporary psychological research has demonstrated that mindfulness training can cultivate self-control, reduce impulsivity, and promote adaptive coping strategies in stressful situations (Gao et al., 2016; Mehraban et al., 2022). As aggression is often linked to poor emotional regulation and heightened impulsivity, the potential of MBIs to foster balance and prosocial behaviour has garnered significant scholarly interest.

Theoretical Foundations of Mindfulness and Aggression

Several psychological theories provide a framework for understanding the mechanisms through which mindfulness influences aggression. The General Aggression Model (GAM) posits that aggressive behaviour arises from the interplay of situations and individual factors, including cognitive processing, emotional arousal, and social learning experiences (Zhang & Zhang, 2023). Within this model, mindfulness is theorized to reduce aggression by interrupting automatic negative thought patterns, fostering cognitive reappraisal, and promoting awareness of alternative behavioural responses (Clark, 2020).

Additionally, the Self-Regulatory Theory suggests that individuals with higher self-regulatory capacities are better equipped to manage impulsive reactions and engage in prosocial behaviour (Hu et al., 2024). Mindfulness practice enhances self-regulation by strengthening executive functioning, reducing reactivity to emotional stimuli, and fostering greater inhibitory control (Alizadeh et al., 2022). Moreover, Social Cognitive Theory highlights the role of observational learning and environmental influences in shaping aggressive behaviour. By integrating mindfulness training within school settings, educators can create a culture of emotional intelligence and conflict resolution, thereby reducing the reinforcement of aggressive behaviour among students (Su et al., 2022).



Need for the study

Adolescence is a critical developmental period characterized by heightened emotional reactivity, and susceptibility is exacerbated by academic pressure, peer competition, and sociocultural factors. Traditional approaches to managing aggression, such as punitive measures, are often fair in addressing the root causes of the problem. MBIs offer a proactive and holistic approach by fostering self-awareness, emotional regulation, and resilience.

Despite the growing body of evidence supporting the efficacy of MBIs in reducing aggression (Franco et al., 2016; Pinazo et al., 2020), there is a paucity of research in the Indian context. This study seeks to address this gap by investigating the impact of MBIs on aggression among Indian female adolescents. The findings will contribute to the development of culturally relevant interventions for managing aggression in schools.

Method

Participants

The study included 60 female students aged 14-18 years from schools in Delhi NCR. Participants were randomly assigned to either the experimental group (n=30) or the control group (n=30).

Tools Used

1. Child and Adolescent Mindfulness Measure (CAMM): This 10-item scale, designed for children and adolescents, assesses present-moment awareness and non-judgemental responses to thoughts and emotions. Higher scores indicate greater mindfulness.

2. Buss-Perry Aggression Scale (BPAS): Evaluates levels of aggression on a 29-item scale. A higher total score reflects greater aggression.

Procedure

The experimental group participated in an 8-week mindfulness training program, which included guided meditation, breathing exercises, and body scans. The control group did not receive any intervention. Pre- and post-test assessments were conducted. The mindfulness intervention was delivered over eight weeks, following COVID-19 safety protocols with groups of 15 students to ensure physical distancing.

Ethical approval for the study was obtained from the Department of Psychology at Lovely Professional University, Punjab, India. Consent was also sought from the school administration and the parents of participants.

Data Analysis

Data were analysed using SPSS 25. A paired sample t-test was used to examine differences in pre-test and post-test scores within each group, while an independent t-test was used to compare the experimental and control groups. Statistical significance was set at $p < 0.05$.

Results

The study aimed to determine the impact of a mindfulness-based intervention on female students' levels of aggression. The following section presents the results based on statistical analysis.

TABLE 1: Comparison of pre-and post-intervention scores of the control group using Paired sample t-test

VARIABLE	TEST	N	M	S.D.	S.E.M	DF	T	P
MINDFULNESS	Pre	30	8.53	5.18	.94	29	-0.68	.502
	Post	30	8.67	4.83	0.88			
AGGRESSION	Pre	30	109.97	10.6	1.93	29	2.08	.046
	Post	30	109.6	9.96	1.82			

The results in Table 1 indicate no significant differences in the pre-and post-intervention scores of mindfulness ($t = -0.68$, $p = 0.502$), and aggression ($t = 2.08$, $p = 0.046$).

The control group, which did not receive any mindfulness training, showed no significant differences between pre-test and post-test scores. The slight changes observed were not statistically significant, indicating that the control group's mindfulness and aggression levels remained largely stable throughout the study.

**TABLE 2: Comparison of pre-and post-intervention scores of the experimental group using Paired sample t-test**

VARIABLE	TEST	N	M	S.D.	S.E.M	DF	T	P
MINDFULNESS	Pre	30	8.77	4.16	0.76	29	-10.23	.000*
	Post	30	22.63	7.83	1.43			
AGGRESSION	Pre	30	109.7	8.37	1.52	29	8.55	.000*
	Post	30	85.30	12.91	2.35			

*p<0.001

The results (table 2) indicate a significant difference in the pre-and post-intervention scores of mindfulness (t= -10.23, p=.000), and aggression (t=8.55, p=.000) in the experimental group.

In contrast, the experimental group demonstrated significant improvements in all three variables following the 8-week mindfulness-based intervention. The intervention led to a notable reduction in aggression in the experimental group.

TABLE 3: Mean differences within the experimental group and control group on scores of dependent variables in pre- and post-intervention using independent t-test

VARIABLE	PRE-TEST			POST-TEST		
	df	t	p	df	t	p
MINDFULNESS	58	-0.19	.848	58	-8.30	.000*
AGGRESSION	58	0.108	.914	58	8.15	.000*

*p<0.001

The results show no significant difference in the pre-intervention scores of both the control and experimental groups on variables mindfulness (t= -0.19, p=.848), and aggression (t=0.108, p=.914). On the other hand, a significant difference is seen in the post-intervention scores of the control group and experimental group in mindfulness (t= -8.30, p=.000), and aggression (t= 8.15, p=.000). These results suggest that the mindfulness-based intervention had a positive effect on the experimental group, significantly improving mindfulness, while reducing aggression.

Discussion

The findings of this study align with previous research demonstrating the efficacy of MBIs in reducing aggression among adolescents (Tao et al., 2021; Zhang & Zhang, 2023). The significant improvements in mindfulness observed in the experimental group underscores the role of MBIs in enhancing emotional regulation and coping mechanisms. These results are consistent with studies by Franco et al. (2016) and Pinazo et al., (2020), which highlighted the positive impact of mindfulness training on impulsivity and aggression.

The reduction in aggression levels can be attributed to the development of self-awareness and self-control through mindfulness practices (Mehraban et al., 2022; Hu et al., 2024). The findings also support the mediating role of emotion regulation and resilience in the relationship between mindfulness and aggression (Kim et al., 2022; Aflakifard & Ghalehnoei, 2021).

This study contributed to the growing body of literature on school-based MBIs and provides evidence for their applicability in the Indian context. The findings have important implications for educators, psychologists, and policymakers, highlighting the need for integrating mindfulness practices into school curricula to promote mental health and well-being among students.

Future Directions and Implications

While mindfulness-based interventions (MBIs) show promise in reducing aggression among students, gaps remain in understanding their long-term effects and moderating factors like gender, socioeconomic status, and baseline aggression levels (Anjum, 2024). Future research should employ longitudinal designs and neurobiological measures to explore sustained benefits and underlying mechanisms, such as enhanced prefrontal cortex activity linked to improved impulse control (Kim et al., 2022).

For effective implementation, schools must integrate mindfulness into daily routines, such as morning meditation or pre-exam breathing exercises, and ensure teacher training and administrative support (Heidary et al., 2022; Sarabadani et al., 2020). Collaboration among educators, psychologists, and policymakers is crucial for scaling MBIs, with socio-emotional learning (SEL) frameworks providing a holistic approach to student well-being (Mehraban et al., 2024). Parental involvement is also key, as families can reinforce mindfulness practices at home.



Cultural adaptability is essential, as mindfulness programs must align with the cultural and linguistic preferences of diverse student populations (Gao et al., 2016; Zare et al., 2016). By addressing these factors, schools can create inclusive, supportive environments that empower students to manage emotions, build resilience, and thrive academically and socially

Conclusion

This study demonstrates the effectiveness of mindfulness-based interventions in reducing aggression and enhancing mindfulness among school students. The findings underscore the potential of MBIs as preventive and therapeutic tools for managing adolescent aggression. Future research should explore the long-term effects of mindfulness training and its applicability in diverse cultural and socio-economic contexts.

Conflict of Interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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