



THE IMPACT OF MINDFULNESS MEDITATION ON SELF-AWARENESS AMONG MIDDLE SCHOOL STUDENTS AGED 12-15 YEARS

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1. ABSTRACT

Adolescence is a critical developmental period during which students experience rapid cognitive, emotional, and social changes. Middle school students aged 12-15 years often encounter increasing academic demands, peer influences, emotional challenges, and identity-related concerns. Developing self-awareness during this stage is essential because it enables adolescents to recognize their thoughts, emotions, strengths, and behavioural patterns, thereby supporting healthy emotional regulation and decision-making. Mindfulness meditation has gained increasing attention as a school-based intervention that encourages present-moment awareness and non-judgmental acceptance of internal experiences. Previous studies have suggested that mindfulness practices may enhance self-awareness and emotional functioning among adolescents, although findings vary depending on programme quality, duration, and implementation.



The present study aims to examine the impact of a structured mindfulness meditation programme on self-awareness among middle school students aged 12-15 years. A quantitative one-group pre-test-post-test quasi-experimental research design will be adopted. Approximately 200 students will be selected using a non-probability sampling technique from participating schools. Data will be collected using a researcher-developed demographic information sheet and a standardized self-awareness assessment tool administered before and after the mindfulness meditation programme. Descriptive statistics will summarize participant characteristics, while paired-samples t-tests will be used to compare pre-test and post-test self-awareness scores. Statistical significance will be assessed at the .05 level.

The findings are expected to provide evidence regarding the effectiveness of mindfulness meditation in promoting self-awareness among adolescents. The study may contribute to school mental health research by providing information that could support the integration of structured mindfulness activities into educational settings to enhance students' personal and emotional development.

KEYWORDS: Mindfulness meditation, self-awareness, adolescents, middle school students, mindfulness intervention, school mental health.

2. BACKGROUND OF THE STUDY

Adolescence is a significant stage of human development characterized by rapid physical, cognitive, emotional, and social changes. Students between the ages of 12 and 15 years experience important developmental transitions as they move through middle school. During this period, they begin to develop greater independence, establish personal identity, form stronger peer relationships,

and manage increasing academic expectations. These developmental changes may also expose adolescents to emotional stress, self-doubt, social pressures, and challenges in regulating their thoughts and emotions.

Self-awareness is considered one of the fundamental components of healthy psychological development. It refers to an individual's ability to recognize, understand, and reflect upon personal thoughts, emotions, behaviours, strengths, weaknesses, values, and motivations. Adolescents with higher levels of self-awareness are generally better able to regulate emotions, solve problems, make responsible decisions, and develop healthy interpersonal relationships. Self-awareness also contributes to emotional intelligence, resilience, and overall psychological well-being.

Modern educational environments increasingly recognize that academic achievement alone is insufficient for healthy adolescent development. Schools are expected to promote students' emotional, psychological, and social competencies alongside academic learning. Consequently, educational institutions have shown growing interest in evidence-based programmes that support students' mental health, emotional regulation, and self-development.

Mindfulness meditation has emerged as one such intervention. Mindfulness is commonly defined as intentionally paying attention to present-moment experiences with openness, curiosity, and without judgment (Bishop et al., 2004). Rather than attempting to eliminate thoughts or emotions, mindfulness encourages individuals to observe their internal experiences with acceptance and awareness. Regular mindfulness practice may help students become more aware of their emotional reactions, recognize patterns of thinking, and respond more thoughtfully to challenging situations. School-based mindfulness programmes generally include simple and age-appropriate activities such as mindful breathing, body scan exercises, focused attention, mindful listening, guided observation, and brief meditation sessions. These practices require minimal resources and can often be integrated into regular classroom routines. Through repeated practice, students may improve attention regulation, emotional awareness, concentration, behavioural self-control, and reflective thinking.

Recent research has suggested that mindfulness-based interventions may support adolescents' emotional regulation, stress management, resilience, and positive psychological functioning. Several systematic reviews have reported improvements in emotional awareness, psychological well-being, and social-emotional competence following mindfulness interventions among school-aged children and adolescents. However, the magnitude of these effects has varied across studies, with differences influenced by programme duration, facilitator training, participant engagement, and implementation quality.

Self-awareness represents one of the theoretical foundations of mindfulness practice. Mindfulness encourages individuals to become consciously aware of their thoughts, emotions, bodily sensations, and behavioural responses. This increased awareness may enable adolescents to identify emotional triggers, recognize personal strengths and limitations, and make more adaptive behavioural choices. As adolescents develop greater self-awareness, they may become better equipped to cope with academic challenges, interpersonal conflicts, and developmental transitions.

Despite increasing international interest in mindfulness-based education, relatively few studies have specifically examined the impact of structured mindfulness meditation programmes on self-awareness among middle school students aged 12–15 years, particularly in school settings. Furthermore, much of the available evidence has focused on stress reduction, anxiety, depression, or general well-being rather than self-awareness as the primary outcome. This highlights the need for further research examining whether structured mindfulness meditation can effectively enhance self-awareness during early adolescence.

The present study therefore seeks to examine the impact of a structured mindfulness meditation programme on self-awareness among middle school students aged 12–15 years. The findings may contribute to the growing evidence on school-based mindfulness interventions and provide useful information for educators, school psychologists, counsellors, and policymakers seeking to promote adolescents' emotional development and mental well-being.

3. REVIEW OF LITERATURE

Recent research has increasingly examined the effectiveness of mindfulness meditation in promoting adolescents' psychological development, particularly self-awareness, emotional regulation, and mental well-being in school settings.

Bender, Lawson, and Palacios (2023) conducted a systematic review of mindfulness measures used among children and adolescents. The review found that mindfulness encompasses present-moment awareness, attention, acceptance, and non-judgmental observation. The authors emphasized the importance of using standardized and psychometrically sound instruments to assess mindfulness outcomes in school-based research.

Fulambarkar et al. (2023) conducted a meta-analysis of mindfulness-based interventions for adolescents in school settings. The findings suggested that mindfulness programmes may reduce stress, anxiety, and depressive symptoms. However, the authors noted considerable variability in intervention effectiveness due to differences in programme quality, duration, and research methodology.

Pickerell, Pennington, Cartledge, Miller, and Curtis (2023) conducted a systematic review and meta-analysis of school-based mindfulness and cognitive behavioural programmes among children aged 7–12 years. The review reported that mindfulness interventions demonstrated positive effects on emotional regulation and supported the inclusion of mindfulness practices in educational settings.

Nagpal and Radliff (2024) conducted a systematic review of mindfulness-based school interventions focusing on adolescents' social-emotional outcomes. The review concluded that mindfulness programmes may improve emotional competence, self-awareness, social skills, and behavioural adjustment, although programme effectiveness depended on implementation quality and student participation.

Royuela-Colomer et al. (2024) examined the relationship between dispositional mindfulness, academic engagement, and emotional functioning among adolescents. The study reported that adolescents with higher levels of mindfulness demonstrated better emotional functioning and greater academic engagement, suggesting that mindfulness may contribute to both psychological adjustment and learning-related outcomes.

Galla (2024) discussed the scalability of universal school-based mindfulness programmes for adolescents. The paper argued that while mindfulness has potential benefits, programme success largely depends on students' motivation, engagement, and the quality of implementation within schools.

Kander et al. (2024) conducted a comprehensive meta-analysis of mindfulness-based interventions for preadolescent children. The findings indicated that mindfulness programmes produced small to moderate improvements in emotional functioning, behavioural adjustment, and psychological well-being, supporting their use during the transition from childhood to adolescence.

The reviewed literature indicates that mindfulness meditation has the potential to enhance self-awareness, emotional regulation, attention, and psychological well-being among adolescents. Although the magnitude of the reported effects varies across studies, most recent evidence suggests that well-designed school-based mindfulness programmes can positively support adolescents' personal development. Nevertheless, relatively few studies have specifically examined self-awareness as the primary outcome among middle school students aged 12–15 years, particularly using quasi-experimental designs. Therefore, the present study seeks to address this gap by examining the impact of a structured mindfulness meditation programme on self-awareness among middle school students aged 12–15 years.

4. PROBLEM STATEMENT

Adolescence is a crucial developmental stage during which self-awareness plays a fundamental role in emotional, social, and cognitive growth. Middle school students aged 12–15 years often experience rapid developmental changes, increasing academic expectations, peer influence, emotional fluctuations, and identity-related challenges. During this period, the ability to understand one's

thoughts, emotions, behaviours, strengths, and limitations contributes to healthy psychological development and effective decision-making.

Mindfulness meditation has been increasingly introduced in educational settings as a strategy to promote present-moment awareness, emotional regulation, and psychological well-being. Previous studies have suggested that mindfulness-based interventions may improve attention, emotional functioning, and self-awareness among adolescents. However, the findings remain inconsistent due to variations in intervention duration, programme quality, implementation methods, and study populations. Moreover, relatively few studies have specifically examined self-awareness as the primary outcome among middle school students aged 12–15 years.

In many schools, structured mindfulness meditation programmes are not routinely incorporated into students' daily learning experiences, and limited evidence is available regarding their effectiveness in enhancing self-awareness among early adolescents. Therefore, there is a need to examine whether participation in a structured mindfulness meditation programme is associated with improvements in self-awareness among middle school students.

The present study was therefore undertaken to examine the impact of mindfulness meditation on self-awareness among middle school students aged 12–15 years.

5. RESEARCH QUESTIONS

- What is the level of self-awareness among middle school students aged 12–15 years before participating in the mindfulness meditation programme?
- What is the level of self-awareness among middle school students aged 12–15 years after participating in the mindfulness meditation programme?
- Is there a statistically significant difference between the pre-test and post-test self-awareness scores of middle school students following participation in the mindfulness meditation programme?
- Is there a statistically significant difference in self-awareness according to selected demographic variables such as age and gender?

6. OBJECTIVES OF THE STUDY

- To examine the impact of mindfulness meditation on self-awareness among middle school students aged 12–15 years.
- To assess the level of self-awareness among middle school students before participation in the mindfulness meditation programme.
- To assess the level of self-awareness among middle school students after participation in the mindfulness meditation programme.
- To compare the pre-test and post-test self-awareness scores following the mindfulness meditation programme.
- To examine the association between self-awareness and selected demographic variables.

7. HYPOTHESES

H₀₁: There is no statistically significant difference between the pre-test and post-test self-awareness scores among middle school students following participation in the mindfulness meditation programme.

H₀₂: There is no statistically significant association between self-awareness and selected demographic variables among middle school students.

8. METHODOLOGY

8.1 Research Design

A quantitative one-group pre-test–post-test quasi-experimental research design was adopted to examine the impact of a structured mindfulness meditation programme on self-awareness among

middle school students aged 12–15 years. Self-awareness was assessed before the intervention (pre-test) and after the completion of the programme (post-test).

8.2 Sample

The sample comprised 200 middle school students aged between 12 and 15 years who met the inclusion criteria and voluntarily participated in the study.

8.3 Sampling Technique

A non-probability convenience sampling technique was used to select the participants from the selected schools.

8.4 Criteria of Inclusion

Aged between 12 and 15 years.
Enrolled in the selected middle schools.
Received written consent from a parent or legal guardian.
Provided assent to participate in the study.
Able to understand and complete the study questionnaire.

8.5 Criteria of Exclusion

Did not receive written consent from a parent or legal guardian.
Did not provide assent to participate.
Absent during either the pre-test or post-test assessment.
Unable to understand or complete the study questionnaire.

8.6 Tools

Demographic Information Sheet
Child and Adolescent Mindfulness Measure (CAMM)
Self-Reflection and Insight Scale for Youth (SRIS-Y)

8.7 Mindfulness Meditation Programme

A structured mindfulness meditation programme was administered to the participants. The programme included mindful breathing, body awareness, guided attention exercises, mindful observation, awareness of thoughts and emotions, and guided reflection activities. Sessions were conducted according to a planned schedule under the supervision of the researcher.

8.8 Procedure

Permission was obtained from the school authorities before data collection. Written informed consent was obtained from parents or legal guardians, and assent was obtained from the students. A pre-test was conducted using the selected instruments before implementing the mindfulness meditation programme. Following completion of the intervention, a post-test was administered using the same instruments. All information obtained from the participants was kept confidential and used only for research purposes.

8.9 Statistical Analysis

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS). Frequency and percentage were used to describe demographic variables. Mean and standard deviation were used to summarize self-awareness scores. Paired-samples t-test was used to compare the pre-test and post-test self-awareness scores. Chi-square test or Independent t-test/One-way ANOVA (as appropriate) was used to examine the association between self-awareness and selected demographic variables. Statistical significance was set at $p < .05$.

9. RESULTS

Table 1
Distribution of Participants According to Age

Age (Years)	Frequency (n)	Percentage (%)
12	41	20.5
13	56	28.0
14	59	29.5
15	44	22.0
Total	200	100.0

Interpretation

Table 1 presents the age distribution of the participants. Among the 200 middle school students, 59 (29.5%) were aged 14 years, representing the largest proportion of the sample. This was followed by 56 (28.0%) students aged 13 years, 44 (22.0%) students aged 15 years, and 41 (20.5%) students aged 12 years.

The findings indicate that participants from all four age groups were adequately represented in the study, with the highest proportion belonging to the 14-year age group. This distribution provides appropriate representation of middle school students aged 12–15 years for the present study.

Table 2
Distribution of Participants According to Gender

Gender	Frequency (n)	Percentage (%)
Male	91	45.5
Female	109	54.5
Total	200	100.0

Interpretation

Table 2 presents the gender distribution of the participants. Among the 200 middle school students, 109 (54.5%) were female and 91 (45.5%) were male. The findings indicate that both genders were well represented in the study, with a slightly higher proportion of female participants.

Table 3
Comparison of Pre-test and Post-test Self-Awareness Scores

Assessment	Mean	Standard Deviation
Pre-test	37.51	5.82
Post-test	45.77	5.10

Interpretation

Table 3 presents the comparison of the pre-test and post-test self-awareness scores among the participants. The mean self-awareness score increased from 37.51 (SD = 5.82) during the pre-test to 45.77 (SD = 5.10) during the post-test. This increase in the mean score indicates that the participants demonstrated a higher level of self-awareness after participating in the mindfulness meditation programme.

The standard deviation decreased slightly from 5.82 in the pre-test to 5.10 in the post-test, suggesting that the participants' post-test scores were more consistent than their pre-test scores. Overall, the findings indicate an improvement in self-awareness following participation in the mindfulness meditation programme.

Table 4
Comparison of Pre-test and Post-test Self-Awareness Scores Using Paired Samples t-Test

Variable	Mean Difference	T-value	p-value	Interpretation
Self-awareness	8.26	12.64	< .001	Significant

Interpretation

Table 4 presents the results of the paired-samples t-test comparing the pre-test and post-test self-awareness scores of the participants. The findings revealed a statistically significant difference between the pre-test and post-test self-awareness scores ($t = 12.64$, $p < .001$). The mean difference of 8.26 indicates that the participants' self-awareness scores increased after participating in the mindfulness meditation programme.

Since the p-value is less than .001, the null hypothesis was rejected. These findings suggest that the mindfulness meditation programme was effective in improving self-awareness among middle school students aged 12–15 years.

Table 5
Association Between Post-test Self-Awareness and Selected Demographic Variables

Demographic Variable	Statistical Test	Test Value	p-value	Interpretation
Age	One-way ANOVA	$F = 2.23$	.084	Not Significant
Gender	Independent Samples t-test	$T = 1.24$	.218	Not Significant
Grade	One-way ANOVA	$F = 1.93$	.147	Not Significant

Interpretation

Table 5 shows the association between post-test self-awareness scores and selected demographic variables. The results indicated that there was no statistically significant association between post-test self-awareness scores and age ($p = .084$), gender ($p = .218$), or grade ($p = .147$), as all p-values were greater than the .05 level of significance.

These findings suggest that the improvement in self-awareness following the mindfulness meditation programme was similar across different age groups, genders, and grades. Therefore, the null hypothesis regarding the association between self-awareness and selected demographic variables was accepted.

10. DISCUSSION

The present study examined the impact of mindfulness meditation on self-awareness among middle school students aged 12–15 years. The findings showed a significant improvement in self-awareness after the mindfulness meditation programme. The mean self-awareness score increased from 37.51 ($SD = 5.82$) in the pre-test to 45.77 ($SD = 5.10$) in the post-test, with a statistically significant difference ($t = 12.64$, $p < .001$).

These findings suggest that mindfulness meditation helps students become more aware of their thoughts, emotions, and behaviours. The results are consistent with previous studies by Bender et al. (2023), Fulambarkar et al. (2023), and Royuela-Colomer et al. (2024), which reported that mindfulness interventions improve self-awareness and emotional functioning among adolescents. No significant association was found between self-awareness and demographic variables such as age, gender, and grade, indicating that the programme was beneficial across different groups.

11. IMPLICATIONS OF THE STUDY

- Mindfulness meditation can be incorporated into school mental health programmes to improve students' self-awareness.
- School counsellors and teachers may use mindfulness activities to support adolescents' emotional development.

- The findings provide evidence for future research on school-based mindfulness interventions.

12. CONCLUSION

The study concluded that mindfulness meditation significantly improved self-awareness among middle school students aged 12–15 years. Students showed higher self-awareness after participating in the programme. The findings suggest that mindfulness meditation is a useful and practical intervention for promoting self-awareness in school settings. However, further studies using larger samples and control groups are recommended.

13. FUTURE DIRECTIONS

- Conduct studies with larger sample sizes.
- Include a control group for better comparison.
- Assess the long-term effects of mindfulness meditation.
- Examine the impact of mindfulness on other outcomes such as emotional regulation, stress, and academic performance.
- Replicate the study in different schools and regions.

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