



Beyond Academic Achievement: The Effect of Mindfulness-Based Intervention on Students' Emotional Regulation and Psychological Well-Being

Raudlatul Hikmah^{1*}, Fatimah Syivaa Usarriroh²

¹ Universitas Nurul Jadid, Indonesia

² Universitas Islam Negeri Sunan Kalijaga Yogyakarta, Indonesia

Email: hikmah12@gmail.com

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*Correspondence Address:

hikmah12@gmail.com

Abstract :

This study aims to examine the effect of mindfulness-based intervention on students' emotional regulation and psychological well-being beyond conventional academic achievement. A quantitative survey design was employed at Madrasah Tsanawiyah Nurul Jadid, Probolinggo, Indonesia. Data were collected using structured questionnaires measuring mindfulness, emotional regulation, and psychological well-being, supported by contextual observations and informal field conversations. Data were analyzed through systematic data screening, descriptive presentation, inferential statistical procedures, and verification of findings, while instrument validity and reliability were assessed before analysis. The findings indicate that mindfulness-based intervention provides psychological benefits beyond academic achievement by strengthening students' emotional self-regulation and adaptive functioning. The findings imply that schools should integrate appropriately designed mindfulness activities into student development and psychological support programs while evaluating implementation quality and contextual suitability. Mindfulness-based intervention is associated with improved emotional awareness, greater control of emotional reactions, stronger attentional regulation, and better psychological balance among students. The results further suggest that emotional regulation provides an important pathway through which mindfulness may support psychological well-being.

INTRODUCTION

The psychological well-being of adolescents has become an increasingly important social concern because emotional difficulties during adolescence can influence academic functioning, interpersonal relationships, and later mental health (Ajani, 2024; Khomairoh, Diana, & Sain, 2025; Lubis, Lubis, & Patisina, 2024). Schools are therefore expected to provide not only academic instruction but also preventive support that strengthens students' emotional capacities. Mindfulness-based intervention (MBI) offers a promising approach because it trains individuals to attend to present experiences intentionally and nonjudgmentally, potentially strengthening emotional awareness and self-regulation (Luo & Li, 2025; Ruble et al., 2023; Tang, Shao, & Zhang,

2025). Recent evidence indicates that mindfulness-based interventions can reduce emotional dysregulation among adolescents and improve emotional regulation and coping skills. However, evidence concerning psychological well-being remains more mixed, particularly in universal school-based programs. This indicates that mindfulness should be examined beyond academic achievement alone (Issa, 2023; Özbay, Demirci Seyrek, & Söylemez, 2024; Sinaga, 2023). Understanding whether mindfulness can improve students' emotional regulation and psychological well-being is therefore important for developing educational interventions that address the whole student rather than academic outcomes exclusively.

The general problem arises from the increasing emotional demands experienced by adolescents within contemporary educational environments. Adolescence represents a developmental period characterized by substantial cognitive, social, emotional, and interpersonal changes, making students particularly vulnerable to difficulties in managing intense emotions (Farrell, Cirino, Barnes, & Woods, 2025; Ortiz-Bonnin & Blahopoulou, 2025; Paignon, Desrichard, & Bollon, 2004). Emotional dysregulation can manifest through impulsive reactions, difficulty calming negative emotions, reduced concentration, interpersonal conflict, and difficulties adapting to stressful circumstances. These experiences may subsequently influence students' psychological well-being and their ability to participate effectively in school life. Recent systematic evidence identifies emotional dysregulation as an important adolescent mental-health concern and reports that mindfulness-based interventions can improve emotional regulation and coping. Nevertheless, emotional difficulties cannot always be addressed adequately through conventional academic counseling because students may require systematic opportunities to develop awareness of their thoughts, feelings, bodily sensations, and behavioral responses. Consequently, schools need preventive approaches that strengthen emotional self-regulation before difficulties become more severe.

A second problem concerns the tendency of educational institutions to prioritize measurable academic achievement while psychological and emotional outcomes receive comparatively less systematic attention. Students may obtain satisfactory academic results while simultaneously experiencing stress, emotional instability, low psychological well-being, or difficulties managing negative emotions (Adinew, 2024; Im Hambali, Hitipeuw, Pohan, & Abdullah, 2025; Pradhan & Ahmad, 2025). This creates a limitation in educational approaches that define student success primarily through grades and academic productivity. Mindfulness provides an alternative perspective by emphasizing present-moment awareness, attention regulation, acceptance, and nonjudgmental observation of internal experiences. Evidence from school-based mindfulness research suggests improvements in attention, resilience, executive functioning, and prosocial behavior, although findings concerning well-being have been inconsistent. Moreover, a large cluster randomized trial of school-based mindfulness training found mixed outcomes and emphasized the importance of implementation and intervention context. These findings indicate that mindfulness interventions require empirical examination within specific educational settings rather than assuming universal effectiveness across all student populations.

Previous research provides substantial evidence that mindfulness can influence emotional regulation among adolescents. A recent systematic review of mindfulness-based interventions found that MBIs can reduce emotional dysregulation and strengthen emotional regulation, coping, and self-regulatory capacities (Aghababaei &

Tabik, 2015; Hemsworth, Muterera, Khorakian, & Garcia-Rivera, 2026). Earlier school-based evidence similarly reported positive effects on cognitive performance, stress, coping, and resilience, although effects on emotional problems were comparatively smaller. These findings establish a theoretical foundation for understanding mindfulness as a psychological process that may help students observe emotional experiences before responding impulsively (McLoughlin & Brady, 2024; Rouissi, 2025; Zhang, Han, Liu, Yang, & Liao, 2024). Nevertheless, previous research has frequently examined emotional regulation, stress, anxiety, resilience, or academic outcomes as separate dependent variables. Consequently, the simultaneous relationship between mindfulness-based intervention, emotional regulation, and broader psychological well-being remains insufficiently clarified in specific school contexts. This gap is important because improved emotional regulation may represent the mechanism through which mindfulness contributes to broader psychological well-being. Examining these outcomes together can therefore provide a more comprehensive understanding of the intervention's educational value.

The existing literature also reveals methodological and contextual limitations. Although systematic reviews generally indicate that mindfulness interventions show promise, considerable heterogeneity exists in intervention designs, delivery methods, duration, measurement instruments, and educational contexts. Furthermore, a reanalysis of randomized trials focusing specifically on adolescents found that universal school-based mindfulness interventions did not consistently improve outcomes across all conditions and raised questions about their effectiveness as a universal prevention strategy. These findings suggest that positive claims about mindfulness should not be generalized without considering participant characteristics, implementation conditions, and institutional context (Lorente, Arnal-Palacián, & Paredes-Velasco, 2024; Loyens, Van Meerten, Schaap, & Wijnia, 2023; Miconi, Santavicca, Frounfelker, Mounchingam, & Rousseau, 2024; Türk, 2023; Venard, Pina Brito, Eeckhout, Zimmermann, & Van Petegem, 2023). The present study therefore occupies a position between broad evidence supporting mindfulness and evidence questioning its universal effectiveness. By examining students in a specific Islamic secondary-school environment, this research contributes contextual evidence concerning whether mindfulness-based practices can strengthen emotional regulation and psychological well-being. Addressing this gap is important for determining whether mindfulness can function as a practical, school-based psychological intervention.

The state of the art of this study lies in examining mindfulness-based intervention beyond the conventional emphasis on academic achievement and instead focusing on two interconnected psychological outcomes: emotional regulation and psychological well-being. The study conceptualizes mindfulness as an applied psychological intervention that may strengthen students' awareness of emotional experiences, reduce reactive responses, and support more adaptive psychological functioning. This perspective is consistent with recent evidence identifying emotional regulation as an important pathway through which mindfulness may influence adolescent mental health. However, the study also responds to contradictory findings concerning universal school-based mindfulness interventions by examining its application within a concrete educational context rather than assuming uniform effects. The novelty therefore lies in integrating emotional regulation and psychological well-being as complementary outcomes within a school-based mindfulness framework. Resolving this issue is important because educational institutions require interventions

that are psychologically meaningful, contextually appropriate, and capable of supporting students' well-being alongside their academic development (Wnuk & Chudzicka-Czupala, 2026).

The research problem addressed in this study is whether mindfulness-based intervention contributes to students' emotional regulation and psychological well-being within the context of secondary education. The central argument is that systematic mindfulness practice can encourage students to become more aware of their thoughts, emotions, bodily sensations, and behavioral impulses before responding to challenging situations. This increased awareness may strengthen emotional regulation by reducing automatic and reactive responses, while simultaneously supporting psychological well-being through greater emotional balance, acceptance, and perceived psychological stability. However, the expected effect should not be interpreted as automatic because previous evidence indicates that school-based mindfulness outcomes vary according to intervention design, implementation, and student characteristics. Therefore, this study proposes that mindfulness-based intervention can positively influence students' emotional regulation and psychological well-being when implemented systematically within an appropriate educational environment. The research consequently seeks empirical evidence that can clarify whether mindfulness provides meaningful psychological benefits beyond academic achievement.

RESEARCH METHODS

This study employed a quantitative research approach using a survey design. The survey design was selected because the research aimed to examine students' perceptions and psychological conditions systematically and to determine the relationship between mindfulness-based intervention, emotional regulation, and psychological well-being through standardized measurement. Quantitative survey research enables researchers to collect comparable responses from a relatively broad group of students and identify general patterns across the measured constructs. The study was conducted at Madrasah Tsanawiyah Nurul Jadid, Probolinggo, Indonesia, which was purposively selected because it provides a relevant secondary-school context for examining adolescent psychological development and school-based mindfulness practices. The participants were students who were directly involved in the learning environment and experienced the intervention or mindfulness-related activities examined in the study. Data were collected using structured questionnaires based on indicators of mindfulness, emotional regulation, and psychological well-being. Supporting field information was obtained through limited observations and informal conversations to contextualize the quantitative findings.

Data analysis was conducted through systematic stages of data preparation, reduction, display, and verification. In the quantitative context, data condensation involved screening questionnaire responses, checking completeness, identifying invalid responses, coding items, and organizing the dataset according to the research variables. Data display was performed through descriptive statistics, frequency distributions, mean scores, standard deviations, and comparative presentations of the relevant variables. Where appropriate, inferential statistical analysis was used to examine the relationship or influence between mindfulness-based intervention and students' emotional regulation and psychological well-being. The analysis was conducted according to the characteristics and assumptions of the selected statistical procedures. Data verification involved checking the consistency of the dataset, interpreting

statistical results against the research objectives, and ensuring that conclusions were supported by the empirical evidence. This analytical process enabled the researchers to move systematically from raw questionnaire responses toward interpretable findings.

The validity and reliability of the research instruments were examined before the main analysis. Content validity was established by aligning questionnaire items with the conceptual dimensions of mindfulness, emotional regulation, and psychological well-being and, where applicable, obtaining expert evaluation. Construct validity was assessed through appropriate statistical procedures, while reliability was examined using an internal-consistency coefficient such as Cronbach's alpha. Questionnaires were administered under standardized conditions to minimize differences in instructions and response procedures. Ethical principles were also considered by informing participants about the purpose of the study, ensuring voluntary participation, maintaining confidentiality, and using the collected information exclusively for research purposes. Although the study employed a quantitative survey design, observations and informal field conversations were used only as contextual supporting information rather than as primary qualitative evidence. This distinction ensured methodological consistency between the research design, data collection, and analytical procedures.

RESULT AND DISCUSSION

Result

Mindfulness and Emotional Regulation

Mindfulness-based intervention was operationally defined in the field as students' capacity to attend consciously to present experiences, recognize emotional changes, observe thoughts without immediate judgment, regulate emotional reactions, and return attention to the current activity. Emotional regulation was reflected through students' ability to identify emotions, control impulsive responses, tolerate uncomfortable feelings, and select more adaptive responses when facing academic or interpersonal difficulties. The findings indicate that students who demonstrated greater mindfulness tended to show stronger awareness of emotional changes before reacting. Rather than immediately responding to anger, disappointment, anxiety, or frustration, students appeared increasingly capable of pausing and considering alternative responses. This pattern suggests that mindfulness may contribute to emotional regulation by creating a psychological space between emotional experience and behavioral reaction. The intervention therefore appears relevant not only to students' academic functioning but also to their capacity to manage emotional experiences within everyday school interactions.

One student described the experience as follows: "Before the mindfulness activity, when I became angry, I usually responded immediately. After practicing mindfulness, I try to breathe first and understand what I am feeling before responding." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this statement as evidence of increased emotional awareness and response inhibition. The student's description indicates a transition from automatic emotional reaction toward conscious observation. Breathing and pausing functioned as practical mechanisms through which the student created distance between emotional stimulation and behavioral response. This pattern is consistent with evidence that mindfulness-based interventions can improve emotional regulation and reduce emotional dysregulation among adolescents. The finding suggests that mindfulness may

help students recognize emotional experiences without immediately acting upon them. From an applied psychological perspective, this capacity is important because emotional regulation can influence interpersonal relationships, classroom behavior, coping, and students' broader psychological functioning.

Another student explained, "When I feel worried about an assignment or examination, I try to focus on my breathing instead of thinking repeatedly about what might happen." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this response as evidence that mindfulness was used as an attentional regulation strategy during stressful situations. Rather than eliminating the stressful situation, the student attempted to redirect attention toward present-moment bodily experience. This approach may reduce excessive cognitive rumination and allow students to respond to stress more deliberately. The interpretation corresponds with previous evidence showing that mindfulness can improve coping and emotional self-regulation among adolescents. The finding also indicates that mindfulness is potentially useful as a preventive school-based strategy because students can apply simple techniques during ordinary academic stress rather than only after psychological problems become severe.

Observational information indicated that students participating in mindfulness activities generally became quieter and more attentive during the practice sessions. Some students initially demonstrated restlessness or difficulty maintaining attention, but repeated practice appeared to support more consistent engagement with breathing and present-moment awareness. During subsequent classroom interactions, some students were observed pausing before responding to emotionally charged situations and returning attention to assigned activities after brief distractions. The researcher interpreted these observations as contextual support for the survey findings, particularly regarding attention and emotional self-regulation. However, the observations should not be interpreted as independent causal evidence because the primary research design was quantitative. Instead, they provide contextual information suggesting how changes in emotional awareness may become visible in everyday school behavior.

The findings can be restated as follows: mindfulness-based intervention appears to strengthen students' capacity to recognize emotional experiences before reacting behaviorally. Students described and demonstrated greater awareness of anger, anxiety, frustration, and worry, together with increased use of breathing, pausing, and attentional redirection. These practices indicate movement from automatic emotional responses toward more deliberate regulation. The central implication is that mindfulness does not necessarily eliminate negative emotions; rather, it may change students' relationship with those emotions by increasing awareness and reducing immediate reactivity. This interpretation is supported by recent systematic evidence showing that MBIs can improve emotional regulation and reduce emotional dysregulation among adolescents. Therefore, the important outcome is not the absence of difficult emotions but the development of greater capacity to recognize, tolerate, and respond adaptively to them.

The emerging pattern can be described as mindful awareness → emotional recognition → response pause → adaptive emotional regulation. Students first become more attentive to present internal experiences, then identify emotional changes, create a brief pause before reacting, and subsequently select a more controlled response. This

sequence provides a psychologically plausible explanation for how mindfulness may influence emotional regulation. The pattern is consistent with the theoretical assumption that mindfulness strengthens awareness and self-regulation, while also acknowledging that the strength of intervention effects may depend on implementation and student characteristics. Existing school-based evidence has found promising effects on self-regulation and emotional outcomes, but systematic reviews also identify substantial heterogeneity across interventions. Consequently, the observed pattern should be interpreted as evidence supporting the proposed mechanism rather than proof of universal effectiveness.

Mindfulness-Based Intervention and Psychological Well-Being

Psychological well-being was operationally defined as students' perceived positive psychological functioning, reflected in emotional balance, positive self-perception, psychological comfort, adaptive coping, meaningful engagement with school activities, and the ability to maintain a relatively positive psychological state despite everyday challenges. The findings indicate that mindfulness-based intervention was associated with students' greater awareness of internal experiences and improved ability to respond to academic and interpersonal pressures without becoming excessively overwhelmed. Students described mindfulness as helping them become calmer, more present, and more accepting of temporary difficulties. These experiences suggest that psychological well-being was reflected not simply through the absence of stress or negative emotions, but through students' perceived capacity to maintain psychological balance. The interpretation is important because existing research indicates that school-based mindfulness interventions can produce positive well-being outcomes in some contexts, although the evidence remains mixed and sensitive to intervention characteristics.

One student explained, "After practicing mindfulness, I feel calmer when I have many school activities. I still feel tired, but I do not immediately think that everything is a problem." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this statement as an indication of improved psychological perspective and emotional balance. The student did not claim that mindfulness removed workload or fatigue; rather, mindfulness appeared to change the way the student interpreted and responded to those experiences. This distinction reflects an important dimension of psychological well-being because well-being does not require the complete absence of negative experiences. Instead, it involves maintaining adaptive functioning despite ordinary stressors. The finding is compatible with literature linking mindfulness with positive psychological well-being and adaptive emotion-regulation strategies. However, the finding should be interpreted cautiously because previous large-scale school trials have reported mixed effects on adolescent well-being.

Another student stated, "I have become more aware when I am comparing myself with other students. When that happens, I try to return my attention to what I am doing instead of judging myself." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this response as evidence of greater self-awareness and reduced self-judgment. The student's ability to recognize comparison-related thoughts without immediately accepting them suggests a more accepting relationship with internal experiences. This process may contribute to psychological well-being by reducing excessive self-evaluation and emotional reactivity.

Mindfulness emphasizes present-moment awareness and nonjudgmental observation, which can provide students with a psychological strategy for responding to difficult thoughts without becoming fully absorbed by them. Recent evidence has similarly associated mindfulness with psychological well-being and adaptive cognitive emotion-regulation strategies. The finding therefore suggests that psychological well-being may improve through changes in how students relate to their thoughts and emotions.

Observation of mindfulness sessions indicated that students gradually became more familiar with sitting quietly, focusing attention, and returning attention after distraction. Some students initially displayed discomfort with silence or difficulty maintaining concentration, but participation became more stable during subsequent sessions. In classroom contexts, several students appeared more composed during demanding activities and demonstrated greater willingness to resume tasks after interruptions. The researcher interpreted these observations as contextual evidence of improved attentional and emotional stability. Nevertheless, because the study used a quantitative survey design, observations were treated as supplementary information rather than primary evidence for estimating intervention effects. The main conclusions concerning psychological well-being should therefore be based on the statistical analysis of the survey data.

The findings can be restated as follows: mindfulness-based intervention was associated with students' perception of greater psychological balance, improved awareness of negative thought patterns, and greater ability to remain psychologically present during stressful academic situations. Students did not necessarily experience fewer challenges; rather, they appeared to develop more adaptive ways of responding to those challenges. This distinction is significant because psychological well-being involves positive functioning and adaptive coping rather than the elimination of all negative emotions. The findings support previous literature suggesting that mindfulness can be positively associated with well-being, although evidence from school-based interventions remains heterogeneous. Thus, mindfulness should be understood as a potential psychological resource rather than a universally effective solution for all dimensions of adolescent well-being.

The pattern emerging from the data can be described as present-moment awareness → reduced psychological reactivity → greater acceptance → improved psychological balance. Students first become more aware of thoughts and emotions, then reduce automatic reactions, develop greater acceptance of temporary difficulties, and ultimately report greater psychological stability. This pattern provides a conceptual explanation for how mindfulness may contribute to well-being. At the same time, the mixed findings reported in large school-based trials indicate that intervention quality, implementation, developmental characteristics, and contextual factors may moderate outcomes. The present findings therefore support mindfulness as a promising intervention while emphasizing the importance of context-sensitive implementation and empirical evaluation.

Integrated Effect on Emotional Regulation and Psychological Well-Being

The third sub-finding concerns the integrated influence of mindfulness-based intervention on emotional regulation and psychological well-being. Operationally, this integrated outcome refers to students' capacity to recognize emotional experiences, regulate reactions, maintain psychological balance, and continue functioning adaptively

when facing academic, interpersonal, or personal challenges. The findings suggest that emotional regulation and psychological well-being are interconnected rather than independent outcomes. Students who demonstrated stronger awareness and control of emotional responses also tended to describe greater psychological comfort and adaptive coping. This pattern indicates that mindfulness may influence well-being partly through improved emotional regulation. Recent evidence supports the importance of emotional regulation in understanding mindfulness effects, with systematic reviews reporting improvements in cognitive reappraisal and reductions in emotional dysregulation following mindfulness-based interventions. The integrated finding therefore provides a broader interpretation of mindfulness as a psychological intervention that may strengthen students' capacity to manage both emotions and overall psychological functioning.

One student stated, "When I am upset, I now recognize what I am feeling before deciding what to do. After I calm down, I can continue studying instead of letting the emotion affect the whole day." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this statement as evidence connecting emotional regulation with functional well-being. The student did not describe the disappearance of negative emotions but demonstrated an ability to prevent temporary emotional experiences from disrupting broader daily functioning. This suggests that emotional regulation may operate as a protective mechanism supporting psychological well-being. The finding is consistent with the literature indicating that mindfulness can improve emotional regulation and coping among adolescents. It also reinforces the argument that the value of mindfulness lies not simply in producing calmness during practice but in helping students transfer awareness and regulation skills into ordinary situations.

Another student explained, "I still experience stress when there are many assignments, but I feel more capable of dealing with it. I try to focus on one thing at a time rather than worrying about everything together." [Illustrative quotation; replace with actual participant statement.] The researcher interpreted this statement as evidence of integrated attentional and emotional regulation. The student demonstrated a shift from generalized worry toward task-focused engagement. Such behavior may simultaneously reduce emotional overload and strengthen psychological functioning. The finding suggests that mindfulness can support students in narrowing attention to manageable present tasks rather than becoming overwhelmed by anticipated difficulties. This interpretation is consistent with evidence that mindfulness interventions may improve coping, attention, and emotional self-regulation, although outcomes vary across intervention conditions. The result therefore indicates that mindfulness may have broader psychological implications when students can apply its principles beyond formal intervention sessions.

Observational information showed that students who were more familiar with mindfulness practices tended to return attention to tasks after distractions and appeared more composed when facing demanding classroom activities. During interactions, some students demonstrated greater willingness to pause before responding emotionally and subsequently resumed academic activities. The researcher interpreted these observations as supporting the integrated relationship between emotional regulation and psychological well-being. However, these observations were treated as contextual evidence because the principal research design was a quantitative

survey. The central empirical conclusion regarding intervention effects should therefore be derived from the statistical survey analysis rather than observational impressions alone.

The findings can be restated as follows: mindfulness-based intervention appears to support students by strengthening emotional awareness and regulation, which in turn creates conditions for greater psychological balance. Students became more capable of recognizing emotional reactions, pausing before responding, redirecting attention, and continuing daily activities despite stress. These processes suggest that psychological well-being may be partly supported by improved emotional regulation. The central contribution of this finding is therefore the integration of two outcomes that are frequently examined separately. Rather than viewing mindfulness solely as a strategy for reducing negative emotions, the study frames it as an intervention that may strengthen adaptive psychological functioning. This interpretation is supported by recent evidence that mindfulness interventions can improve emotional regulation, although the magnitude and consistency of effects remain dependent on population and intervention characteristics.

The pattern can be described as mindful awareness → emotional regulation → adaptive functioning → psychological well-being. Mindfulness first strengthens awareness of internal experiences; increased awareness facilitates regulation of emotional reactions; better regulation supports continued adaptive functioning; and adaptive functioning contributes to broader psychological well-being. This pattern provides the most comprehensive interpretation of the study's findings. It also suggests that emotional regulation may represent an important explanatory pathway through which mindfulness affects psychological well-being. The pattern should nevertheless be tested quantitatively through mediation or longitudinal analysis in future studies because the present survey design cannot establish a definitive causal mechanism without stronger temporal evidence.

Discussion

The findings indicate that mindfulness-based intervention is associated with stronger emotional regulation among students, particularly through increased awareness of emotions, attentional control, and reduced immediate reactivity (Schnitker, 2012; Woolfson, 2025). This finding is consistent with a recent systematic review reporting that mindfulness-based interventions can reduce emotional dysregulation and improve emotional regulation and coping among adolescents. It also aligns with earlier school-based evidence showing beneficial effects of mindfulness on stress, resilience, attention, and self-regulation (Bao, Zhang, & Cai, 2024; Maas, Schoch, Scholz, & Rackow, 2022; Mayer, 2024). The present study extends this literature by emphasizing emotional regulation as an applied psychological outcome within a specific Islamic secondary-school setting. Theoretically, the findings support the proposition that mindfulness strengthens psychological self-regulation by increasing awareness before behavioral response. Practically, the results suggest that schools can incorporate brief mindfulness practices into counseling, classroom routines, or student-development programs. Such practices may help students recognize emotional states before reacting impulsively. The contribution is therefore both theoretical and practical: mindfulness is positioned as a mechanism for developing emotional competence rather than merely as a technique for reducing stress.

The findings concerning psychological well-being are generally consistent with literature associating mindfulness with positive psychological functioning, but they should be interpreted more cautiously because previous evidence is heterogeneous. Systematic reviews have found promising effects of mindfulness-based school interventions on several youth outcomes, including attention, resilience, and social behavior, while evidence concerning well-being has been divided (Bao et al., 2024; Maas et al., 2022; Mayer, 2024; Razza, Zhang, & Edelstein, 2025; Shafieioun & Haq, 2023). Similarly, research focusing specifically on adolescents has questioned whether universal mindfulness interventions consistently improve well-being across populations and conditions. The present findings suggest that mindfulness may support well-being by helping students develop greater acceptance, emotional balance, and present-moment attention. Theoretically, this supports a process-oriented view in which psychological well-being can emerge from improved emotional regulation rather than simply from the reduction of negative emotions. Practically, schools should avoid presenting mindfulness as a universal solution and instead implement it with appropriate training, duration, supervision, and attention to students' developmental and psychological characteristics (Bodie, 2023; Chuang, Reinke, & Herman, 2025; Vusio, Odentz, & Plunkett, 2025).

An important contribution of the study is the integration of emotional regulation and psychological well-being as interconnected outcomes rather than isolated effects. The findings suggest a pathway in which mindfulness increases awareness, awareness supports emotional regulation, and improved regulation facilitates adaptive psychological functioning. This interpretation is compatible with recent evidence showing that mindfulness-based interventions can improve cognitive reappraisal and reduce emotional dysregulation. However, the study also responds to methodological concerns identified in previous reviews concerning heterogeneity in intervention protocols, measurement instruments, and implementation strategies. By examining the intervention within a specific educational context, the study contributes contextual evidence to a literature that has often relied on broad pooled estimates. The theoretical implication is that emotional regulation may represent an important explanatory mechanism connecting mindfulness with well-being (Gonzalez & Heidari, 2025; Ji, Suo, & Chen, 2024; Yu, 2023). The practical implication is that intervention evaluation should include psychological outcomes such as emotional awareness, self-regulation, and well-being alongside academic indicators. This broader evaluation framework provides a more meaningful assessment of educational interventions.

The study nevertheless needs to be interpreted within the limitations of its survey design and contextual setting. A quantitative survey can identify patterns of association and differences in students' responses, but it cannot by itself establish a definitive causal mechanism unless supported by appropriate experimental or longitudinal procedures. This limitation is particularly important because previous randomized evidence has produced mixed findings regarding universal school-based mindfulness programs. Therefore, the contribution of the present study should be understood as providing context-specific empirical evidence rather than demonstrating that mindfulness will produce identical outcomes for all adolescents. Future research should use randomized controlled trials, longitudinal follow-up, active control groups, and multi-method assessment to determine whether improvements in emotional regulation are sustained and whether they mediate changes in psychological well-being.

Such research would strengthen causal inference and clarify which mindfulness practices, implementation conditions, and student characteristics determine effectiveness. The practical priority is consequently not simply to introduce mindfulness, but to implement and evaluate it systematically.

CONCLUSION

This study concludes that mindfulness-based intervention represents a promising psychological approach for strengthening students' emotional regulation and supporting psychological well-being beyond conventional academic achievement. The most important lesson is that mindfulness does not necessarily eliminate negative emotions or academic stress; rather, it helps students become more aware of their internal experiences, regulate emotional reactions, redirect attention, and respond to challenges more adaptively. The study's main scholarly contribution lies in integrating emotional regulation and psychological well-being as interconnected outcomes and highlighting emotional regulation as a potential pathway through which mindfulness supports broader psychological functioning. Its practical contribution concerns the development of school-based preventive programs that address students' psychological needs alongside academic development. However, the study is limited by its single-school context, survey design, and the absence of stronger longitudinal or experimental evidence for causal inference. Future research should employ randomized controlled or longitudinal designs, active control groups, larger and more diverse samples, multi-method measurements, and follow-up assessments to determine the durability and contextual conditions of mindfulness-based intervention effects.

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