

Enhancing Elementary Students' Mathematical Problem-Solving Skills Through Mindfulness-Based Emotional Coaching and Living Values Education (LVE)

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ABSTRACT

Mathematical problem-solving skills among elementary school students in Indonesia remain below expected standards according to international and national assessments. Limited emotional regulation and insufficient internalization of positive values are identified as contributing factors. Integrating social-emotional approaches into mathematics learning is therefore essential. This study examined the effectiveness of an emotional coaching program integrating mindfulness practices and Living Values Education (LVE) in enhancing students' mathematical problem-solving abilities. A mixed-methods approach with a sequential explanatory design was employed. The quantitative phase involved a pretest-posttest design with 25 fourth-grade students selected through purposive sampling at an elementary school in Cirebon, Indonesia. Students' mathematical problem-solving skills were measured using a structured test and analyzed using a paired sample *t*-test. The qualitative phase consisted of semi-structured interviews analyzed thematically to explore students' emotional regulation, learning focus, and problem-solving strategies. The results showed a statistically significant improvement in students' mathematical problem-solving performance following the intervention. Qualitative findings indicated enhanced emotional regulation, increased concentration, and the use of more reflective problem-solving strategies. Mindfulness practices contributed to students' self-awareness and emotional calmness, while Living Values Education fostered responsibility, patience, and cooperation in learning. The findings indicate that emotional coaching grounded in mindfulness and Living Values Education effectively supports both cognitive and emotional development, offering a holistic approach to improving elementary students' mathematical problem-solving skills.

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1. INTRODUCTION

Elementary mathematics education serves as a crucial foundation in the development of students' mathematical abilities. Introducing and mastering mathematical concepts from an early age has a significant and lasting impact, as these concepts become deeply embedded in the child's memory and habits that are difficult to alter (Fauzan & Anshari, 2024). Early conceptual mastery also facilitates the learning process at higher levels, enabling students to more easily comprehend and master complex mathematical ideas (Friantini et al., 2020). To achieve comprehensive mathematical understanding, students must master four core domains: arithmetic (number operations), algebra (equation solving), geometry (shapes and sizes), and analysis (problem-solving using mathematical concepts) (Aini, 2017). However, current observations in the field reveal that mathematics learning outcomes remain unsatisfactory, with many students still struggling to understand concepts, solve problems, and achieve academic success (Andani et al., 2021).

According to the 2022 Programme for International Student Assessment (PISA) as reported by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek), Indonesia ranked 69th, placing it among the bottom 12 countries in mathematics performance. Additionally, Dapodik (the national basic education data system) reported in 2020 that the average mathematics score of Indonesian elementary students was around 60%, which is still considered below standard. Elementary mathematics education is not only intended to develop cognitive abilities such as deep, rational, and structured thinking, as well as analytical and problem-solving skills, but also to nurture students' affective and social development. Thus, mathematics education must be designed in a way that supports balanced growth across cognitive, affective, and social dimensions. Emotional intelligence plays a vital role in becoming a whole person, and in many cases, is more critical than academic intelligence (Aini, 2017).

In the context of human development, elementary mathematics education must consider the importance of emotional intelligence in achieving holistic personal growth, combining knowledge and emotions. Cognitive development focuses on enhancing thinking abilities, decision-making, and problem-solving, while affective development targets emotional, social, and moral capacities. Emotional intelligence directly influences students' character and can be shaped by parenting styles, thus highlighting the important role of parents in fostering emotional intelligence in their children (Rahmasari et al., 2023). Therefore, education that emphasizes emotional development as emotional coaching, can assist students in developing the emotional and affective skills required to cope with academic challenges, including those found in mathematics learning (Mulyani et al., 2023). Moreover, mathematical problem-solving ability is also influenced by students' communication skills and learning motivation (Tansil & Harefa, 2021; Yuliati, 2021). Hence, it is crucial to enhance students' mathematical communication skills and motivation to support problem-solving in mathematics through social-emotional learning.

Social-emotional learning helps students develop better interpersonal attitudes such as empathy, collaboration, and effective communication (Faizah & Liliana, 2025). Students begin to build social-emotional skills through interactions with close individuals like parents, siblings, and friends, which then extend to broader social relations in the community (Era et al., 2024). Additionally, social-emotional learning supports stress management and critical thinking through mindfulness approaches (Setyawan, 2023). In the current era of the *Merdeka Curriculum*, the implementation of social-emotional learning allows students to enhance both social and emotional capacities (Yuhelmi, 2022). Simultaneously developing emotional intelligence and logical reasoning is essential, as logical ability alone is insufficient to solve problems and achieve success (Muhamad & Handyansah, 2024).

Mindfulness and Living Values Education (LVE) are two approaches that can be utilized in emotional coaching to help students develop both cognitive and affective dimensions of their social-emotional abilities. Mindfulness refers to the capacity to consciously and openly attend to one's present experiences, with an attitude of self-acceptance (Rosita et al., 2025). Mindfulness is directly correlated

with focused attention, making it a valuable practice in learning environments to enhance student concentration and performance, and to establish a balance between academic achievement and emotional well-being (Gondo et al., 2023; Suwandi et al., 2024). It offers numerous benefits including improved focus and concentration, reduced stress and anxiety, increased self-awareness and emotional regulation, as well as enhanced empathy and compassion (Krismayanti, 2024). Through mindfulness, students can manage their emotions, adjust perspectives, and adapt socially to their environments, thus enabling them to achieve emotional regulation early on (Betty et al., 2025) (Havina, 2024).

Living Values Education (LVE), on the other hand, instills universal human values relevant to educational institutions, communities, and beyond. It aims to guide and cultivate human attitudes and behavior through structured and systematic efforts that help students internalize values related to God, self, others, the environment, and the nation (Jurlissani, 2021). Values emphasized in LVE include peace, respect, love, cooperation, happiness, honesty, humility, responsibility, simplicity, tolerance, freedom, and unity (Muadhinah & Munawwarah, 2024). LVE engages students in experiential activities designed to transfer socially acknowledged values into personal convictions, thus fostering positive attitudes and appropriate behavior aligned with societal expectations. Emotional coaching helps students verbalize their feelings and deepen their understanding of emotional experiences (Yuliani et al., 2021), and serves to guide students when they express emotions that are inappropriate or counterproductive to their own or others' well-being (Intan et al., 2018).

The integration of mindfulness-based emotional coaching and Living Values Education (LVE) addresses various complex factors influencing students' ability to solve mathematical problems. Teachers often rely on traditional teaching methods, presenting problems, solutions, and practice exercises, which may result in students becoming passive recipients of information. This passivity can reduce engagement and adversely impact learning outcomes (Safari & Putri, 2024). Supporting evidence from Pratiwi et al. (2019) reveals that certain mathematics topics remain difficult even for prospective elementary school teachers, as many still struggle to solve mathematical problems accurately. Additionally, Gustiani & Puspitasari found that students often struggle with interpreting word problems, particularly in translating them into appropriate mathematical models (Ardana et al., 2023). Many students perceive word problems as difficult to understand and solve (Kharen et al., 2023), which may be due to limited exposure to non-routine questions within the school curriculum (Siswanto & Meiliasari, 2024). Therefore, teachers must adopt more innovative and participatory instructional strategies that encourage active student involvement and enhance the quality of mathematics learning (Indarayani et al., 2018).

This study focuses on three main variables: mindfulness-based emotional coaching, Living Values Education (LVE), and elementary students' mathematical problem-solving abilities. Mindfulness-based emotional coaching is conceptualized as a supportive guidance approach that helps students recognize, understand, and regulate their emotional responses during the learning process. Living Values Education (LVE) refers to a value-oriented educational framework aimed at fostering the internalization of moral and ethical values that shape students' attitudes toward learning and academic challenges. Students' mathematical problem-solving ability, as the outcome variable, reflects their capacity to understand problems, plan solution strategies, implement appropriate procedures, and evaluate results in mathematical tasks.

The integration of mindfulness and LVE within emotional coaching in this study is informed by self-regulation theory and constructivist learning theory. Self-regulation theory suggests that students who are better able to manage their emotions and behaviors tend to engage more effectively in learning activities, particularly in cognitively demanding situations. In this context, mindfulness practices are expected to support students' awareness and attentional focus, while LVE may contribute to the development of values such as responsibility and cooperation that are relevant to motivational and social aspects of learning (Hartley et al., 2020). From a constructivist perspective, mathematical

problem-solving is understood as a process that develops through active engagement, reflection, and meaningful learning experiences (Bermejo et al., 2021).

Accordingly, this study is positioned as a preliminary investigation that explores the potential contribution of mindfulness-based emotional coaching integrated with LVE to students' emotional engagement and problem-solving processes in mathematics. Rather than establishing causal relationships, the study seeks to provide initial empirical insights that may inform future, more rigorous research designs in the development of holistic mathematics learning approaches.

2. METHODS

This study adopted a mixed-methods approach, integrating both qualitative and quantitative methodologies. The rationale behind selecting this method was to obtain a more comprehensive understanding of the impact of mindfulness-based emotional coaching and Living Values Education (LVE) on students' mathematical problem-solving abilities. The research employed a sequential explanatory design, wherein quantitative data were gathered and analyzed in the initial phase, followed by the collection and interpretation of qualitative data to provide deeper insights and contextual explanations for the quantitative findings. A total of 25 elementary school students with low mathematical proficiency were selected as research participants. These participants were chosen through purposive sampling, targeting students who met the specific characteristics relevant to the study's objectives. All 25 students were included in both the quantitative and qualitative analyses.

The research instruments consisted of a mathematical problem-solving test and in-depth interviews. The test was designed to assess students' problem-solving abilities both before and after the intervention, with indicators including the ability to understand the problem, formulate a solution plan, implement the chosen strategy, and evaluate the results (Kharen et al., 2023). The interviews were conducted to explore students' experiences and perceptions regarding the emotional coaching intervention based on mindfulness and LVE. These explored dimensions such as students' experiences with the coaching sessions, perceived benefits, and any difficulties encountered during the process. The decision to involve only 25 students was based on the limited number of eligible participants within the school who met the criteria for emotional and cognitive support needs. Additionally, the absence of a control class was due to ethical and practical constraints within the elementary school setting, where withholding potentially beneficial interventions from other students was not appropriate. Instead, the focus of this study was to explore the internal effectiveness of the intervention in a real classroom setting.

Based on the research flow illustrated in Figure 1, the first phase of the study utilized quantitative methods to examine differences in students' mathematical problem-solving abilities before and after the intervention. The data were obtained through a test administered to fourth-grade students at SD Negeri Sadagori 1 in Cirebon, aged between 9 and 11 years. To evaluate the effectiveness of the intervention, a paired sample t-test was performed using SPSS version 27. This analysis aimed to determine whether the observed changes in performance were statistically significant. While the quantitative results could reveal the existence of performance shifts, they were not sufficient to capture the nuanced experiences and interpretations of the students involved.

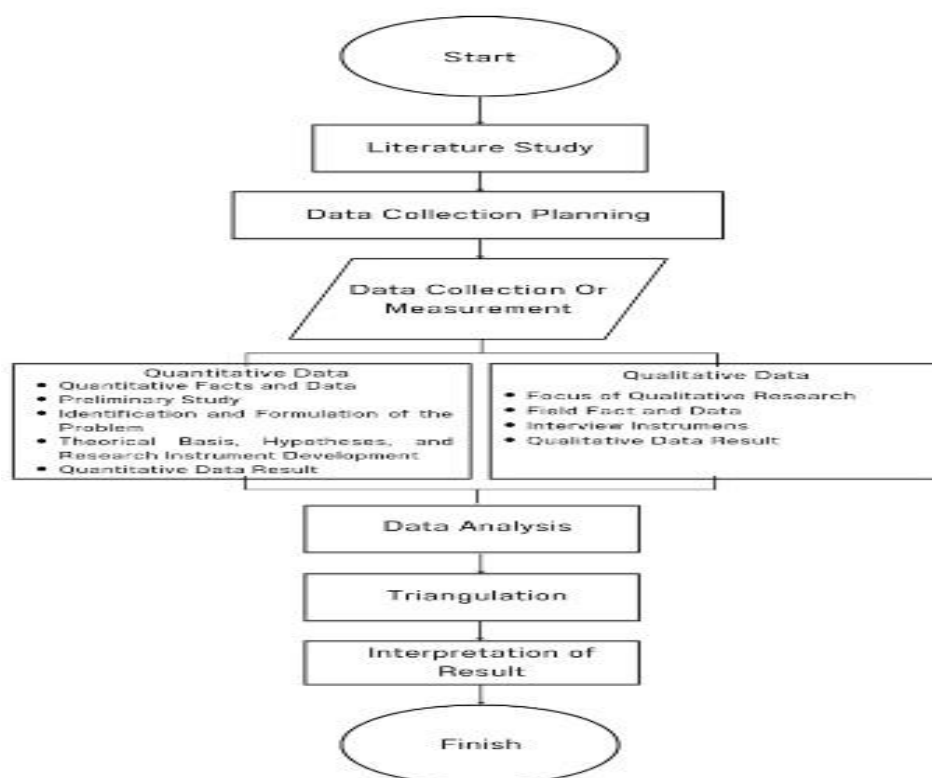


Figure 1. Research Flowchart

Consequently, the second phase of the study employed qualitative methods to explore students' subjective experiences and perceptions related to the mindfulness-based emotional coaching and LVE. Qualitative data were collected through interviews with the same group of students. Thematic analysis was conducted using NVivo software to systematically identify and report emerging patterns and recurring themes within the interview data (Wahyu, 2022). Of the 25 interviewees, only statements directly related to each sub-theme were included in the coding table to maintain analytical precision and avoid distorting the data. Each sub-theme was developed based on code groupings generated through the NVivo software, and the number of quotations did not necessarily correspond to the total number of participants, but rather to the frequency of similar ideas occurring across different responses.

In the final phase, the findings from both the quantitative and qualitative components were integrated through a triangulation process, aimed at enhancing the validity and depth of the overall results. During triangulation, both data sets were examined concurrently to identify alignments and discrepancies between the two forms of data. This integrative analysis allowed for a more holistic understanding of how mindfulness-based emotional coaching and LVE influenced students' mathematical problem-solving capabilities. The triangulated findings offer not only empirical validation but also a richer narrative that captures the complexity of students' learning experiences. Ultimately, this study is expected to contribute accurate and meaningful insights into the effectiveness of emotional and values-based interventions in improving cognitive and emotional learning outcomes in mathematics education. Each sub-theme was coded using NVivo, with label references such as [MIND01] for "calm during problem-solving", [STRAT02] for "reading carefully", and [VAL01] for LVE values like "responsibility". These codes allowed for precise tracing of emotional and cognitive patterns across student responses.

3. FINDINGS AND DISCUSSION

3.1 Findings

The findings of this study indicate that the emotional coaching program based on mindfulness and Living Values Education (LVE) significantly contributes to enhancing students' mathematical problem-solving abilities at SD Negeri 1 Sadagori. Both quantitative and qualitative analyses reveal a strong correlation between improved emotional regulation and students' success in tackling complex and challenging mathematical problems. To assess the impact of the intervention, a paired sample t-test was conducted, comparing students' pretest and posttest scores on mathematical problem-solving tasks.

Table 1. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest & Posttest	25	.420	.037

The correlation coefficient of 0.420 with a significance value of 0.037 ($p < 0.05$) presented in Table 1 indicates a statistically significant positive relationship between pretest and posttest scores. This suggests that students with relatively stronger initial abilities experienced greater improvements after the intervention. The moderate correlation also points to the influence of external factors, such as the intervention itself, which combined mindfulness training with value-based education.

Table 2. Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Pair	Pretest – Posttest				Lower	Upper			
1		-5.440	7.795	1.559	-8.657	-2.223	-3.490	24	.002

As seen in Table 2, there was a statistically significant difference between pretest and posttest scores ($t = -3.490$, $p = 0.002$). The mean difference of -5.440 points to a substantial performance gain following the intervention. The 95% confidence interval does not include zero, reinforcing the validity of the statistical result. These outcomes suggest that the integrated approach of mindfulness and LVE significantly contributed to improving students' critical and reflective thinking skills when solving mathematical tasks. It also led to enhanced emotional regulation, concentration, and confidence.

To enrich the quantitative findings, thematic qualitative analysis using NVivo software was conducted to explore students' experiences, perceptions, and emotional responses throughout the intervention. The analysis offered a contextual and personalized view of how the mindfulness-based emotional coaching and LVE program supported students' cognitive development.

Table 3. Themes, Sub-Themes, and Representative Student Quotes from the Qualitative Analysis

Main Theme	Sub-Theme	Student Quotes	NVivo Code
Students' Emotional Response	Feeling confused/stressed	"It was difficult; I felt overwhelmed and confused."	[EMO01]
Students' Emotional Response	Relying on help	"I asked the teacher and then tried solving it independently."	[EMO02]

Cognitive Strategy Change	Reading questions carefully	"I read each question carefully and with focus."	[STRAT02]
Cognitive Strategy Change	Starting with easy questions	"I began with the simpler problems first."	[STRAT03]
Mindfulness Effectiveness	Focused and aware	"I felt more aware and attentive during the task."	[MIND02]
Mindfulness Effectiveness	Calm when facing problems	"After practicing focus and attention, I was calmer and understood better."	[MIND01]
Perception of Mindfulness	Helps with math	"Yes, mindfulness helped me understand mathematics better."	[MIND03]
Perception of Mindfulness	Helps focus in other subjects	"I believe mindfulness also improved my concentration in other subjects."	[MIND04]
Perception of Mindfulness	Practiced more regularly	"Mindfulness exercises became more consistent and were applied in every subject."	[MIND05]
Impact of Living Value Education	Patience	"When I am patient, I do not give up easily even when math problems are challenging."	[VAL02]
Impact of Living Value Education	Responsibility	"Being responsible means trying on my own before asking for assistance."	[VAL01]
Impact of Living Value Education	Cooperation	"Through cooperation, I can ask my friends and gain a clearer understanding."	[VAL03]
Strategy Shift After Value Internalization	Calm and diligent reading	"I became calmer and avoided panicking when facing difficult questions."	[STRAT01]
Strategy Shift After Value Internalization	Careful reading and discussion	"Now, I read more carefully and discuss with my peers when uncertain."	[STRAT02]
Value Impact on Word Problems	Patient and thorough understanding	"I became more patient and careful in understanding each part of the problem."	[VAL02]
Value Impact on Word Problems	Confidence in answering	"I understand the problems better and can answer them with greater confidence."	[VAL04]

As depicted in Table 3, key emerging themes include changes in emotional responses, enhanced focus through mindfulness practice, and character strengthening via LVE values. Sub-themes such as "feeling confused/stressed" and "relying on assistance" initially indicate that students faced affective barriers when approaching mathematical problems. However, following mindfulness training and value reinforcement (LVE), students began to exhibit adaptive strategies like "carefully reading questions," "tackling easier problems first," and "remaining calm and aware while working." This suggests that the intervention impacts not only emotional aspects but also enhances the quality of students' strategic thinking (Yuliati, 2021).

Table 4. Summary of Query Output

Sub-Theme	Number of Quotes	NVivo Code
Expressing confusion or stress	3	[EMO01]
Seeking assistance from others	1	[EMO02]
Careful reading of mathematical problems	2	[STRAT02]
Initiating with simpler problems	3	[STRAT03]
Increased awareness and focus	4	[MIND02]
Feeling calmer when solving mathematical tasks	4	[MIND01]
Improved understanding of mathematical content	5	[MIND03]
Enhanced focus on other academic subjects	1	[MIND04]
Suggestions for regular mindfulness practice	2	[MIND05]
Demonstrating patience when faced with challenging problems	1	[VAL02]
Showing responsibility through independent effort	2	[VAL01]
Collaborating to better understand problems	1	[VAL03]
Becoming more composed and thorough in reading instructions	1	[STRAT01]
Careful reading and active peer discussion	1	[STRAT02]
Patience and thoroughness in interpreting word problems	4	[VAL02]
Increased confidence in providing answers	1	[VAL04]

Subsequently, Table 4 highlights that the sub-theme "aids in understanding mathematics" appears most frequently (5 citations), followed by others such as "more aware and focused," "calmer when facing problems," and "patient and meticulous in comprehending word problems." The recurrence of these citations reflects students' perceptions that mindfulness and LVE not only alleviate emotional tension but also bolster attention capacity and decision-making during mathematical problem-solving. Additional sub-themes like "responsibility for independent effort," "collaborative problem understanding," and "confidence in answering questions" demonstrate the integration of social and affective aspects strengthened through LVE values. Consequently, students experience not only individual cognitive changes but also develop adaptive social behaviors that support collaborative problem-solving processes. These findings are further elucidated in Figure 2 (Flowchart of Theme Interrelationships), which illustrates the connections among main themes and sub-themes emerging throughout the intervention. The flowchart portrays how students' initial experiences of stress and confusion transition into the internalization of new cognitive strategies, mediated by mindfulness and reinforced by LVE values, ultimately leading to transformed attitudes and self-confidence in tackling mathematical problems.

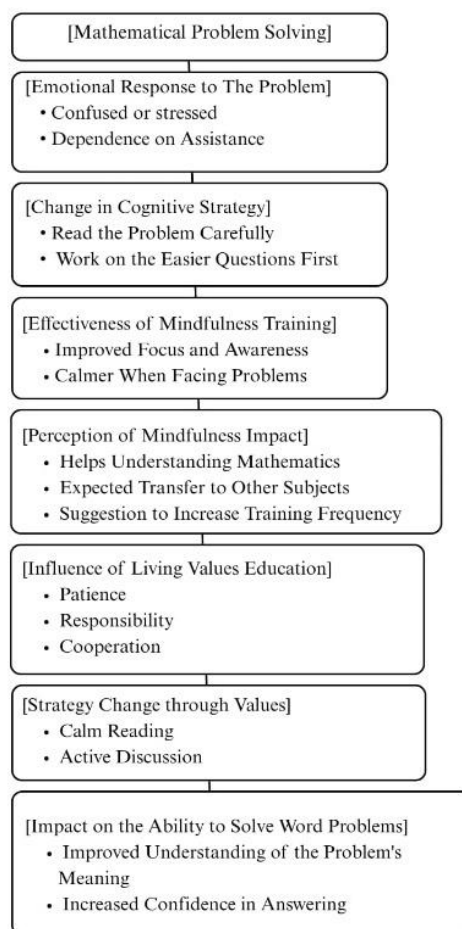
Manual Flowchart (Theme Interrelationship Flow)

Figure 2. Conceptual Flowchart Illustrating the Interrelationships Among Themes Identified in This Preliminary Study

Figure 2 illustrates the transformative pathway experienced by students throughout the learning process. This transformation begins with an initial state characterized by emotional confusion, heightened anxiety, and a strong dependence on external support either from teachers or peers. This early phase reflects a pattern of affective instability, which often disrupts students' ability to engage in critical thinking and solve mathematical problems independently. The diagram further shows that transformation does not follow a linear progression but rather unfolds through a dynamic interaction between internal student processes and external instructional interventions.

3.2 Discussion

The present preliminary study explored how mindfulness-based emotional coaching integrated with Living Values Education (LVE) may relate to elementary students' mathematical problem-solving processes. By combining quantitative and qualitative findings, the study offers initial insights into how emotional regulation, value internalization, and cognitive strategies may interact during mathematics learning. Rather than establishing causal effects, the findings should be interpreted as exploratory evidence that informs future, more rigorous investigations.

The quantitative results indicated a statistically significant improvement in students' posttest scores compared to pretest scores. While this improvement suggests a positive shift in mathematical

problem-solving performance, it cannot be solely attributed to the intervention. Similar patterns have been reported in previous studies that associate mindfulness practices with enhanced attention, reduced anxiety, and improved academic engagement (Gondo et al., 2023; Suwandi et al., 2024). These studies argue that mindfulness supports students' capacity to manage cognitive load during complex tasks, which is particularly relevant in mathematical problem-solving. Likewise, research on values-based education has shown that fostering responsibility, patience, and cooperation can support students' persistence and engagement in challenging learning activities (Muadhinah & Munawwarah, 2024).

However, contrasting findings should also be considered. Some studies have reported that improvements in mathematical performance following social-emotional interventions are modest or inconsistent, particularly when instructional content and task difficulty are not sufficiently aligned with students' cognitive levels (Siswanto & Meiliasari, 2024). Additionally, research emphasizing direct instructional approaches suggests that explicit strategy instruction and practice opportunities may exert a stronger influence on mathematical problem-solving outcomes than affective interventions alone (Safari & Putri, 2024). These contrasting perspectives highlight the possibility that the observed improvement in this study may reflect the combined influence of repeated exposure to problem-solving tasks, increased familiarity with test formats, or teacher scaffolding, rather than the emotional coaching components in isolation.

The qualitative findings provide a more nuanced understanding of students' learning experiences. Students reported feeling calmer, more focused, and more confident when engaging with mathematical problems. These perceptions align with studies indicating that mindfulness practices can enhance emotional awareness and attentional control, thereby supporting learning readiness (Krismayanti, 2024). Furthermore, students' reflections on values such as patience and responsibility resonate with prior research suggesting that value internalization can foster adaptive learning behaviors, including persistence and collaborative problem-solving (Jurlissani, 2021). From a constructivist perspective, these affective and social dimensions may contribute to more meaningful engagement with mathematical tasks by encouraging reflection and active participation (Bermejo et al., 2021).

Nevertheless, it is important to acknowledge potential biases inherent in the qualitative data. Students' responses may have been influenced by social desirability, particularly given their awareness of teachers' expectations and the novelty of the intervention. Positive student statements may therefore reflect a tendency to provide favorable feedback rather than purely authentic experiences. Additionally, the dual role of teachers as facilitators of the intervention may have introduced expectancy effects, where students' improved engagement resulted from increased attention and support rather than from mindfulness or LVE practices per se (Mulyani et al., 2023).

Several non-intervention factors may also have contributed to the observed changes. Maturation effects are plausible, as students naturally develop improved emotional regulation and cognitive strategies over time, especially within a supportive classroom environment. Practice effects from repeated exposure to similar mathematical problem-solving tasks may have enhanced students' performance independently of the intervention. Moreover, peer interaction and collaborative discussion—highlighted in the qualitative findings—may have functioned as an informal learning mechanism that supported understanding and confidence (Ardana et al., 2023). These factors underscore the need for caution when interpreting improvements as outcomes of emotional coaching alone.

Despite these limitations, the integration of mindfulness and LVE appears to offer a promising framework for supporting students' emotional engagement in mathematics learning. The findings are consistent with social-emotional learning research suggesting that emotional stability, motivation, and value-based attitudes can create conditions conducive to deeper cognitive processing (Faizah & Liliana, 2025). Rather than acting as direct determinants of achievement, mindfulness and values education

may function as enabling factors that support students' readiness to engage with mathematical challenges.

Importantly, this study contributes to the literature by highlighting the dynamic and non-linear nature of emotional and cognitive development in mathematics learning. The thematic flowchart illustrates how emotional responses, value internalization, and problem-solving strategies may interact reciprocally over time. Similar observations have been reported in studies emphasizing that learning is shaped by ongoing interactions between affective and cognitive processes rather than linear cause-and-effect relationships (Sumianto et al., 2024).

In conclusion, the findings of this preliminary study suggest that mindfulness-based emotional coaching integrated with Living Values Education may support students' emotional regulation and engagement in mathematical problem-solving. However, the small sample size, absence of a control group, and potential confounding factors limit the generalizability and inferential strength of the results. Future research should employ more robust experimental or quasi-experimental designs, larger and more diverse samples, and longitudinal approaches to disentangle the specific contributions of emotional, instructional, and contextual factors. Such efforts are essential to clarify the role of social-emotional interventions within evidence-based mathematics education.

4. CONCLUSION

This preliminary study indicates that the integration of mindfulness-based emotional coaching and Living Values Education (LVE) is associated with positive changes in elementary students' mathematical problem-solving processes. Quantitative findings showed a statistically significant improvement in students' posttest scores compared to pretest results, while qualitative evidence revealed enhanced emotional regulation, increased learning focus, and the adoption of more reflective and structured problem-solving strategies. Mindfulness practices appeared to support students' self-awareness and emotional calmness, whereas LVE contributed to the internalization of values such as responsibility, patience, and cooperation, which were reflected in students' engagement with challenging mathematical tasks. Despite these promising findings, the study has notable limitations, including a small sample size drawn from a single school, the use of purposive sampling, and the absence of a control group, which restricts the generalizability of the results and precludes strong causal conclusions. Consequently, the findings should be interpreted as exploratory evidence rather than definitive proof of effectiveness. Future research is recommended to employ larger and more diverse samples, incorporate control or comparison groups, and utilize longitudinal or experimental designs to better examine the specific contributions of mindfulness and values-based interventions to mathematical learning outcomes. Such studies would help clarify the robustness, scalability, and long-term implications of integrating emotional and values-based approaches into primary mathematics education.

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