



A DEVELOPMENT OF MINDFULNESS-BASED INTERVENTIONS FOR PROMOTING STUDENTS' EMOTIONAL  
REGULATION



A DEVELOPMENT OF MINDFULNESS-BASED INTERVENTIONS FOR PROMOTING STUDENTS'  
EMOTIONAL REGULATION



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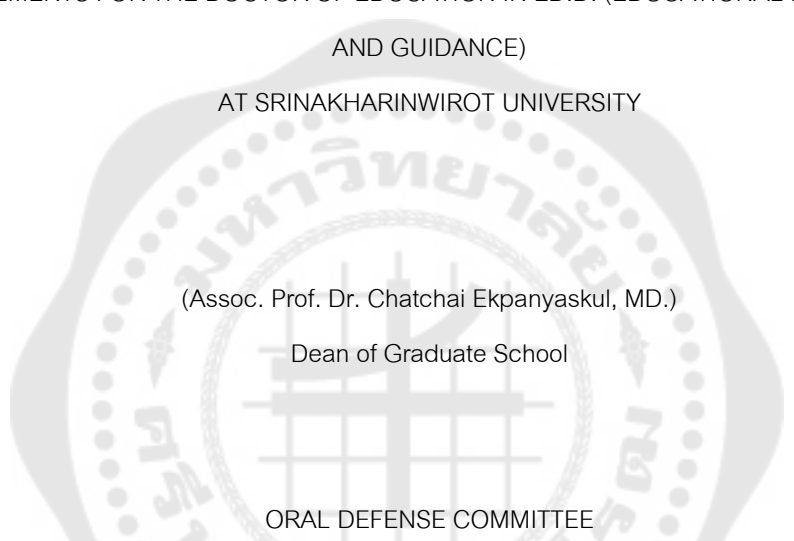
A DEVELOPMENT OF MINDFULNESS-BASED INTERVENTIONS FOR PROMOTING STUDENTS' EMOTIONAL  
REGULATION

BY

XIANG YAOMEIJIAO

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(Assoc. Prof. Dr. Chatchai Ekpanyaskul, MD.)  
Dean of Graduate School

ORAL DEFENSE COMMITTEE

..... Advisor  
(Associate Professor Dr. Pasana Chularut)

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Author	XIANG YAOMEIJIAO
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Advisor	Associate Professor Dr. Pasana Chularut
Co-Advisor	Lecturer Dr. Thammachot Aeamtussana

This study aimed to: 1) examine the definition and components of emotional regulation among middle school students 2) develop mindfulness-based interventions for promoting emotional regulation and 3) evaluate the effectiveness of the mindfulness-based interventions for promoting emotional regulation. The sample consisted of seventh- and eighth-grade students from Guanling Ethnic Middle School in Guizhou Province. Research tools included semi-structured interview questionnaires, an emotional regulation questionnaire, and a mindfulness-based intervention designed to promote students' emotional regulation. Statistical methods such as mean, standard deviation (SD), and one-way and two-way repeated measures ANOVA were used for data analysis. Based on the principle of voluntary participation, 60 students were randomly assigned to an experimental group (n = 30) and a control group (n = 30). The experimental group received the mindfulness-based interventions, while the control group did not. The findings revealed that (1) Emotional regulation among students consists of four components: 1) awareness and understanding of emotions 2) acceptance of emotions 3) the ability to engage in goal directed behavior and 4) access to emotion regulation strategies, (2) The mindfulness-based intervention for promoting students' emotional regulation consisted of three steps: introduction, learning activities, and conclusion. Additionally, the intervention comprised 14 sessions, each lasting for 90 minutes, (3) The mindfulness-based intervention was effective in promoting students' emotional regulation, and the experimental group continued to show improvement at a one-month follow-up. Specifically: 3.1) Students' emotional regulation after receiving the mindfulness-based intervention and after the follow-up period was significantly higher than before the intervention, at a significance level of .05 and 3.2) Students' emotional regulation after receiving the intervention and after the follow-up period was significantly higher than those in the control group at a significance level of .05.

Keywords: Emotional Regulation, Mindfulness-Based Interventions, Middle School Students

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XIANG YAOMEIJIAO

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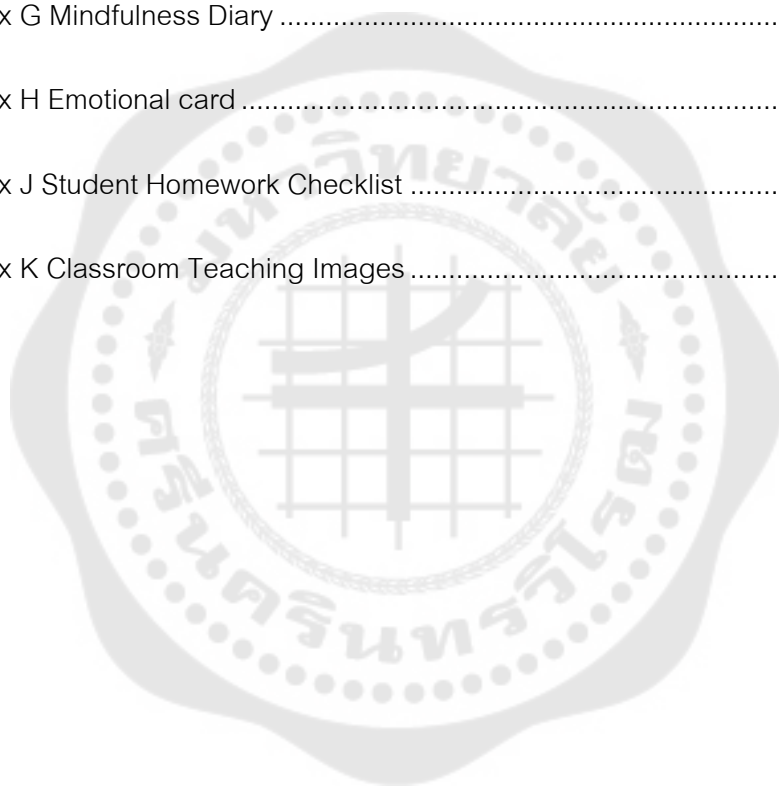
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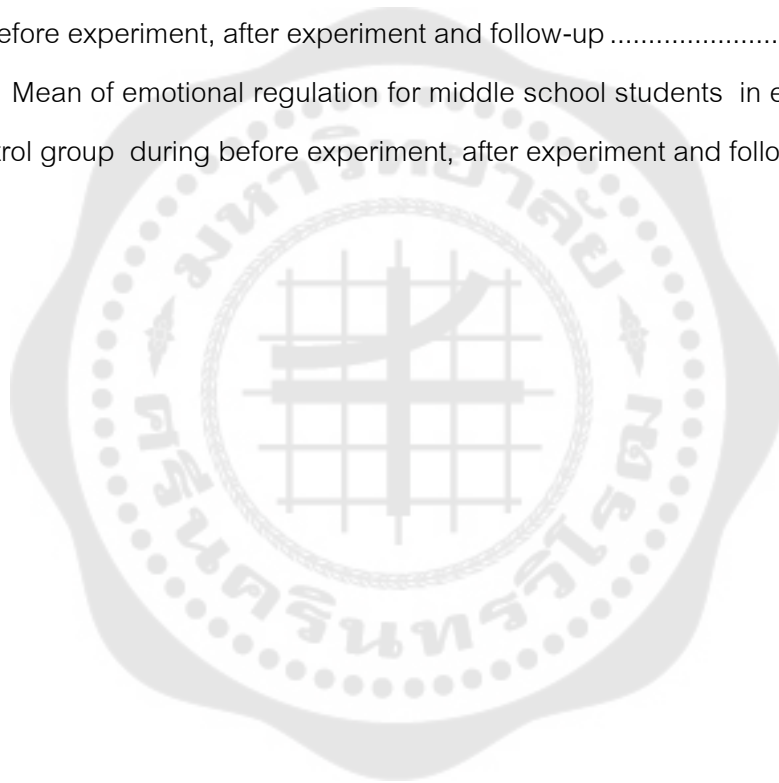


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# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the Study

With the ongoing deepening of educational reform in China, the issue of students' mental health has received increasing attention from all sectors of society. In recent years, the government has introduced a series of policy documents emphasizing the central role of mental health education within the primary and middle school systems. For example, the Guidelines for Mental Health Education in Primary and Secondary Schools (Revised in 2012) explicitly called for a systematic approach to mental health education to comprehensively enhance students' psychological well-being (Ministry of Education, 2012). Similarly, the 14th Five-Year Plan for National Education Development identified mental health education as a crucial component of quality education, highlighting the need to strengthen students' emotional regulation and psychological adjustment abilities to support their holistic development (Ministry of Education of the People's Republic of China, 2021).

Against this policy backdrop, emotional regulation has come to be widely regarded as one of the core indicators of mental health, directly influencing students' academic performance, quality of interpersonal relationships, and ability to cope with life stress (Liu, Wang, & Ma, 2020; Zhao & Sun, 2019). Middle school students are in a critical period of rapid physiological and psychological change, characterized by intense emotional fluctuations and a notable rise in negative emotions such as anxiety, depression, and anger (Chen, Shen, & Hu, 2019). However, current research and educational practice suggest that many middle school students still face significant challenges in emotional regulation, often exhibiting intense emotional reactions, impulsive expression, or excessive suppression of emotions (Zhang & Wang, 2021).

In this study, the researcher observed that Due to a lack of systematic emotional regulation strategies, students frequently fall into negative emotional cycles when

confronted with academic pressure and interpersonal conflict, adversely affecting their mental health and academic performance.

Although the cultivation of emotional regulation abilities in middle school students has gradually attracted attention in the field of education, there is still a significant research gap in terms of effective educational models for enhancing this ability. In particular, empirical studies on the application of mindfulness-based interventions in emotional regulation among middle school students remain scarce. Existing research mainly focuses on senior high school students in their third year, while the junior high school stage, which is a critical period for emotional development, is often overlooked. Therefore, exploring emotional regulation education models suitable for middle school students—especially those based on mindfulness interventions—holds important academic value and practical significance.

Emotional regulation plays a crucial role in the personal development of middle school students, as it not only directly impacts their mental health but also significantly influences academic performance, the quality of interpersonal relationships, and social adaptability (Morris et al., 2017). The development of emotional regulation is especially critical during developmental stage of youth, a period marked by increasingly complex emotional experiences and rising social pressures (Zimmermann & Iwanski, 2014). Therefore, a deep understanding of the concept of emotional regulation is a vital prerequisite for implementing effective educational interventions and promoting the holistic development of middle school students.

According to the APA Dictionary of Psychology (American Psychological Association, n.d.) emotion regulation is refer to the ability of an individual to regulate and adjust one or multiple emotions. Gross (1998) emotional regulation encompasses the mechanisms through which individuals shape their emotional responses, including determining the types of emotions they experience, the timing of these emotions, and the ways in which they are internally processed and externally expressed. Emotion regulation (ER) can be understood as the strategies or efforts individuals employ to shape their own emotional states or those of others (McRae & Gross, 2020). It encompasses the

processes through which people alter the intensity or duration of their emotional experiences in order to adapt effectively to situational demands and environmental pressures (Aldao & Plate, 2018).

Emotional regulation is a multidimensional psychological process that encompasses the entire sequence from emotional awareness to regulatory behaviors. Gratz and Roemer (2004) proposed that emotion regulation involves: a) awareness and understanding of emotions; b) acceptance of emotions; c) the ability to engage in goal-directed behavior when experiencing negative emotions; and d) access to emotion regulation strategies perceived as effective. They emphasized that emotion regulation is not merely about suppressing or altering emotional responses, but also includes recognizing and accepting emotions. This study will be based on four different surveys assessing the emotion regulation abilities of middle school students.

As a core mechanism of individual psychological adaptation, emotion regulation encompasses a wide range of intervention methods, including cognitive, behavioral, and emotional expression dimensions. According to the emotion regulation process model proposed by Gross (1998), regulatory strategies can be divided into upstream regulation approaches, which occur before the generation of emotions, and proactive regulation of emotion, which are employed after emotions have been generated. Among these, Cognitive reappraisal, a form of antecedent-focused regulation, functions by altering one's perception of a situation to modulate subsequent emotional responses. It is considered a highly adaptive approach and has been widely associated with more positive emotional states and reduced degree of depression and anxiety (Gross & John, 2003). In contrast, Expressive suppression is characterized by the post-emotion inhibition of expressive behavior, offering limited and momentary control over emotional displays. However, sustained reliance on this approach has been associated with adverse consequences, including diminished social competence and heightened physiological stress reactions (Gross, 1998). Meanwhile, seeking social support is regarded as an effective external regulation strategy, offering a psychological buffer when dealing with stress and emotional distress (Cohen & Wills, 1985). In addition,

emotional writing, an introspective strategy, allows individuals to express and organize emotional experiences, helping to reduce the psychological burden of emotional suppression and promoting emotional processing and integration (Pennebaker & Chung, 2011). On the behavioral level, behavioral activation emphasizes engaging in meaningful and positive daily activities to counteract low mood and lack of motivation (Mazzucchelli et al., 2009).

With the development of various emotion regulation strategies, mindfulness has gradually emerged as a regulatory approach that integrates cognition and experience. By enhancing individuals' awareness of their present emotional states and fostering non-judgmental acceptance, mindfulness helps reduce the automaticity of emotional responses and improves regulatory effectiveness (Roemer et al., 2009).

Regarding research on mindfulness interventions, Allen, Romate, and Rajkumar (2021) stated that mindfulness-based interventions are "a mindfulness-based intervention with the primary aim to enhance positive human functioning." Mindfulness not only serves to alleviate negative emotions, but also fosters gratitude, optimism, and a meaningful life in students. According to Lomas and Ivtzan (2016), mindfulness-based interventions (MBIs) have been shown to foster various beneficial outcomes, including enhanced hope, optimism, prosocial behaviors, experiences of flow, working memory, and academic achievement. Brown and Ryan (2003) further indicated that the ability to remain mindful correlates positively with greater well-being in everyday life. When applied to children and adolescents, MBIs demonstrate significant potential, particularly in enhancing cognitive functioning and regulating emotions. Consequently, such interventions serve as an effective approach for supporting students in the development of emotional regulation skills.

Mindfulness refers to maintaining continuous awareness of one's thoughts, emotions, bodily sensations, and the surrounding context in the present moment. Practicing mindfulness involves cultivating an open, non-judgmental, receptive, and compassionate attitude, characterized by curiosity, acceptance, and kindness toward one's experiences (Keng, Smoski, & Robins, 2011), mindfulness is the cognitive

skill (Bhikku (2003)). Mindfulness-based interventions are designed to cultivate an enhanced capacity for sustained attention and heightened awareness of experiences occurring in the present moment. Mindfulness-Based Interventions (MBIs) cultivating defined as nonjudgmental, present-moment awareness—through practices like meditation, body scanning, and breath awareness. These interventions enhance attentional focus, self-awareness, and acceptance of internal experiences, promoting emotional regulation, stress management, and overall well-being (Kabat-Zinn, 1990; Bishop et al., 2004). Baer (2003) highlights MBIs as therapeutic tools to reduce emotional reactivity and improve stress and affect regulation. Similarly, Shapiro et al. (2006) emphasize MBIs as a way to strengthen metacognitive capacity, facilitating advanced psychological regulation .

This study designed an intervention program aimed at enhancing middle school students' emotional regulation abilities based on a mindfulness-based interventions model. The effects of emotional regulation on academic achievement among students daily life, and mental health, the proposed mindfulness-based interventions seeks to systematically integrate mindfulness concepts into the teaching process. By creating a supportive, dynamic, and engaging learning environment, the model aims to stimulate students' active participation, thereby improving their emotional regulation skills and overall adaptability, and laying a foundation for coping with future challenges.

The mindfulness-based interventions in this study consists of four core components and includes three main implementation steps: Lead-in, learning activities , and conclusion. These three steps are closely aligned with the goal of enhancing emotional regulation through mindfulness-based interventions. They ensure the effective integration of mindfulness elements into teaching and promote students' awareness, acceptance, and regulation abilities through a structured educational process.

## 1.2 Research Questions

(1) What are the definition and component of students' emotional regulation for middle school students?

(2) How to develop a mindfulness-based interventions for enhancing students' emotional regulation through Mindfulness-Based Interventions?

(3) How to evaluate the effectiveness of mindfulness-based interventions for enhancing students' emotional regulation of middle students?

### **1.3 Objectives of the Study**

(1) To study the definition and components of students' emotional regulation of middle school students.

(2) To develop the mindfulness-based interventions to promote students' emotional regulation of middle school students.

(3) To evaluate the effectiveness of the mindfulness-based interventions in improving the students' emotional regulation of middle school students.

### **1.4 Contribution to Knowledge**

(1) The study will provide a deeper understanding of students' emotional regulation in middle school students.

(2) Investigating the practical value and implementation potential of mindfulness-based approaches in fostering emotional regulation in middle school students contributes to the ongoing innovation in teaching practices

(3) It will be beneficial for middle school teachers to utilize the model of mindfulness-based interventions to develop strategies for middle school students' emotional regulation, conduct teaching smoothly, and improve students' learning efficiency.

### **1.5 Scope of the Research**

#### **1.5.1 Identifying Population and Sample**

**Phase 1: To study the definition and components of students' emotional regulation of middle school students.**

This study was carried out in three distinct phases. The initial phase employed a qualitative methodology to investigate theoretical foundations and

conceptual frameworks pertaining to students' emotional regulation, primarily through an extensive review of existing literature. To enrich this phase, five domain experts were purposively selected and engaged in semi-structured interviews, aiming to elicit in-depth insights regarding emotional regulation in students and the application of mindfulness-based interventions. Concurrently, in the process of designing the emotional regulation questionnaire, a pilot study was conducted involving 100 middle school students from Guanling Ethnic Middle School in Guizhou Province. These participants were chosen due to their demographic and contextual similarities to the future experimental group, and their responses were used to refine the questionnaire.

**Phase 2: To develop the mindfulness-based interventions for enhancing students' emotional regulation of middle school students.**

The second phase of the study, Researchers first developed an understanding of the theories and concepts related to students' emotional regulation based on the literature review. Then, interviews with the five experts were conducted to supplement this foundational knowledge. These experts provided insights into students' emotional regulation and mindfulness-based interventions. This integrated body of information served as the foundation for developing a mindfulness-based interventions curriculum.

The designed curriculum was structured into 14 individual modules, with each module having a duration of 90 minutes, and the entire program was scheduled to be finished within a six-week timeframe. In order to guarantee the validity and effectiveness of the curriculum, five specialists in Item-Objective Congruence (IOC) were invited to conduct a comprehensive review of the content. Subsequent to their evaluation and suggestions, the curriculum underwent a process of revision and optimization to enhance its quality.

After the in-depth scrutiny by the experts, a preliminary implementation of the curriculum was carried out with a group of 10 students from seventh and eighth grades, whose demographic and contextual characteristics closely matched those of the intended experimental cohort. This trial run allowed the researchers to make further

adjustments based on the students' reactions, ultimately finalizing the mindfulness-based interventions curriculum.

**Phase 3: To evaluate the effectiveness of the mindfulness-based interventions on students' emotional regulation of middle school student**

During the third phase of the research, the theoretical constructs and conceptual frameworks related to students' emotional regulation, initially explored in the first phase, were systematically integrated with the insights obtained from expert interviews conducted in the second phase. These synthesized foundations served as the basis for refining the mindfulness-based intervention curriculum developed earlier. Subsequently, this finalized curriculum was subjected to empirical evaluation through the application of a randomized controlled trial, employing a pretest-posttest design to assess its effectiveness.

Population: This study involved 2,651 middle school students from Guanling Ethnic Middle School in Guizhou Province, primarily seventh- and eighth-grade students.

Sample: The sample mainly consisted of 60 seventh- and eighth-grade students from Guanling Ethnic Middle School. Among the total 2,651 students in the seventh and eighth grades, 60 students with the lowest scores on the Students' Emotional Regulation Scale for Middle School Students were selected. These students were then divided into an experimental group and a control group, with 30 students in each group. The researchers ensured that the two groups were equivalent in terms of baseline ability levels.

### **1.5.2 Variables**

#### **1.5.2.1 Independent Variable**

Mindfulness-based Interventions

#### **1.5.2.2 Dependent Variable**

Students' Emotional regulation

## 1.6 Definition of Terms

### 1.6.1 Students' Emotional regulation

Emotional regulation is a psychological ability that refers to a student's capacity to recognize, manage, and express their emotional states in various situations. This ability is reflected in the conscious or automatic regulation of the intensity, duration, and expression of emotions, thereby enabling effective adaptation and self-management in social interactions, stress coping, and goal-directed behaviors. It is composed of the following four components:

#### 1) Awareness and understanding of emotional

Awareness and understanding of emotional refers to an individual's ability to perceive their own emotional states, meaning they can promptly notice and identify the emotions they are experiencing. and an individual's ability to recognize the causes of emotions, their development process, and their impact on behavior, enabling them to explain why a certain emotional response occurs.

#### 2) Acceptance of emotions

Acceptance of emotions refers to an individual's attitude of tolerance and acceptance toward their own emotions, meaning they do not avoid or suppress emotions but allow them to exist naturally without the need for immediate control or change.

#### 3) The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions

The capacity to pursue goal-oriented actions while inhibiting impulsive responses in the face of negative emotions reflects an individual's skill in sustaining attention to current objectives and exercising behavioral regulation despite emotional distress, thereby avoiding impulsive or goal-deviating responses caused by emotional interference and enabling adaptive responses within the situation.

#### 4) Access to emotion regulation strategies perceived as effective

Access to emotion regulation strategies perceived as effective refers to an individual's ability to acquire and apply empirically supported emotion regulation methods through accumulated experience or systematic training, and to flexibly select appropriate strategies in different situations to manage their emotional responses.

### 1.6.2 Mindfulness-Based Interventions

Mindfulness-based interventions is a type of psychological intervention that systematically trains individuals to maintain intentional, open, and a receptive, bias-free focus on present-moment experiences. It aims to enhance attention regulation, self-awareness, and acceptance, thereby promoting emotional regulation, stress management, and psychological well-being. It is composed of the following three steps:

#### 1) Lead in :Introduction: Stimulating Interest and Cognition

At the beginning of the class, the teacher introduces the concept of mindfulness-based interventions through a brief explanation or relatable example. For instance, sharing a story about a student who effectively alleviated anxiety caused by academic pressure through deep breathing and meditation can spark students' interest. This is followed by a concise explanation of the core elements of mindfulness-based interventions: focusing on the present moment and adopting a non-judgmental attitude toward one's emotions and thoughts. The purpose of this stage is to help students understand how mindfulness-based interventions integrates with students' emotional regulation and to encourage them to try practicing it.

#### 2) Learning Activity: Practicing Mindfulness-Based Interventions

During the learning activity, the teacher guides students through one or two mindfulness-based interventions, such as mindful breathing or mindful observation. Through deep breathing and focused attention, students experience how to observe their emotional changes and bodily sensations without judgment. Throughout the activity, the teacher emphasizes the concept of "acceptance," helping students recognize that emotions are neither good nor bad—the key lies in how they are faced and regulated. The aim of this step is to allow students to experience firsthand how mindfulness-based interventions can assist in better emotional regulation, especially when dealing with stress, anxiety, or irritability.

### 3) Conclusion: Reflection and Application

After the activity has been completed, the teacher facilitates a reflection session where students share their feelings and insights. Through group discussions or personal reflections, students can summarize the specific ways mindfulness-based interventions has supported their students' emotional regulation, such as alleviating anxiety, enhancing concentration, or reducing emotional fluctuations. Teachers can further encourage students to continue practicing mindfulness-based interventions in their daily lives to better cope with challenges related to academics, social relationships, and personal emotions. The process of reflection and hands-on application facilitates students' internalization of the enduring value of mindfulness practices for emotional regulation, enabling them to adopt these techniques as part of their routine behavior.

#### 1.7 Research Hypotheses

(1) In the experimental group, students' emotional regulation after receiving the mindfulness-based interventions and after the follow up period is higher than before beginning the experiment.

(2) In the experimental group, students' emotional regulation after receiving the collaborative mindfulness-based interventions and after the follow up period is higher than the students in the control group.

#### 1.8 Conceptual Framework

This study is based on the following theoretical foundations: Bandura's constructivist learning theory and social learning theory. The research primarily aims to enhance students' emotional regulation through the implementation of mindfulness-based interventions. The conceptual framework, as illustrated in Figure 1, indicates that based on constructivist learning theory, this study enhances emotion regulation in secondary school students through mindfulness-based interventions. The model mainly consists of three steps(Lead-in, leading activities, conclusion), including the following mindfulness-based interventions strategies: body awareness, body scan, loving-kindness meditation, and mindful eating. this model is designed to enhance the

dependent variable, students' emotional regulation with its 4 components: awareness and understanding of emotions, acceptance of emotions, the ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions, access to emotional regulation strategies perceived as effective.

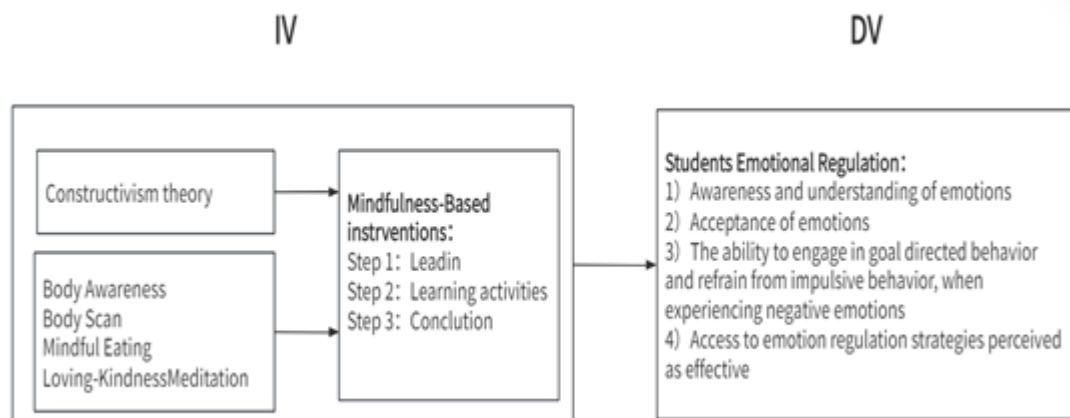


Figure 1 Conceptual framework

## CHAPTER 2

### LITERATURE REVIEW

This chapter mainly analyzes and studies the definition, theoretical basis, constituent elements, and students' emotional regulation strategies of the dependent variable students' emotional regulation; And a detailed analysis of the theoretical basis, definition, steps of mindfulness-based interventions, and intervention strategies based on mindfulness, as follows:

#### 2.1 Students' Emotional Regulation

##### 2.1.1 Definition of Students' Emotional Regulation

##### 2.1.2 Theoretical Basis of Students' Emotional Regulation

##### 2.1.3 Components of Students' Emotional Regulation

##### 2.1.4 The Significance of Students' Emotional Regulation

##### 2.1.5 Strategies to Enhance Students' Emotional Regulation

##### 2.1.6 The Measurement of Students' Emotional Regulation

##### 2.1.7 The Review of Students' Emotional Regulation Researches

#### 2.2 Mindfulness-Based Interventions

##### 2.2.1 Theoretical Foundation

##### 2.2.2 Definition of Mindfulness-Based Interventions

##### 2.2.3 The Steps of Mindfulness-based Interventions

##### 2.2.4 The Strategies of Mindfulness-Based Interventions

##### 2.2.5 The Review of the Mindfulness-Based Interventions

#### 2.1 Students' Emotional Regulation

##### 2.1.1 Definition of Students' Emotional Regulation

According to the APA Dictionary of Psychology (American Psychological Association, n.d.) emotion regulation is refer to the psychological ability to manage and modify emotional responses in accordance with situational demands or internal goals.

Emotion regulation refers to the processes through which individuals adjust the intensity or duration of their emotional experiences in order to respond effectively to

situational demands (Aldao & Plate, 2018). It encompasses the capacity to manage one's emotional state, which may include strategies such as cognitively reframing a difficult situation to diminish feelings of anger or anxiety, concealing outward expressions of sadness or fear, or concentrating on positive aspects that promote happiness or calmness (Psychology Today Staff, 2025).

Gross (1998) conceptualizes emotional regulation as a dynamic process through which individuals modulate emotional arousal by selecting, modifying, or expressing emotional states in ways that align with personal or contextual demands. Emotion regulation (ER) can be defined as the processes individuals use to shape, alter, or guide their own emotional experiences or those of others (McRae & Gross, 2020).

Thompson (1994) defined emotional regulation as a dynamic developmental process in which individuals, at different life stages, utilize internal or external resources to modulate their emotional states in pursuit of socially adaptive outcomes. Within educational settings, this regulatory capacity serves as the basis for students' self-control and their ability to function effectively in social contexts. Emotional regulation, from this perspective, is not static but continuously evolves in response to maturational and environmental factors.

Saarni (1999) approached emotional regulation from the standpoint of emotional socialization, proposing that children and adolescents must learn strategies to coordinate their emotional experiences with others in socially appropriate ways. She argued that the ability to regulate emotion is not only essential for internal emotional coherence but also critical for developing social competence. For students, this implies that emotional regulation is intrinsically linked to their capacity for empathy, communication, and cooperative behavior.

Eisenberg (2001) provided a more comprehensive conceptualization, asserting that emotional regulation encompasses both the downregulation of negative affect (e.g., anger, fear) and the upregulation or maintenance of positive affect (e.g., joy, pride). Their research emphasized that individual differences in emotional regulation among

adolescents are strongly correlated including multiple developmental outcomes, including academic achievement, peer relationships, and psychological soundness. This dual-focus model extends the scope of regulation beyond mere control of negative emotions, underscoring its role in enhancing positive adaptation.

Camras (2004) emphasized that emotional regulation is not merely about controlling or altering emotional experiences, but rather involves the interactive mechanisms within the processes of emotion generation and regulation. They argued that emotional regulation is an integral part of emotional functioning, rather than a process that stands in opposition to emotion itself.

Pekrun (2006) defined students' emotional regulation as the ability to manage academic-related emotions (For example, symptoms of anxiety, frustration, and excitement) within learning contexts. This regulation is directly linked to students' learning motivation, self-efficacy, and academic performance.

Gross and Thompson (2007) further noted that the definition of emotional regulation encompasses both conscious strategies (such as deliberately shifting attention) and unconscious regulatory processes (such as habitual response suppression).

From a functional perspective, Koole (2009) defined emotional regulation as a process that serves personal goals and adaptability: "the process of purposefully maintaining, enhancing, or attenuating emotional states, regardless of whether the regulation is conscious or unconscious."

Bucich (2020) characterized students' emotional regulation as a functional skill closely tied to academic settings, emphasizing its mediating role between educational achievement, behavioral adjustment, and emotional well-being. They pointed out that strong emotional regulation abilities enable students to cope with stress, failure, and criticism in learning, enhance self-control, and thereby optimize learning behaviors.

In this study, Students' emotional regulation is a psychological process through which middle school students perceive, control, and express their emotional states when facing academic pressure, interpersonal relationships, and life changes. Its core lies in

recognizing emotions, managing emotional responses, and adaptively adjusting emotional behaviors to maintain individual psychological balance and social functioning.

### **2.1.2 Theoretical Basis of Students' Emotional Regulation**

As a critical component of the individual's psychological regulation system, students' emotional regulation is grounded in several major psychological theories. Current academic research primarily constructs its theoretical foundation from three dimensions: the process mechanisms of emotional regulation, developmental characteristics, and social influences. These perspectives together form a relatively systematic explanatory framework.

#### **2.1.2.1 Process Model of Emotional Regulation**

According to Gross (1998, 2015), one of the most impactful theoretical frameworks in understanding emotional regulation is the Process Model, which emphasizes the different stages and strategies involved in regulating emotions. This model divides the regulation of emotion into two main phases: the stage oriented toward antecedent factors, which may involve strategies such as selecting or altering situations and directing attention, and the stage centered on responses, which can include techniques like cognitive reappraisal and the suppression of emotional expression. Emotional regulation, in this view, is a conscious and strategic process (Gross, 1998). The model emphasizes the sequential nature and strategic variability of regulatory behaviors, making it particularly effective in explaining how students respond emotionally in varying situations such as academic pressure, peer conflict, or teacher-student interactions (Gross, 2015). Moreover, the process model has served as a theoretical basis for the development of numerous assessment tools and intervention programs related to emotional regulation.

#### **2.1.2.2 Emotion Socialization Theory**

The Emotion Socialization Theory developed by Eisenberg and colleagues (1998, 2001) underscores the crucial roles of family, school, and cultural contexts in shaping students' emotional regulation abilities. This theory posits that children and adolescents acquire emotion regulation skills primarily through social interaction mechanisms such as observation, imitation, feedback, and emotion coaching. The ways

in which parents and teachers express and regulate their own emotions directly influence students' emotional regulation behaviors (Eisenberg, Cumberland, & Spinrad, 1998). Within educational settings, factors such as the quality of teacher-student interactions, classroom emotional climate, and societal expectations significantly affect students' regulatory tendencies and strategy selection (Eisenberg, Spinrad, & Morris, 2001).

### **2.1.2.3 Theory of Psychosocial Development**

Erikson's (1968) conceptualization of psychosocial development provides a developmental lens for analyzing how students develop and apply strategies for emotional regulation.. This theory highlights that the core developmental task during adolescence is the formation of ego identity, a process accompanied by intense and complex emotional experiences. As such, the development of emotional regulation skills is especially critical during secondary school years. It not only influences adolescents' self-concept and self-acceptance but also relates to their integration of social roles and behavioral self-control (Zimmermann & Iwanski, 2014). Developmental psychology emphasizes that students' emotional regulation is not a fixed or innate ability; rather, it matures progressively alongside cognitive development and social experience, underscoring the stage-specific, malleable, and educable nature of this capacity.

### **2.1.2.4 Self-Regulated Learning Theory**

Zimmerman (2000) proposed the theory of self-regulated learning, emphasizing that emotion regulation, as part of the self-regulation process, influences students' learning behaviors and academic achievement. According to Zimmerman's framework, students' emotional regulation abilities are closely related to their goal setting, monitoring, and self-evaluation. In the process of self-regulated learning, emotion regulation helps students manage learning-related emotions such as academic anxiety and disappointment, and this capacity has a significant impact on students' motivation and academic performance.

### **2.1.2.5 Dynamic Systems Theory**

The dynamic systems theory proposed by Sameroff (2000) provides a multidimensional perspective on the development of emotion regulation, highlighting that it is a complex, time-dependent process influenced by individual, family, and social-

environmental factors. In the study of students' emotional regulation, dynamic systems theory underscores that individuals' capacity for students' emotional regulation develops and changes over time through learning experiences and social interactions, and that this ability functions differently across educational contexts. This theory offers an integrative perspective for educational research, underscoring the pivotal role that the multifaceted relationships between learning environments and situational contexts play in cultivating and advancing students' capacities for emotional regulation

#### **2.1.2.6 Control-Value Theory**

Pekrun (2006) introduced the Control-Value Theory, a theoretical framework specifically targeting emotional regulation in academic contexts. Pekrun argued that students' emotional responses during learning are determined by their perceived control over tasks and the value they attribute to them. Specifically, students' emotional regulation abilities are influenced by their appraisal of control over learning tasks (e.g., self-efficacy) as well as their affective evaluation of the tasks (e.g., interest or perceived importance). This theory highlights the contextual adaptability of emotional regulation processes, meaning that students adjust their emotional responses according to the difficulty of academic tasks and their goal orientations.

In summary, the theoretical foundation of students' emotional regulation is primarily constructed from the process-oriented perspective, developmental psychology, and socio-environmental influences. Together, these three theoretical dimensions—mechanism, developmental stage, and social context—offer an in-depth account of the composition and developmental trajectory of students' emotion regulation capacities, thereby establishing a robust theoretical basis for the design of targeted interventions and the implementation of empirical research.

#### **2.1.3 Components of Students' Emotional Regulation**

Emotional regulation is a multidimensional and dynamic psychological process that encompasses the perception, understanding, modulation, and expression of emotions. Scholars from various theoretical backgrounds have explored the structural

components of emotional regulation in depth, forming a relatively systematic body of theory.

Gross (1998) proposed a classification of emotional regulation strategies into two overarching categories: strategies targeting antecedent factors (pre-emotion generation) and those addressing emotional responses (post-emotion generation). Specifically, he identified five core components: selecting and modifying circumstances, shifting attentional focus, reframing experiences, and controlling outward emotional displays. These components reflect different stages at which regulatory actions can be implemented, from proactively shaping emotional triggers to modifying emotional responses after they arise.

Saarni (1999) emphasized the functional role of emotional regulation in social contexts, viewing it as a component of social-emotional competence. She proposed that effective emotional regulation requires several key components: emotional awareness and contextual understanding (emotional knowledge), regulation of emotional expression in social situations, empathy, and self-regulation of emotions.

Eisenberg et al. (2001) conceptualized emotional regulation as comprising three central components: emotion awareness, the use of regulation strategies, and emotion expression management. This framework emphasizes both the internal emotional processes and the social dimensions of regulatory behavior, particularly relevant for children and adolescents in school contexts.

From a developmental perspective, Thompson (1994) outlined three key components of emotional regulation: the monitoring of emotional arousal, the modulation of emotional responses, and goal-directed regulation. His model underscores the evolving nature of emotional regulation capabilities across developmental stages, aligning with the broader framework of self-regulation in children and youth.

Gratz and Roemer (2004) proposed a broader, clinically grounded model of emotion regulation, outlining four fundamental dimensions within this construct: (a) awareness and understanding of emotions; (b) acceptance of emotions; (c) The ability to engage in goal directed behavior and refrain from impulsive behavior, when

experiencing negative emotions, and (d) access to emotion regulation strategies perceived as effective. This multidimensional model integrates both intrapersonal and behavioral components, providing a foundation for empirical assessment and intervention development.

Compas (2017), based on developmental research with children and adolescents, proposed that emotional regulation should be considered a core component of the coping system. He categorized emotion regulation into two broad types: automatic emotional regulation and effortful emotional regulation. Furthermore, these were divided into three strategic dimensions: emotion expression responses, goal-directed emotion-focused coping strategies, and negative avoidant strategies (e.g., suppression, denial).

In summary, existing research has proposed a variety of theoretical models concerning the structural dimensions of students' emotional regulation, such as the Process Model developed by Gross (1998, 2015), the multidimensional competence framework by Gratz and Roemer (2004), and Pekrun's (2006) Control-Value Theory. These theories reveal the core components of emotional regulation from different perspectives, including emotional awareness, emotional understanding, the application of regulatory strategies, the management of how emotions are externally expressed, and the influence of the social environment on emotional regulation. However, research focusing specifically on student populations within educational contexts still needs to fully consider the integrated characteristics of individual emotional regulation, such as internal acceptance, emotional balance, emotional experience, and emotional expression.

Based on existing theories and the developmental characteristics of students, this study defines students' emotional regulation as comprising four main components: Awareness and understanding of emotions, acceptance of emotions, The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions, Access to emotion regulation strategies perceived as effective. By examining these four dimensions collectively, the study aims to construct an emotional

regulation measurement and intervention framework that is more aligned with the educational context and the psychological development of students. The purpose of this framework is to supply conceptual grounding alongside empirical findings to improve students' emotion regulation skills and shape pedagogical approaches.

#### **2.1.4 The Significance of Students' Emotional Regulation**

##### **2.1.4.1 Promoting Mental Health and Emotional Adaptation**

Effective emotional regulation is widely acknowledged as a crucial protective factor for maintaining mental well-being. Learners who adaptively employ strategies such as cognitive reappraisal and acceptance of emotions generally exhibit markedly reduced symptoms of depression, anxiety, and stress (Aldao, Nolen-Hoeksema, & Schweizer, 2010; John & Gross, 2004). In contrast, deficits in emotion regulation are strongly linked to the development of emotional disorders (Gratz & Roemer, 2004). Gross (2015) highlighted that regulating emotions involves more than the suppression of negative affect; it centers on fostering emotional equilibrium and adaptively managing emotional experiences, both of which are vital to adolescents' psychological health.

##### **2.1.4.2 Enhancing Academic Performance and Learning Motivation**

In educational contexts, students' emotional states directly influence their attention, working memory, and executive functions (Pekrun, 2006). Students with strong emotional regulation abilities can maintain higher levels of learning motivation and cognitive engagement when facing academic pressure and test anxiety, thereby achieving better academic outcomes (Valiente, Swanson, & Lemery-Chalfant, 2012). According to Pekrun's (2006) Control-Value Theory, emotional regulation reduces the disruptive effects of negative emotions, thus fostering positive emotions and academic engagement.

##### **2.1.4.3 Improving Interpersonal Relationships and Social Adaptation**

The capacity to regulate emotions is essential for the healthy social functioning of adolescents. Research by Gross and John (2003) demonstrated that effective emotional regulation contributes to the establishment of positive interpersonal relationships, enhances perceived social support, and fosters a sense of group belonging. In contrast, insufficient emotional regulation abilities are often linked to

impulsive behaviors, emotional outbursts, and interpersonal conflicts (Eisenberg, Spinrad, & Morris, 2001). Denham et al. (2003) suggested that emotional regulation is a core mechanism for the development of social competence, affecting individuals' social status and level of adaptation within classrooms and peer groups.

#### **2.1.4.4 Promoting Long-Term Personality Development and Psychological Resilience**

From a developmental perspective, emotional regulation forms the foundation for psychological resilience and personality maturation (Thompson, 1994; Zimmermann & Iwanski, 2014). Emotional regulation patterns established during adolescence are relatively stable and have profound impacts on individuals' ability to cope with stress, regulate emotions, and develop healthy personality traits in adulthood (Compas et al., 2017). Consequently, fostering students' emotional regulation abilities has been regarded as a critical intervention target for preventing mental health disorders and promoting positive developmental outcomes (Southam-Gerow & Kendall, 2002).

#### **2.1.4.5 Emotional Regulation Promotes Academic Development**

Students' ability to regulate emotions directly influences their emotional responses to learning tasks, thereby affecting learning motivation, classroom performance, and academic achievement (Pekrun, 2006). In particular, students who are able to regulate their emotions effectively under academic pressure tend to maintain higher levels of learning engagement and stronger academic self-confidence (Saarni, 1999). For example, research has shown that the use of cognitive reappraisal—a key emotional regulation strategy—is positively correlated with academic success, while emotion suppression and avoidance are associated with feelings of academic failure and procrastination (Gross, 2015; Graziano et al., 2007). Thus, emotional regulation plays a significant role not only in academic performance but also in shaping academic motivation and self-efficacy.

#### **2.1.4.6 The Central Role of Emotional Regulation in Individual Development**

As a vital component of psychological functioning, emotional regulation plays a foundational and pivotal role in personality development, mental health, academic adjustment, and social functioning. Studies have shown that individuals with

strong emotion regulation skills are better equipped to adapt to complex and changing external environments, improve cognitive processing efficiency, enhance the quality of social interactions, and, to some extent, prevent the onset of various psychological disorders (Gross, 2015; Aldao, Nolen-Hoeksema, & Schweizer, 2010).

From the perspective of individual adaptation, emotional regulation serves as a mediating mechanism that links internal psychological balance with external behavioral control. It contributes to greater psychological resilience and behavioral flexibility when facing stress, conflict, and challenges. Gross (1998, 2015) pointed out that emotion regulation intervenes in the emotion generation process by altering individuals' interpretations of and responses to situations, which in turn influences emotional experiences and behavioral outcomes, and shapes long-term mental health.

In terms of social functioning, good emotional regulation skills help individuals maintain appropriate emotional expressions in social interactions, thereby facilitating the development of stable and positive interpersonal relationships (Saarni, 1999). Particularly in educational settings, students' emotional regulation levels directly impact their classroom engagement, the effectiveness of peer engagement and the characteristics of teacher–student relationships (Moè & Katz, 2020). In contrast, poor emotional regulation may lead to maladaptive behaviors such as aggression, social withdrawal, and academic avoidance (Graziano, Reavis, Keane, & Calkins, 2007).

From a developmental psychology standpoint, the ability to regulate emotions is considered one of the key indicators of social maturity in children and adolescents. Eisenberg and Spinrad (2004) suggested that childhood and adolescence are critical periods for the rapid development of emotional regulation abilities. The growth of this skill is not only associated with the formation of self-control and moral behavior but also serves as a foundation for successful academic and behavioral adjustment in school environments.

Overall, the significance of students' emotional regulation lies not only in its immediate role in supporting learning and emotional adaptation, but also in its long-term effects on personality development, psychological health, and social functioning. Based

on the aforementioned theoretical and empirical findings, emotional regulation has become a central focus in educational interventions, psychological counseling, and school-based mental health services, highlighting its increasing research and practical value.

### **2.1.5 Strategies to Enhance Students' Emotional Regulation**

Given the extensive and long-term influence of emotional regulation on students' mental health, academic performance, and social adaptation (Gross, 2015; Eisenberg et al., 2001), enhancing students' emotional regulation has become a critical focus in educational psychology and school-based intervention research. Contemporary studies and practices suggest that strategies for strengthening students' emotional regulation can be approached from five dimensions: cognitive training, social support, curriculum integration, skill instruction, and environmental optimization.

#### **2.1.5.1 Training in Emotional Regulation Strategies**

Emotional regulation is a learnable skill that can be enhanced through planned interventions. Gross (1998, 2015) identified cognitive reappraisal as one of the most adaptive regulation strategies, which can effectively reduce negative emotional responses and promote emotional resilience. Training students to reinterpret the meaning of stressful events has been shown to alleviate anxiety and anger (Webb, Miles, & Sheeran, 2012). In addition, strategies related to expressive regulation, such as appropriate expression of positive emotions and control over nonverbal cues, have been found to improve social satisfaction and self-esteem (Gross & John, 2003).

#### **2.1.5.2 Integration of Social and Emotional Learning Programs**

Social and Emotional Learning (SEL) provides a systematic, curriculum-based framework for fostering students' abilities to regulate emotions. This approach is grounded in five central competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2020). Evidence from empirical research indicates that sustained participation in SEL initiatives leads to notable improvements in students' emotion regulation, relationships with peers, classroom participation, and academic outcomes (Durlak et al., 2011). Comprehensive, school-

wide adoption of structured SEL programs—such as Promoting Alternative Thinking Strategies (PATHS) and Second Step—has been shown to be effective in developing students' emotional understanding and self-regulation skills.

#### **2.1.5.3 Development of Mindfulness-Based Interventions**

In recent years, mindfulness-based interventions has gained wide application in adolescent emotional regulation interventions. Mindfulness enhances students' nonjudgmental awareness of emotional experiences and strengthens impulse control (Kuyken et al., 2013). Research indicates that mindfulness-based interventions significantly improve emotional acceptance, self-regulation, and psychological resilience, while reducing symptoms of anxiety and depression (Zoogman, Goldberg, Hoyt, & Miller, 2015). Interventions such as Mindfulness-Based Cognitive Therapy (MBCT) and school-based programs like MindUP have demonstrated strong applicability and efficacy in primary and secondary education settings.

#### **2.1.5.4 Establishing Supportive Teacher - Student and Family Relationships**

Eisenberg et al. (1998, 2001) emphasized that the development of emotional regulation relies heavily on supportive socialization systems within families and schools. Parental emotion socialization practices, teachers' emotional guidance, and the broader emotional climate of the school all influence students' regulatory behaviors. Warm, high-support teacher–student relationships have been shown to reduce emotional suppression and impulsive expression (Raver, 2002). Educational interventions should include teacher training in emotional modeling, coaching, and feedback, while also strengthening school–family collaboration to reinforce the development and application of students' regulation strategies.

#### **2.1.5.5 Optimizing the Emotional Environment of Educational Settings**

The emotional climate within the school context exerts a subtle yet powerful influence on students' emotional regulation. Classroom management styles, peer interaction norms, and the overall emotional atmosphere co-construct students' attitudes and behaviors toward emotional regulation (Pekrun, 2006). Research suggests that supportive and autonomy-promoting classroom environments foster students' emotional agency and reflective regulatory capacity (Reeve, 2009). Thus, schools should aim to

cultivate inclusive, respectful, and feedback-rich educational environments to enable students to practice regulation strategies in authentic contexts.

#### **2.1.5.6 Problem-Solving**

Problem-solving is a strategy that involves actively seeking and implementing solutions to alleviate negative emotions. At its core, this strategy focuses on taking action to effectively address difficulties triggered by emotional distress, thereby reducing the negative emotional impact. Compared with other emotional regulation strategies, problem-solving is characterized by its direct action orientation and effectiveness. For instance, when facing work-related stress, applying effective time management or reprioritizing tasks may help reduce anxiety. Research has shown that problem-solving strategies not only help in alleviating negative emotions but also enhance individuals' emotional resilience and coping capabilities (Folkman & Moskowitz, 2000). Additionally, such strategies can provide individuals with a greater sense of control over their circumstances, thereby boosting self-efficacy (Lazarus & Folkman, 1984).

#### **2.1.5.7 Social Support**

Social support refers to the emotional and material assistance individuals receive from their social networks to help alleviate emotional stress. Numerous studies have shown that social support can effectively reduce negative emotions, particularly during times of significant life stress or emotional crises (Cohen & Wills, 1985). Through interactions with others, individuals can receive emotional comfort, informational guidance, and practical assistance, thereby improving their emotional regulation processes.

The degree to which social support is beneficial is strongly associated with a person's ability to regulate emotions. Studies have demonstrated that individuals who receive substantial social support tend to cope more effectively with stress and report lower levels of emotional strain (Thoits, 1995). Furthermore, both the breadth and quality of an individual's social network play a critical role in shaping the outcomes of emotion regulation.

Taken together, the above strategies represent a comprehensive intervention framework encompassing cognitive, behavioral, relational, and contextual dimensions. Effective implementation requires adapting these strategies to students' developmental stages, cultural backgrounds, and individual needs, ensuring that emotional regulation support is personalized, developmentally appropriate, and contextually sensitive.

### **2.1.6 The Measurement of Students' Emotional Regulation**

Emotional regulation is a multidimensional psychological construct that involves the monitoring, evaluation, and modulation of emotional responses in order to achieve personal goals (Gross, 1998, 2015). In the field of educational psychology, accurately measuring students' emotional regulation is essential for understanding their developmental levels, evaluating the effects of interventions, and informing educational support strategies (Compas et al., 2017). Over the past two decades, researchers have developed a variety of measurement tools—including self-report questionnaires, behavioral observations, and psychophysiological indicators—each emphasizing different theoretical foundations, measurement dimensions, and application contexts.

#### **2.1.6.1 Berkeley Expressivity Questionnaire**

According to the literature, measures of emotional regulation are mainly questionnaires and experimental methods. Gross (1997) (Berkeley Expressivity Questionnaire) for middle school students focuses on three main aspects of emotional expressivity, i.e., impulse intensity, negative expressivity, and positive expressivity. The Berkeley Expressivity Questionnaire was developed by Chinese scholars to measure the emotional expressivity of Chinese middle school students. The questionnaire consists of 18 questions, including two factors: positive and negative emotional expression. The questionnaire was scored on a 5-point Likert scale from 1 "not at all" to 5 "completely". The total score was summed up by all the scores of all the items and divided by the number of items to form a synthetic score, and the higher the score, the better the Chinese middle school students' ability in emotional expression and reaction, and vice versa (Wang Zhenhong et al., 2007).

### 2.1.6.2 Self-Report Scales

Self-report scales are the most commonly used tools for measuring emotional regulation due to their practicality, reliability, and suitability for large-scale studies. The Emotional Regulation Questionnaire (ERQ), created by Gross and John (2003), measures two primary strategies for regulating emotions: cognitive reappraisal and expressive suppression. Empirical evidence supports the ERQ's strong psychometric reliability and validity, and the instrument has been extensively utilized across diverse age cohorts, including adolescent populations (Moore et al., 2008).

The Difficulties in Emotion Regulation Scale (DERS), created by Gratz and Roemer (2004), is another extensively utilized assessment instrument, encompassing six distinct domains: non-acceptance of emotional experiences, challenges in goal-directed behavior, problems with impulse control, reduced emotional awareness, restricted access to regulation strategies, and insufficient emotional clarity. Owing to its multidimensional structure, the DERS allows researchers to conduct a comprehensive evaluation of specific areas where students may exhibit deficits in regulating emotions (Bjureberg et al., 2016).

### 2.1.6.3 Measures of Positive and Negative Emotional Expression

One of the most representative tools in this category is the Positive and Negative Affect Schedule (PANAS), developed by Watson, Clark, and Tellegen (1988). It consists of two subscales measuring the intensity and frequency of positive emotions (e.g., joy, pride, enthusiasm) and negative emotions (e.g., anger, fear, anxiety) experienced over a specific time frame. PANAS has shown high reliability and validity in adolescent populations (Crawford & Henry, 2004).

The Berkeley Expressivity Questionnaire (BEQ), designed by Gross and John (1995), is another pertinent measurement tool in the assessment of emotional expression, which evaluates the external expressivity of individuals in terms of facial expression, emotional intensity, and expression control. Within the BEQ, three subdimensions are assessed—positive expressivity, negative expressivity, and impulse strength and regulation. Studies have shown that the BEQ effectively predicts individuals'

strategy preferences and social evaluations in interpersonal contexts (Gross & John, 2003).

#### **2.1.6.4 Self-Acceptance Subscale**

In mental health research, the Self-Acceptance Subscale from the Ryff Scales of Psychological Well-Being is frequently used to assess individuals' ability to acknowledge and accept their emotional experiences and personal limitations. Ryff (1989) emphasized that self-acceptance is not only a core dimension of psychological well-being but also closely associated with emotional regulation strategies such as cognitive reappraisal and mindfulness.

#### **2.1.6.5 Behavioral Observation Methods**

Behavioral observation involves assessing students' emotional responses and regulation behaviors in natural or structured settings such as classrooms or experimental tasks. Compared to self-report measures, behavioral observation reduces the influence of self-perception bias or social desirability effects, thereby offering valuable complementary data (Denham et al., 2003). Researchers may code facial expressions, verbal content, or social interaction behaviors to evaluate students' regulatory abilities and strategy use (Eisenberg et al., 2001).

#### **2.1.6.6 Teacher and Peer Ratings**

Teachers and peers, through sustained interaction with students, can provide external assessments of emotional regulation based on long-term observation (Raver, 2002). This approach is particularly effective for identifying overt emotional dysregulation and social adaptation difficulties, supplementing the limitations of self-report measures. However, such assessments are susceptible to rater bias and contextual factors, and should therefore be combined with other methods to ensure validity.

#### **2.1.6.7 The Difficulties in Emotion Regulation Scale**

The Difficulties in Emotion Regulation Scale (DERS), created by Gratz and Roemer (2004), is a 36-item self-report measure that evaluates common challenges in emotion regulation across six key domains: nonacceptance of emotional experiences, problems with goal-directed actions, difficulties in impulse control, reduced emotional

awareness, restricted access to regulation strategies, and insufficient emotional clarity. Responses are scored on a 5-point Likert scale, where higher scores reflect more pronounced emotion regulation difficulties. The DERS has demonstrated high reliability and validity and is extensively applied in both clinical practice and research investigations.

In conclusion, the measurement of students' emotional regulation requires a comprehensive approach that integrates multiple methods to capture both the subjective and observable aspects of regulatory functioning. Each method—self-report, behavioral observation, or third-party evaluation—offers unique advantages and limitations. To achieve more accurate and ecologically valid assessments, researchers and practitioners are encouraged to adopt multi-informant, multi-method assessment frameworks, tailored to students' developmental levels and educational settings.

This research primarily aimed to design an emotional regulation questionnaire for middle school students, grounded in the four components of emotional regulation, and employed the Difficulties in Emotion Regulation Scale to assess their emotional regulation abilities.

#### **2.1.7 The Review of Students' Emotional Regulation Researches**

Eisenberg and colleagues (2001) carried out research entitled "Temperamental Emotions and Emotional Regulation". Their Role in Predicting Social Functioning Quality." The study explored how temperamental emotions (i.e., an individual's innate tendency toward emotional responses) and emotional regulation abilities interact to influence an individual's social functioning quality. The study employed a longitudinal design, conducting multiple assessments of a group of adolescents to collect data on their temperamental emotions, emotional regulation strategies, and social functioning quality. Through questionnaires, behavioral observations, and interviews, the researchers obtained a wealth of empirical information. They found that individuals with different temperamental types exhibited differences in emotional expression, emotional experience, and emotional regulation strategies, and these differences further influenced their social interactions and social functioning quality. These findings are significant for

understanding the underlying mechanisms of individual social development and for developing effective social intervention measures.

Fried (2011) conducted research on the topic “Teaching Emotion Regulation to Teachers in the Classroom.” The aim of the study was to explore how emotions influence and are intertwined with various cognitive processes involved in learning, as well as classroom motivation and social interactions. Both students and teachers often need—or are required—to regulate their emotions in everyday classroom life. Limited research suggests that certain aspects of the classroom environment can foster the development of emotional regulation strategies. Additionally, the study indicates that some emotion regulation strategies are more effective than others, with antecedent-focused strategies appearing to offer particular advantages. From a self-regulation perspective, the paper provides a comprehensive discussion of emotion regulation in the classroom by reviewing relevant literature, including the author’s own research. The article highlights the importance of emotional regulation in the classroom and discusses ways to promote it.

Djambazova-Popordanoska (2016) conducted a study titled “The Impact of Emotion Regulation on Young Children’s Emotional Well-being and Academic Achievement”, which explored the role of effectively managing both positive and negative emotions in shaping young children’s emotional and cognitive growth, as well as their later academic outcomes. The research emphasized substantial evidence supporting the reciprocal link between emotion regulation capabilities and children’s emotional well-being, with a particular focus on emotional health and self-esteem. Recent advances in neuroscience further corroborate that emotions exert a significant impact on cognitive development, influencing the learning process in either facilitative or inhibitory ways. These insights underscore the essential function of emotion regulation in fostering school readiness among young children. Those with strong regulation skills tend to maintain focus, sustain attention on academic tasks, and comply with teacher directives—all of which are vital for long-term academic achievement. Collectively, both established and emerging findings in this area offer valuable implications for shaping

educational policies and guiding developmental and instructional strategies during this critical stage of childhood.

Morris et al. (2019) conducted a study entitled “The Role of Physiological and Subjective Emotion Regulation Indicators in Predicting Adolescent Mental Health” to examine how emotional regulation relates to adolescent psychological functioning. Recognizing emotional regulation as a critical factor in psychosocial adjustment, the authors highlighted that deficits in this domain can result in psychological distress and impairments in daily functioning. Prior studies had often focused on a limited set of emotional regulation processes, primarily in relation to psychological disorders. To address this gap, Morris and colleagues analyzed a normative sample of 119 adolescents (mean age = 15.73 years), utilizing both self-report measures and physiological data—specifically respiratory sinus arrhythmia (RSA)—to assess emotional regulation. The study also included a range of indicators reflecting both positive (e.g., resilience, perseverance, connectedness, well-being) and negative functioning (e.g., symptoms of depression and anxiety). Hierarchical regression analyses, after controlling for covariates, revealed that self-reported emotional regulation significantly predicted positive psychological traits and was inversely related to depression and anxiety symptoms. Moreover, stronger RSA was positively associated with resilience and perseverance. Effect sizes ranged from small to moderate, indicating a meaningful influence of both subjective and physiological regulation indicators on adolescent mental health outcomes.

De Neve and colleagues (2023) examined the intricate connections between emotion regulation and students’ academic performance as well as social interactions in their publication entitled “Emotional Regulation in the Classroom: A Network Approach to Modeling Emotion Regulation Difficulties, Learning Engagement, and Relationships with Peers and Teachers”. While emotional regulation is generally recognized as a key factor influencing student engagement, the precise mechanisms through which it affects learning behaviors and interpersonal dynamics have remained underexplored. Drawing on a sample of 136 middle school students aged 13 to 18 (59.7% female), the

researchers employed psychometric network analysis to examine how specific emotional regulation components—such as emotional clarity, awareness, impulse control, and acceptance of emotional responses—are linked to behavioral and emotional engagement, as well as to students' relationships with peers and teachers. The results indicated that emotional engagement plays a mediating role between emotion regulation and social connections within the classroom. Moreover, difficulties in impulse control, low emotional awareness, and rejection of emotional experiences were found to be uniquely predictive of strained teacher–student and peer relationships, which, in turn, had indirect effects on learning engagement. Causal analyses further suggested that these emotional challenges are precursors to broader difficulties in accessing and applying effective regulation strategies. The findings provide valuable implications for educational practice, emphasizing the importance of integrating emotional regulation training into school curricula and teacher development programs to enhance student engagement and support positive relational environments.

Boruah (2024), in the research titled “A Mixed Methods Exploration of Teacher Involvement and Its Effects on Adolescent Behavioral and Emotional Problems”, emphasized that teacher involvement in adolescents' lives, including academics and emotions, is crucial for creating a supportive learning environment.

Li (2025), in the study titled “The Impact of Emotion Regulation Strategies on Adolescent Mental Health: Interactions of Family and Society”, proposed that emotional regulation plays a crucial role in adolescent mental health. Adolescents are in a transitional stage and face emotional challenges throughout their development. In the United States—a global leader—many adolescents struggle with mental health issues such as anxiety, depression, and emotional instability. The article explores the factors contributing to these emotional problems, particularly the influence of family and society, and proposes innovative strategies to help adolescents improve their emotional well-being.

Overall, the critical role of emotional regulation in the development of children and adolescents has received increasing scholarly attention. Research has shown that

adolescents' emotional regulation abilities are not only influenced by their temperament-based emotional reactivity (Eisenberg et al., 2001), but are also closely linked to family and social support systems (Li, 2025; Boruah, 2024). The use of effective emotional regulation strategies has been demonstrated to improve mental health, reduce the risk of anxiety and depression, and enhance social functioning (Morris et al., 2019). In educational contexts, both teachers' own emotional regulation and their ability to guide students' emotional processes play a crucial role. They can foster students' regulatory abilities by shaping the emotional climate of the classroom (Fried, 2011), thereby promoting greater learning engagement and improving the quality of interpersonal interactions (De Neve et al., 2023). Furthermore, emotional regulation during early childhood also has far-reaching effects on emotional well-being and academic performance. Empirical studies have indicated that children with higher levels of emotional regulation perform better in terms of attentional focus, task persistence, and adherence to classroom rules (Djambazova-Popordanoska, 2016). Taken together, current empirical research not only highlights the close associations between emotional regulation, mental health, social functioning, and academic achievement, but also provides valuable theoretical and practical implications for school curriculum development and teacher training programs.

## **2.2 Mindfulness-Based Interventions**

### **2.2.1 Theoretical Foundation**

Mindfulness-Based Interventions (MBIs) are rooted in the concept of mindfulness, which is defined as a non-judgmental, present-moment awareness (Kabat-Zinn, 1990). The theoretical framework of MBIs integrates elements from Buddhist practices and contemporary psychological theories, aiming to cultivate attention regulation, emotional awareness, and acceptance of one's internal experiences. These interventions are designed to foster self-regulation, stress reduction, and psychological well-being by enhancing an individual's capacity to remain aware of their thoughts, emotions, and physical sensations without automatic reactions or judgment.

### 2.2.1.1 Theoretical Foundations of Mindfulness-Based Interventions

Kabat-Zinn (1990) is credited with introducing mindfulness as a clinical intervention, especially by creating the Mindfulness-Based Stress Reduction (MBSR) program. His approach combines mindfulness meditation and awareness practices with stress reduction techniques. Kabat-Zinn's theory suggests that mindfulness allows individuals to develop a deeper awareness of their physiological and psychological states, thus enhancing their ability to regulate emotional responses to stressors and pain. Mindfulness training, as per Kabat-Zinn's model, is a means of cultivating a healthy, balanced way of being present in one's life and experiencing the world.

Bishop et al. (2004) provide a more refined definition of mindfulness, highlighting two essential dimensions: "mindful attention" and "mindful attitude." Mindful attention refers to the act of being fully present in the moment, while mindful attitude involves an open, accepting, and non-judgmental stance toward whatever arises in the mind and body. These dimensions help individuals improve emotional regulation by encouraging a shift from automatic, reactive patterns to a more considered and intentional approach to dealing with internal experiences.

Baer (2003) further elaborates on the therapeutic potential of MBIs, emphasizing that the key objective is to reduce automatic emotional reactivity. Fostering mindfulness enables individuals to better understand their emotional mechanisms and to adopt more constructive responses to emotional challenges, thereby enhancing overall mental resilience.

Shapiro et al. (2006) focus on the concept of "reperceiving," which refers to the ability to shift one's awareness of experiences in a way that allows for greater objectivity and less identification with those experiences. This shift is central to the process of enhancing metacognitive skills, which facilitates higher-order emotional and psychological regulation. The notion of reperceiving helps explain why MBIs are effective not only in managing symptoms but also in promoting broader psychological growth and integration.

### 2.2.1.2 Emotional Regulation Theory

The Emotional Regulation Theory posits that mindfulness enhances emotional self-regulation by increasing openness to emotional experiences and fostering a stance of non-reactive acceptance. Rather than suppressing or cognitively altering emotional states, mindfulness encourages individuals to acknowledge and tolerate difficult emotions without judgment. This “awareness–acceptance” process has been shown to improve both the effectiveness and adaptability of emotional regulation (Chambers et al., 2009), supporting healthier coping strategies and greater psychological resilience.

### 2.2.1.3 Reperceiving Theory

The Reperceiving Theory, developed by Shapiro and colleagues (2006), describes mindfulness as a metacognitive process that fosters a shift in perspective, allowing individuals to “step back” from automatic patterns of thinking and emotion. This capacity, termed reperceiving, enables a heightened meta-awareness of one’s internal states and fosters a more objective and less reactive mode of self-observation. As a result, mindfulness not only enhances emotional regulation but also contributes to personality integration and psychological growth by restructuring self-related processes.

Additionally, Hölzel et al. (2011) introduced a Multi-Component Mechanism Model that integrates existing theoretical perspectives. This comprehensive framework identifies five primary processes through which mindfulness produces its benefits: regulation of attention, heightened bodily awareness, enhanced emotional awareness, improved emotion regulation, and shifts in self-perception. The model underscores that mindfulness extends beyond simple attention-training techniques, functioning instead as a holistic system for deliberate transformation designed to optimize psychological functioning across various domains.

In summary, the theoretical foundation of mindfulness-based interventions is marked by a high degree of integration and interdisciplinarity. It spans mechanisms of cognitive control, emotional processing, and self-structure transformation, thus providing

a robust conceptual basis for the application of mindfulness in education, psychotherapy, and developmental support.

### 2.2.2 Definition of Mindfulness-Based Interventions

Kabat-Zinn (1994) described mindfulness as the intentional and present-centered focus of attention, maintained in a nonjudgmental manner. Expanding on this perspective, Bishop et al. (2004) proposed an operational definition in which mindfulness comprises two central components: the self-regulation of attention and an approach toward present-moment experiences characterized by openness, curiosity, and acceptance. Similarly, Brown and Ryan (2003) conceptualized mindfulness as a receptive form of attention and awareness directed toward current events and experiences. In practice, mindfulness entails sustained moment-to-moment awareness of one's thoughts, emotions, bodily sensations, and surrounding environment. Individuals who embody mindfulness often demonstrate attitudes of openness, nonjudgment, friendliness, curiosity, acceptance, compassion, and kindness (Keng, Smoski, & Robins, 2011).

Bhikku (2003) mindfulness is the cognitive skill, usually developed through meditation or sustained practice, of sustaining metacognitive awareness towards the contents of one's own mind and bodily sensations in the present moment. In particular, it is a type of metacognitive skill involving cognitive processes such as attentional monitoring, attentional regulation, attentional focus reorientation, and subpersonal thought inhibition. Mindful awareness can be oriented towards to both internal phenomena, such as thoughts and emotions, and external phenomena, such as speech or other volitional motor actions. Lomas and Ivtzan (2016) found that mindfulness-based interventions (MBIs) effectively promote various positive outcomes, including enhanced hope, greater optimism, increased prosocial behaviors, experiences of flow, improved working memory, and better academic achievement.

Mindfulness-Based Interventions (MBIs) refer to psychological intervention programs that center on the cultivation of mindfulness—defined as a conscious, present-moment, and nonjudgmental awareness—through structured practices such as

meditation, body scanning, and breath awareness. These interventions are designed to systematically enhance individuals' attentional focus, self-awareness, and acceptance of internal experiences, thereby promoting emotional regulation, stress management, and overall psychological well-being (Kabat-Zinn, 1990; Bishop et al., 2004).

Baer (2003) defines MBIs as interventions that incorporate mindfulness-based interventions into therapeutic frameworks, with the primary goal of enhancing individuals' awareness of their emotions, thoughts, and behaviors, thereby reducing automatic emotional reactivity and improving their capacity to manage stress and negative affect. Similarly, Shapiro et al. (2006), drawing on the concept of re-perceiving, emphasize mindfulness-based interventions as a means of strengthening metacognitive capacity, which facilitates higher-order psychological regulation and the integration of personality structures.

Bishop and colleagues (2004) present an operationalization of mindfulness consisting of two fundamental elements: (1) regulating attention to sustain awareness of immediate internal and external experiences, and (2) adopting an attitude toward those experiences characterized by openness, curiosity, and acceptance. They emphasize that mindfulness is not intended to eradicate negative thoughts or emotions, but rather to engage with them in a receptive and nonjudgmental manner. This conceptualization serves as a theoretical basis for both clinical practice and experimental research involving mindfulness-based interventions.

Creswell (2017) further specifies three defining features of MBIs: first, the intervention must focus on the cultivation of mindfulness as its central mechanism; second, it must be delivered through structured, replicable, and time-limited protocols; third, it should aim to support adaptive regulation across cognitive, emotional, and physiological domains.

Tang, Hölzel, and Posner (2015) conceptualize mindfulness-based interventions as "a class of behavioral interventions that improve individuals' awareness and regulation of sensory, cognitive, and emotional states through training, with core mechanisms

reflected in dynamic neural restructuring of the prefrontal cortex, autonomic nervous system, and emotion regulation networks.”

In summary, definitions of mindfulness-based interventions encompass multiple psychological mechanisms, including attentional control, nonjudgmental acceptance, and metacognitive transformation, all contributing to deeper emotional adaptation. Although the conceptualization of mindfulness-based interventions continues to evolve, its foundational principles remain grounded in present-moment awareness and acceptance-based coping, operationalized through structured training to enhance overall psychological functioning.

In this study, “mindfulness-based interventions” is defined as a type of psychological intervention that systematically trains individuals to maintain intentional, open, and non-judgmental awareness of the present moment. It aims to enhance attention regulation, self-awareness, and acceptance, thereby promoting emotional regulation, stress management, and psychological well-being.

### **2.2.3 The Steps of Mindfulness-Based Interventions**

Mindfulness-Based Interventions typically follow a structured, multi-step process designed to cultivate sustained attention, emotional awareness, and nonjudgmental acceptance. These steps reflect the theoretical foundations of mindfulness and support the gradual internalization and generalization of mindful awareness into daily functioning. Standardized protocols often incorporate five core components, as outlined below.

#### **2.2.3.1 Guided Formal Practices**

This component constitutes the core of the intervention. Participants engage in formally structured mindfulness-based interventions guided by the instructor's verbal cues. Common exercises include breath awareness, body scanning, mindful walking, and sitting meditation (Kabat-Zinn, 1990; Carmody & Baer, 2008). These practices are designed to anchor attention in the present moment, reduce preoccupation with the past or future, and progressively enhance sensitivity to internal bodily and emotional signals.

Moreover, they foster an open, accepting attitude toward experience (Bishop et al., 2004).

### **2.2.3.2 Informal Mindfulness-Based Interventions**

Mindfulness-based interventions also emphasize the integration of mindfulness into everyday life, encouraging participants to cultivate awareness during routine activities such as eating, brushing teeth, conversing, or walking (Crane et al., 2017). This step aims to broaden the scope and sustainability of mindfulness beyond formal practice, allowing individuals to more quickly recognize automatic reactions in daily situations and use mindfulness to interrupt maladaptive patterns (Shapiro et al., 2006).

### **2.2.3.3 Emotional and Cognitive Awareness**

Training in emotional and cognitive awareness is a key component—especially in Mindfulness-Based Cognitive Therapy (MBCT). This step helps participants recognize the connection between emotional states and negative automatic thoughts (Segal et al., 2013). Through techniques such as decentering and reperceiving, individuals learn to observe emotions and thoughts as transient mental events rather than self-defining truths. This shift reduces rumination and emotional over-identification, making it particularly effective in the prevention and alleviation of anxiety and depression (Feldman et al., 2010; Shapiro et al., 2006).

### **2.2.3.4 Group Inquiry and Instructor Feedback**

Mindfulness-based interventions are typically conducted in group settings, where instructors facilitate guided group inquiry and feedback sessions. Through reflective questioning, open discussion, and supportive feedback, participants are encouraged to explore their personal experiences with mindfulness-based interventions, share challenges, and gain insight through peer interaction (Santorelli, 2014). This step fosters deeper processing of mindfulness principles, enhances conceptual understanding, and reinforces motivation for continued practice (Crane et al., 2017).

### **2.2.3.5 Home Practice and Self-Monitoring**

Participants are required to engage in daily home practice following each session, typically for 20 to 45 minutes. This may include repeating formal exercises,

following guided audio meditations, and completing practice logs to record their experiences (Parsons et al., 2017). Research has demonstrated a positive correlation between the frequency and quality of home practice and the effectiveness of the intervention (Crane et al., 2014). As such, this step is considered essential for maintaining training intensity and promoting long-term habit formation.

In summary, the standardized procedure of mindfulness-based interventions typically follows a progressive, cyclical model: structured formal practice → integration into daily life → emotional and cognitive restructuring → group reflection and reinforcement → home practice consolidation. This closed-loop system not only reflects the scientific rigor of intervention design, but also supports the adaptability and cross-cultural scalability of mindfulness-based interventions (Crane et al., 2017; Creswell, 2017).

In this study, mindfulness-based interventions were explored and analyzed based on literature and related research. A comprehensive analysis of the definition and key components of mindfulness-based interventions was conducted. The main focus of this study is to design a mindfulness-based interventions, identifying three fundamental steps: Lead in, learning activities, and conclusion.

#### **2.2.4 The Strategies of Mindfulness-Based Interventions**

As a non-pharmacological, low-risk, and highly adaptable form of psychological intervention, Mindfulness-Based Interventions have been widely applied among student populations. Students are at a critical stage of cognitive, emotional, and personality development, often facing multiple challenges such as academic pressure, interpersonal conflicts, identity formation, and emotional regulation. Therefore, the strategies employed in mindfulness-based interventions for students must be developmentally sensitive and contextually tailored (Zenner, Herrnleben-Kurz, & Walach, 2014). Current research identifies four principal strategies in school-based mindfulness-based interventions:

##### **2.2.4.1 Developmentally Appropriate Practices**

Developmentally appropriate practices form the foundational strategy of mindfulness interventions for children and adolescents. This approach emphasizes the

alignment of intervention content with students' age, attentional capacity, and modes of emotional expression. Instead of relying solely on traditional sitting meditation, these practices often incorporate mindful drawing, mindfulness games, and sensory awareness activities (Semple et al., 2010). Such adaptations increase student engagement and practice sustainability, while facilitating a more concrete and internalized understanding of mindfulness (Meiklejohn et al., 2012).

#### **2.2.4.2 School-Based Informal Mindfulness Strategies**

Informal mindfulness strategies embedded in daily school routines play a vital role in student interventions. Teachers often guide students to apply mindfulness techniques during naturally occurring moments such as pre-class pauses, deep breathing before exams, or mindful walking during breaks. These brief and accessible practices help students manage stress, enhance classroom focus, and improve task initiation (Zoogman et al., 2015). Empirical evidence supports the effectiveness of these strategies in improving students' emotional regulation and behavioral control (Felver et al., 2016).

#### **2.2.4.3 Emotional Literacy and Acceptance Strategies**

Mindfulness-based interventions are frequently integrated with emotional literacy curricula to help students identify and understand their emotional states. Students are guided to acknowledge emotions such as anxiety, anger, or loneliness without judgment, often through structured sequences like pause-observe-breathe-respond. This approach promotes more resilient and adaptive coping mechanisms (Schonert-Reichl & Lawlor, 2010), and has been shown to enhance both emotional intelligence and self-efficacy (Carsley et al., 2018).

#### **2.2.4.4 Instructor-Guided and Peer-Supported Strategies**

Instructor guidance and peer support are essential for reinforcing mindfulness learning in school settings. Teachers serve as role models through demonstrations and experiential sharing, while also encouraging reflection through inquiry-based dialogue. In addition, peer collaboration in small-group practices fosters social connection and enhances continuity of training (Viafora et al., 2015; Thomas &

Atkinson, 2017). These strategies amplify the social dimension of mindfulness and help embed it within the classroom culture.

#### **2.2.4.5 Mindful Breathing**

Mindful breathing involves focusing on the breath as a primary anchor for attention. By directing attention to the breath, individuals can develop greater awareness of their thoughts and emotions and interrupt automatic reactions. Kabat-Zinn (1990) highlights that mindful breathing is a foundational technique in mindfulness-based interventions and serves as a way to center attention and foster relaxation. This practice encourages a calm and focused state of mind, which can help reduce anxiety and stress levels.

#### **2.2.4.6 Body Scan**

The body scan is a guided mindfulness practice that involves progressively focusing on different parts of the body to increase awareness of bodily sensations. Typically, the practice starts from the toes and gradually moves upward, focusing on each body part such as the legs, abdomen, chest, etc., until full-body awareness is achieved. Studies show that the body scan helps individuals become more aware of tension or discomfort in the body and reduces feelings of anxiety or stress (Kabat-Zinn, 1990). This technique is widely used in stress reduction interventions, especially for combating anxiety, insomnia, and other related symptoms (Carlson et al., 2004).

#### **2.2.4.7 Body Awareness**

Body awareness in mindfulness involves real-time awareness of bodily sensations, which helps individuals connect with their physiological state. Regular practice allows individuals to better sense bodily tension, fatigue, or discomfort and take appropriate actions when these signals arise. This practice not only helps in understanding the link between the body and emotions but also reduces emotional distress arising from physical discomfort (Creswell, 2017).

#### **2.2.4.8 Mindful Eating**

Mindful eating applies mindfulness practices to everyday eating behaviors. It encourages individuals to pay full attention to the taste, texture, smell, and feelings while eating, rather than eating mechanically or unconsciously. Research shows that

mindful eating helps increase awareness of hunger and fullness cues, thus reducing overeating and binge eating behaviors (Moss & Wilson, 2019). Moreover, it enhances food choice awareness and promotes healthier eating habits (Kristeller & Wolever, 2011).

#### **2.2.4.9 Loving-Kindness Meditation**

Loving-kindness meditation (LKM) is a contemplative practice aimed at developing compassion and kindness toward oneself and others. Empirical evidence indicates that LKM contributes to improved emotional well-being and mitigates adverse emotions, including anger and anxiety. Fredrickson et al. (2008) suggest that LKM strengthens emotional resilience by fostering positive affect and enhancing interpersonal connectedness.

#### **2.2.4.10 Mindful Yoga**

Mindful yoga is an intervention that integrates traditional yoga postures with principles of mindfulness, emphasizing present-moment awareness, breath regulation, and non-judgmental observation of bodily sensations (Ross & Thomas, 2010). Unlike conventional forms of yoga that often focus on physical flexibility or fitness goals, mindful yoga centers on cultivating internal awareness and psychological self-regulation through slow, intentional movements and sustained attention to the body.

Empirical evidence suggests that mindful yoga can effectively reduce stress, anxiety, and depressive symptoms while enhancing emotion regulation and psychological well-being (Gard et al., 2014). Among both clinical and non-clinical populations, mindful yoga has been associated with improvements in interoceptive awareness—the ability to perceive internal bodily signals such as breathing, tension, or pain—which in turn contributes to greater emotional stability and mind-body integration (Mehling et al., 2011).

Moreover, mindful yoga has demonstrated positive effects in fostering self-compassion and self-acceptance, especially among individuals experiencing chronic stress or trauma (Emerson et al., 2009; van der Kolk, 2014). Through the non-judgmental observation of physical limitations and discomfort during practice, individuals gradually

develop a more accepting and respectful relationship with their own bodies, reducing tendencies toward self-criticism (Carmody & Baer, 2008).

On a neurobiological level, mindful yoga has been shown to influence brain regions involved in emotional regulation, such as the prefrontal cortex and insular cortex, providing physiological support for its psychological benefits (Gerritsen & Band, 2018).

In conclusion, effective implementation of mindfulness-based interventions for student populations requires structural adaptation across practice content, instructional methods, and contextual settings. By combining developmentally appropriate practices, integration into daily school life, emotional acceptance training, and socially supported implementation, Mindfulness-based interventions demonstrate strong feasibility and effectiveness in educational environments. These strategies offer significant support for the development of student' psychological resilience, self-regulation, and academic adjustment.

#### **2.2.5 The review of the Mindfulness-Based Interventions**

Several studies have explored the effectiveness of studies have the mechanisms by which mindfulness plays a positive role in educational settings for adolescents' social-emotional, behavioral, and academic cooperation, and studies have also elaborated on the success of mindfulness-based interventions in helping educators address administrative, instructional, and emotional challenges classroom and school environment creation.

Shapiro et al. (2006) conducted a seminal study titled “Mechanisms of Mindfulness”, aiming to conceptualize the underlying processes through which mindfulness exerts its beneficial effects. The authors proposed a theoretical framework wherein mindfulness operates through the deliberate cultivation of intention (I), attention (A), and attitude (A)—specifically an open, accepting, and nonjudgmental stance. This triadic process is believed to facilitate a fundamental shift in perspective, referred to as “re-appreciation,” which functions as a meta-mechanism capable of transcending immediate responses and fostering transformative psychological change. According to the model, “re-appreciation” interacts with several interrelated mechanisms that

contribute to positive psychological outcomes: (1) enhanced self-regulation, (2) clarification of personal values, (3) increased flexibility across cognitive, emotional, and behavioral domains, and (4) experiential exposure. The authors argue that both intentionality and mindful attention are central to activating these processes, establishing a recursive cycle—intention, attention, connection, regulation, order, and ultimately, health. This progression suggests that nonjudgmental awareness fosters interpersonal and intrapersonal connection, which in turn promotes regulatory capacities, leading to greater psychological coherence and overall well-being.

Zenner, Hermleben, and Walach (2014) a study titled “Mindfulness-based interventions in schools—a systematic review and meta-analysis” analyzed and evaluated the effects of mindfulness interventions in primary and secondary school settings. The study focused on the application of mindfulness in enhancing students’ cognitive abilities, socio-emotional skills, and mental health. By incorporating multiple empirical studies, the authors found that mindfulness-based interventions in schools can significantly improve students’ attention, self-regulation, stress management, and overall emotional well-being.

The article pointed out that mindfulness programs—such as mindfulness meditation, breathing exercises, and body scans—are highly implementable in school contexts and can effectively enhance students’ executive functioning, learning motivation, and classroom behavior. In addition, the research indicated that such interventions are particularly suitable for addressing emotional fluctuations and stress burdens during adolescence, making them a sustainable preventive mental health strategy.

Carmody et al. (2009) conducted a study entitled *An Empirical Study of Mindfulness Mechanisms in Mindfulness-Based Stress Reduction Programs*, investigating the implementation of mindfulness within educational contexts for adolescents aged 11 to 18. The research focused on enhancing social-emotional and behavioral competencies as defined by the Collaborative for Academic, Social, and Emotional Learning (CASEL) through targeted interventions. Findings indicated that

mindfulness-based programs positively influence adolescents' self-regulatory capacities, including emotional regulation.

Burrows (2011) researched the topic "Relational Mindfulness in Education", Relational mindfulness can help educators address management, teaching, and emotional challenges classroom and school environment success. The relational mindfulness inquiry project described in the article is designed to create a supportive, calm, and nonjudgmental environment where educators are willing to be open and honest about their experiences practicing relational mindfulness during challenging interactions with students or colleagues, and where educators are willing to engage in open and honest conversations about their experiences practicing relational positivity.

Greco et al. (2011) conducted a series of four studies to develop and validate the Children and Adolescent Mindfulness Measure (CAMM). Study 1 established the item development process and evaluated the clarity of the initial 25 items. In Study 2, exploratory factor analysis reduced the pool to 10 items. Study 3 confirmed the structure of the 10-item scale in a cross-validation sample, while Study 4 examined its validity through bivariate and partial correlations with related constructs. Findings demonstrated that the CAMM is developmentally suitable and internally consistent. As hypothesized, CAMM scores correlated positively with quality of life, academic performance, and social competence, and negatively with physical discomfort, internalizing symptoms, and externalizing behaviors. Although controlling for overlapping processes (thought suppression and cognitive rigidity) attenuated these associations, they remained statistically significant. Collectively, the results support the CAMM as a reliable instrument for assessing mindfulness in school-aged youth.

Ager et al (2015) researched the topic "Mindfulness in Schools Research Project: Exploring Students' Perspectives of Mindfulness—What are Students' Perspectives of learning mindfulness-based interventions at School?". Research has shown that mindfulness can impact academic performance, executive functioning, and a sense of connection to self, others, and the environment. Mindfulness programs such as the Meditation Capsule can have a positive impact on the health of a school's student

body by reducing stress, helping to develop core character traits such as empathy and awareness of self, others, and the environment, and increasing students' happiness and well-being. It can also help individuals improve their health, focus their physical and mental attention, and assist in conflict resolution.

Roemer et al. (2015) explored the relationship between mindfulness practices and emotional regulation, highlighting mindfulness as a potential causal factor in fostering healthier emotional responses. Their findings suggest that mindfulness is linked to reduced emotional distress, improved resilience, decreased negative self-referential thinking, and greater capacity for goal-directed behavior. Interventions such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) have been shown to alleviate self-reported emotional dysregulation. The authors argue that mindfulness promotes expanded and sustained attention to present-moment experiences, which enhances individuals' awareness of both their internal states (e.g., bodily sensations) and external contexts. This increased perceptual clarity supports more accurate recognition of emotional cues and facilitates timely and effective use of regulation strategies. Consequently, mindfulness equips individuals with the attentional and cognitive flexibility needed for adaptive emotional regulation in challenging situations.

In summary, the reviewed literature establishes a robust theoretical and empirical foundation for the present study, offering critical insights into the benefits, mechanisms, and educational applications of mindfulness. Shapiro et al. (2006) proposed a theoretical model emphasizing the foundational mechanisms of mindfulness, particularly its role in fostering self-regulation, which contributes to enhanced psychological order and overall well-being among students. Similarly, Nagpal et al. (2024) found that mindfulness-based interventions implemented within educational contexts positively influence adolescents' self-regulatory abilities, including emotional regulation. Deplus et al. (2016) further adapted mindfulness-based cognitive therapy for adolescent populations, demonstrating its utility in supporting youth with emotional regulation difficulties.

Carmody et al. (2009) provided empirical evidence showing that mindfulness-based approaches are effective in improving adolescents' capacity for self-management, particularly in regulating emotional responses. Ager et al. (2015) expanded this understanding by highlighting mindfulness as a key contributor to enhanced academic performance, executive functioning, and a strengthened sense of connection to oneself, others, and the broader environment. Their findings also underscore mindfulness's potential in promoting physical and mental focus and resolving interpersonal conflict. Roemer et al. (2015) reinforced the association between mindfulness and adaptive emotional regulation, citing outcomes such as reduced emotional distress, improved resilience, decreased negative self-referential cognition, and better engagement in goal-directed behavior. Additionally, Burrow (2011) emphasized the relevance of relational mindfulness-based interventions in educational settings, suggesting they offer valuable support in addressing the instructional, behavioral, and emotional challenges faced by educators. Furthermore, the CAMM (Child and Adolescent Mindfulness Measure) has been identified as a promising instrument for assessing mindfulness skills among school-aged populations.

### **A Comprehensive Literature Review**

This chapter presents an in-depth synthesis of existing theoretical and empirical literature on students' emotional regulation and mindfulness-based interventions, forming a comprehensive foundation for the current study. The review systematically explores the core constructs of emotional regulation, encompassing emotional awareness, acceptance, impulse control, and the capacity to pursue goal-directed actions under negative emotional states. These components are consistently identified in the literature as vital to students' psychological well-being, interpersonal functioning, and academic success. Emotional regulation is shown to be shaped by a broader ecological system involving schools, families, and community contexts, reinforcing the need for integrative and supportive learning environments.

The discussion further highlights a range of mindfulness-based intervention strategies—such as mindful breathing, body scanning, and movement-based

mindfulness techniques—that have been found to cultivate emotional awareness and self-regulatory abilities in educational settings. These practices not only reduce stress and impulsivity but also promote a positive classroom climate conducive to learning. Attention is also given to the measurement of emotional regulation, with an emphasis on the importance of using psychometrically sound instruments. This study adopts a 5-point Likert scale to assess emotional regulation, drawing on validated tools supported by prior research to ensure reliability and construct validity.

Moreover, the literature review situates mindfulness within a constructivist paradigm, conceptualizing it as the non-judgmental, present-moment awareness that enables individuals to accept internal and external experiences as they are. Such awareness supports adaptive coping, particularly in the face of emotional challenges. The mechanisms through which mindfulness facilitates emotional regulation—namely enhanced attention, value clarification, and behavioral flexibility—are explored in depth. These insights inform the design of the current study, which aims to develop and evaluate a targeted mindfulness-based intervention program to enhance emotional regulation among middle school students.

In sum, the review consolidates existing findings and theoretical models, offering a robust conceptual base for the current research. By identifying key benefits, validated strategies, and existing gaps, this chapter justifies the relevance and originality of the proposed intervention, while advancing the broader discourse on socio-emotional learning within the context of basic education.

## CHAPTER 3

### RESEARCH METHODOLOGY

The objective of this study was to synthesize existing research on mindfulness-based interventions aimed at enhancing students' emotional regulation:

(1) To study the definition and components of students' emotional regulation in middle school students.

(2) To develop a model based on mindfulness-based interventions to improve students' emotional regulation of middle school students

(3) To evaluate the effectiveness of mindfulness-based interventions in improving the students' emotional regulation of middle school students.

Accordingly, the study was structured into 3 distinct phases, each outlined in detail below.

**Phase 1: To study the definition and components of students' emotional regulation in middle school students.**

This study adopted an integrated qualitative and quantitative research approach. To explore emotional regulation among middle school students, the researcher conducted an extensive literature review and carried out in-depth interviews with five experienced psychologists and education experts. Based on theoretical definitions and core components of emotional regulation, a specialized questionnaire was developed to assess students' regulatory capacities. The instrument underwent a thorough validation process to ensure its reliability and methodological rigor.

**Phase 2: To develop a model based on mindfulness-based interventions to improve the students' emotional regulation of middle school students**

The objective of the researchers was to develop an expanded model of mindfulness-based interventions aimed at enhancing emotional regulation among middle school students. Drawing upon findings from Phase 1, as well as insights gained through an extensive review of the literature, relevant theoretical frameworks, and expert interviews with five senior professionals in the fields of psychology and education, the

researchers formulated implementation guidelines. Based on these foundations, a structured program consisting of 14 sessions—each lasting 90 minutes—was designed to support and improve emotional regulation capacities in middle school learners.

**Phase 3: To evaluate the effectiveness of mindfulness-based interventions in improving the students' emotional regulation of middle school students.**

In order to assess the practical effectiveness of the mindfulness-based intervention, the researcher implemented the program with a designated sample group. Measurement instruments developed during Phase 1—specifically, the emotional regulation questionnaire—were utilized to administer pre-intervention, post-intervention, and follow-up assessments. This multi-stage evaluation was designed to yield a comprehensive understanding of the intervention's real-world impact, enabling a systematic examination and empirical validation of its outcomes.

#### Synthesis of Findings Across the Three Research Phases

##### (1) Phase 1: Conceptualization and Definition

This initial phase centered on identifying and defining the fundamental components of emotional regulation, specifically tailored to the developmental context of middle school students.

##### (2) Phase 2: Framework Development

During the 2 phase, the researchers designed a dynamic instructional framework intended to enhance emotional regulation skills within the target student population.

##### (3) Phase 3: Implementation and Evaluation

In the final phase, a mindfulness-based intervention model was implemented and systematically evaluated to determine its effectiveness in promoting emotional regulation among middle school learners.

### **3.1 Phase 1: Definition and Components of students' Emotional Regulation in middle School Students.**

In the preliminary stage of the research, the investigator adopted an integrated methodology that combines qualitative and quantitative data, and followed the procedural steps outlined below.

#### **3.1.1 The Collection of Qualitative Data**

##### **3.1.1.1 Literature Review Study**

The first phase of the study involves a comprehensive literature review aimed at critically synthesizing existing scholarship on students' emotional regulation. This stage establishes the theoretical and conceptual foundation of the research by refining its definition, identifying core dimensions, and highlighting its educational significance within psychology and pedagogy.

During this stage, the researcher collects and reviews a broad selection of scholarly materials related to emotional regulation in students. These sources include academic journal articles, monographs, empirical research reports, and other relevant publications. Through a process of systematic identification, screening, and content analysis, the researcher aims to distill key theoretical perspectives, compare various definitions, and examine how emotional regulation concepts have been applied in educational practice. This analytical process enables a deeper understanding of the evolution and current state of emotional regulation theory in educational research.

##### **3.1.1.2 Development of the Semi-Structured Interview Guide**

To support the construction of a theoretical framework for students' emotional regulation, the second step of the initial research phase involved the development of a semi-structured interview guide. This process was grounded in a comprehensive qualitative review of existing literature on students' emotional regulation, which provided the conceptual basis for designing open-ended interview questions aimed at eliciting expert insights. The interview guide focused on four core areas:

**(1) Basic information about the experts;**

- 1) The key components of emotional regulation among middle school students;
- 2) Preliminary considerations for developing mindfulness-based interventions guidelines;
- 3) Methods or criteria for evaluating emotional regulation abilities in this age group (see Appendix E for detailed question content).

**(2) Expert Selection and Qualifications**

Five experts in psychology and education from Anshun University were selected as participants for the interviews. These individuals met rigorous inclusion criteria, including:

- 1) Holding a doctoral degree or professorial title in education, psychology, or educational psychology;
- 2) Active engagement in academic roles at recognized institutions in relevant disciplines.

**(3) Design and Validation Procedures of the Interview Tool**

The development and refinement of the semi-structured interview tool followed a multi-step process to ensure methodological rigor and content validity:

**1) Literature Foundation:** An extensive literature review was conducted to identify theoretical perspectives and methodological best practices relevant to emotional regulation and interview design.

**2) Clarification of Interview Objectives:** The goals of the interviews were clearly articulated, guiding the thematic structure and ensuring alignment between questions and research aims.

**3) Formulation of Open-Ended Questions:** Questions were crafted to elicit detailed and reflective responses, ensuring comprehensive coverage of the study's conceptual domains.

**4) Content Validation:** The preliminary interview guide was evaluated by experts to verify its accuracy, relevance, and clarity.

**5) Revision and Enhancement:** Feedback from expert reviewers was incorporated into multiple rounds of revisions to improve the quality, coherence, and applicability of the final interview guide.

A detailed diagram outlining the development process of the interview guide is provided to visually represent the sequence and structure of these steps.

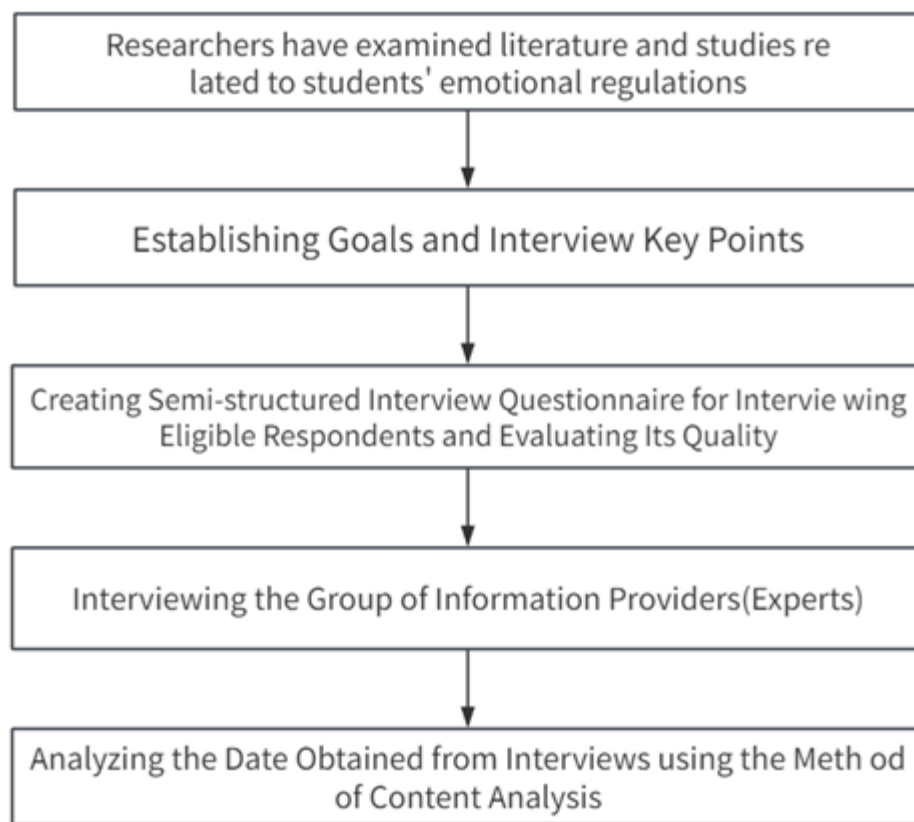


Figure 2 Developmental Stages of the Semi-Structured Interview Guide

#### **Semi-Structured Expert Interview Questionnaire**

This semi-structured interview instrument was developed to investigate the conceptual understanding and structural components of emotional regulation in Chinese middle school students. Its purpose is threefold: to inform the theoretical foundation for defining emotional regulation within this demographic, to provide expert-based recommendations for the design of mindfulness-based interventions strategies

aimed at enhancing students' emotional regulation capacities, and to support the development of valid and reliable assessment tools for measuring emotional regulation in middle school educational contexts in China.

### **Structure of the Semi-Structured Expert Interview Questionnaire**

The expert interview questionnaire is composed of two primary sections, each designed to elicit detailed, structured input while allowing for flexible and in-depth discussion during face-to-face interviews with selected experts.

#### **Section 1: General Background Information**

This section gathers essential demographic and professional data about the interviewee. It includes information such as the expert's name, academic qualifications, professional background, current academic or institutional position, area of specialization, affiliated organization, the scheduled date and time of the interview. These details provide context for interpreting expert responses and establishing the relevance of their insights to the research focus.

#### **Section 2: Thematic Inquiry on Emotional Regulation and Mindfulness-Based Interventions**

This section is organized around 3 core thematic areas:

1. **Conceptualization and Components of Students' Emotional Regulation:** Experts are invited to share their views on the definition of emotional regulation as it applies to middle school students in China. They are also asked to assess the applicability of the commonly accepted four-component model of emotional regulation in the Chinese middle school context, providing feedback on its cultural and developmental appropriateness.

2. **Design Principles for Mindfulness-Based Interventions:** This portion explores expert perspectives on the formulation of mindfulness-based interventions tailored to Chinese middle school students. Experts are asked to propose design principles, intervention features, implementation steps, and relevant psychological strategies or activities that could enhance students' emotional regulation through such a model.

3. Development of Assessment Instruments for Emotional Regulation: The third component addresses methodological considerations related to the evaluation of students' emotional regulation. Experts are encouraged to assess the suitability of the existing Students' Emotional Regulation for Middle School Students Questionnaire, and to recommend alternative or complementary instruments where appropriate.

This interview tool is specifically designed for use in semi-structured, in-person expert interviews, ensuring both comprehensive coverage of the targeted research domains and the flexibility needed to explore nuanced professional insights. The instrument supports an in-depth investigation into the definition, theoretical construction, and practical assessment of emotional regulation in Chinese middle school students from the perspective of domain experts.

#### **3.1.1.3 Developing a Students' Emotional Regulations Questionnaire for middle Students**

In preparation for the third phase of the study, the researcher developed a survey instrument specifically designed to assess emotional regulation among middle school students. The principal tool employed was the Middle School Student Emotional Regulation Scale, which was implemented in collaboration with Guanling Ethnic Middle School in Guizhou Province.

To establish content validity, the draft questionnaire was evaluated by three experts in education and psychology, yielding an Item-Objective Congruence (IOC) score of 1.0, which reflects a strong correspondence between the items and the intended constructs. Subsequently, a pilot study was conducted with 100 students possessing backgrounds comparable to the target sample. The pilot results produced a Cronbach's alpha of 0.90, indicating high internal consistency.

Based on the pilot data and expert feedback, the questionnaire was revised and finalized. The resulting instrument comprises 26 items, organized into five key dimensions of emotional regulation. This finalized version will be employed during the second and third phases of the research to collect baseline data from students at

Guizhou Guanling Ethnic Middle School, thereby capturing a comprehensive profile of their current emotional regulation abilities.

### **Steps in Questionnaire Construction**

This study utilized a customized questionnaire as a primary instrument to investigate the emotional regulation traits and competency levels of middle school students. The development and validation of this tool followed a structured, multi-step process to ensure both theoretical grounding and measurement reliability.

To begin, the researcher conducted an extensive review of relevant literature, encompassing academic journal articles, textbooks, and both international and domestic research focused on students' emotional regulation. The conceptual foundation for the instrument was drawn from established definitions and constructs outlined in the Students' Emotional Regulation Scale. To further contextualize and refine the framework for middle school populations, qualitative data were collected through in-depth interviews with five experienced professionals in psychology and education. The expert insights were incorporated into the research model, ensuring alignment with both theoretical constructs and educational realities. Through this integrated approach, four core dimensions of emotional regulation were identified as central to the emotional functioning of middle school students: 1) Emotional awareness and understanding; 2) Acceptance of emotional experiences; 3) The capacity to engage in purposeful, goal-directed behavior while inhibiting impulsive responses during negative emotional states; 4) Access to and perceived effectiveness of emotion regulation strategies.

Building on these theoretical foundations, the researcher designed a 26-item questionnaire to comprehensively assess the emotional regulation abilities of middle school students. Each item corresponds to one or more of the aforementioned domains, ensuring that the tool provides a holistic measure of students' emotional regulation capacities.

- 1) Awareness and understanding of emotions with 6 items;
- 2) Acceptance of emotions with 6 items;

3)The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions with 7 items;

4) Access to emotion regulation strategies perceived as effective with 7 items;

The items in the questionnaire were developed based on professional terminology and aligned with clearly defined operational definitions of each emotional regulation construct. Response options were structured using both four-point and five-point Likert-type scales to capture the frequency and consistency of students' emotional regulation behaviors. The five-point scale ranges from "Almost Never" to "Sometimes," "About Half the Time," "Most of the Time," and "Almost Always," as adapted from the established Students' Emotional Regulation Scale.

To ensure the content validity and linguistic appropriateness of the instrument, the draft version of the questionnaire was submitted to five domain experts in psychology and education. These experts were tasked with evaluating the clarity, relevance, and alignment of each item with its corresponding operational definition. Additionally, they assessed the empirical validity (content validity) of the scale's components. Based on their assessments, the Item-Objective Congruence (IOC) index for all 26 items was calculated, resulting in a perfect score of 1.0. Revisions were made to the instrument according to the feedback provided, further refining its accuracy and applicability.

Following expert validation, the revised version of the Middle School Students' Emotional Regulation Questionnaire was administered to a sample of 100 students with comparable demographic and educational backgrounds. The questionnaire distribution and data collection achieved a 100% response rate. After careful screening to ensure all responses were complete and no items were left unanswered, all 100 completed questionnaires were deemed valid for analysis. Using this dataset, the internal consistency of the scale was tested through Cronbach's alpha, which yielded a reliability coefficient of 0.90, indicating strong internal reliability (refer to Appendix B for detailed results).

The finalized instrument incorporates both four- and five-point Likert-type response scales to ensure flexibility in measuring the varying dimensions of emotional regulation with appropriate psychometric rigor.

**Likert-scale scoring criteria defined by the following ranges**

- 1.00-1.74 Low
- 1.75-2.59 Moderate Low
- 2.50-3.24 Moderate High
- 3.25-4.00 High
- 4.01-5.00 Very High

At a later stage, the emotional regulation scale for middle school students was constructed using interpretive data drawn from visual chart analysis.

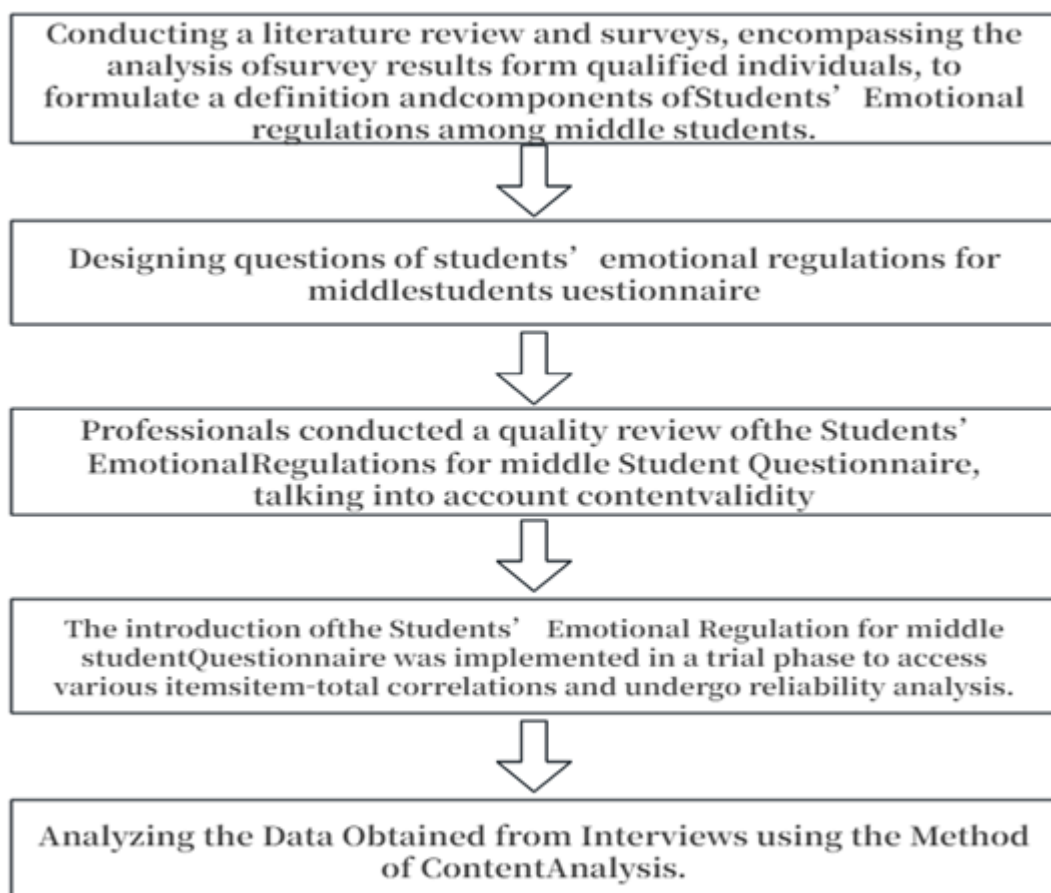


Figure 3 Construction Process of the Emotional Regulation Questionnaire for Middle School Students

The criteria are applied to evaluate middle school students' performance across multiple dimensions of emotional regulation, including emotional awareness, self-regulation strategies, impulse control, and emotional expression.

The subsequent section outlines the methodological process followed in the development of the Emotional Regulation Survey Questionnaire for Middle School Students. This includes the identification of theoretical constructs, item generation, and alignment with empirically grounded definitions.

To illustrate the measurement approach, a sample table is provided below, demonstrating how the emotional regulation abilities of middle school students are operationalized and assessed through structured survey items and standardized response categories.

Participant Guidelines:

1. There are no correct answers to the questions. Please answer based on your actual situation or impression.

2. Mark "√" under the number that matches your situation or fill in the blank as required.

You are requested to assess each statement by indicating the degree to which it corresponds with your own behaviors or feelings. The assessment uses a five-level response scale as outlined below:

1	2	3	4	5
Almost Never	Sometimes	About half the time	Most of the time	Almost always

Questions	Scale				
	1 Almost Never	2 Sometimes	3 About half the time	4 Most of the time	5 Almost always
I am clear about my feeling					
I have difficulty making sense out of my feeling					
I care about what I am feeling.					
I become angry with myself for feeling upset.					
I feel ashamed with myself for having depression.					
I feel guilty for feeling bad.					

### 3.2 Phase 2: To Development of Mindfulness-based Interventions to Students' Enhance Emotional Regulation in middle Students

The second phase of the study is designed to address the second and third research objectives, which focus on the development of a mindfulness-based interventions aimed at improving emotional regulation among middle school students, as well as the evaluation of its effectiveness. This phase is structured into two main components to facilitate both the design and the assessment processes.

### 3.2.1 Development of Mindfulness-Based Interventions to Enhance students' Emotional Regulation of middle Students

The study proceeded through the following sequence of steps:

#### **Step 1: Expert Interviews**

As an initial step, the researcher conducted in-depth interviews with three subject-matter experts to gather professional insights into the essential elements of mindfulness-based interventions. These interviews yielded critical information regarding the key components of students' emotional regulation within the Chinese sociocultural context. Specifically, the experts emphasized several dimensions: emotional awareness and understanding, acceptance of emotional experiences, the capacity for goal-directed behavior alongside the inhibition of impulsive reactions during emotionally negative states, and availability of self-identified effective emotion regulation strategies.

The insights obtained from these expert consultations played a significant role in shaping the theoretical foundation of the mindfulness-based interventions proposed in this study. The framework was further informed by the conceptual perspectives of Cicchetti and Gross on mindfulness-based emotional regulation, integrating both developmental and regulatory dimensions into the design.

#### **Step 2: Development of Session Plans for Mindfulness-Based Interventions**

The researcher developed a series of 14 structured session plans as part of the mindfulness-based interventions program, with the objective of improving emotional regulation among middle school students. Each session was designed to last approximately 90 minutes and was organized into three instructional phases: Lead-In, Learning Activities, and Conclusion. This tripartite structure ensured instructional consistency and pedagogical coherence across all sessions.

The content of the sessions was grounded in mindfulness-based practices and specifically aligned with the four core components of emotional regulation relevant to adolescents. These components include: (1) emotional awareness and understanding, (2) acceptance of emotional experiences, (3) the ability to engage in purposeful, goal-directed behavior while inhibiting impulsive actions in emotionally negative contexts, and (4) access to and utilization of effective emotion regulation strategies. The activities

within each session were carefully designed to target these domains, ensuring that students could progressively develop their regulatory competencies in a structured and supportive environment.

### **Step 3: Expert Review of Session Plan Design**

The complete set of 14 session plans was submitted for evaluation to three experts specializing in Item-Objective Congruence (IOC). The qualifications and professional backgrounds of these experts are documented in Appendix G. Their primary task was to assess the degree to which each session plan aligned with the intended instructional and research objectives of the mindfulness-based interventions.

The expert review process resulted in an IOC score of 1.0 across all items, reflecting a high level of consistency and congruence between the session content and the targeted learning outcomes. Following the evaluators' recommendations, several refinements were implemented to enhance the clarity, relevance, and overall pedagogical effectiveness of the session plans.

### **Step 4: Mindfulness-based interventions teaching plans Try-Out**

A subset of 10 students from the experimental group was randomly selected to participate in a preliminary try-out phase. Conducted over the course of two days, this phase involved one-hour sessions during which selected components of the lesson plans were implemented. The primary objective of this stage was to observe students' engagement, responsiveness, and acceptance of the mindfulness-based activities.

Observational data and qualitative feedback gathered during the trial implementation informed further refinements to the session plans. These adjustments were made to improve the relevance, clarity, and overall effectiveness of the intervention materials.

Through the systematic execution of these development stages—design, expert validation, trial implementation, and revision—the researcher sought to construct, apply, and evaluate a mindfulness-based interventions program specifically tailored to enhance emotional regulation among middle school students.

**3.3 Phase 3: To evaluate the effectiveness of the mindfulness-based interventions on the students' emotional regulation of middle students.**

### 3.3.1 Research Design

The quasi-experimental design includes an experimental group and a control group, each marked with an "R" (E and C) to denote random assignment. Randomization, a critical methodological procedure, allocates participants to groups or conditions by chance. This process minimizes pre-existing differences, ensuring that the experimental and control groups are comparable on relevant variables at the study's outset, as illustrated in the figure below.

Table 1 Randomized Pretest, posttest, Follow-up design

Group	Pre-TAest	Experiment	Post-Test	Follow-up Test
ER	T1	X	T2	T3
CR	T1	~	T2	T3

### 3.3.2 Identify population and sample size

**Population:** Subjects were used to assess the use of the mindfulness-based interventions to improve students' emotional regulation in middle school students. These students were primarily 7th and 8th-grade students at Guanling Ethnic middle School, which has a total of 2651 students who attend weekly mental health classes.

**Sample:** This sample group was used to evaluate the mindfulness-based interventions designed to enhance students' emotional regulation in middle school students, these students are mainly students in grades 7 and 8 of Guanling Ethnic middle School, grades 7 and 8 weekly mental health class sessions, this study was conducted randomly sample 60 people voluntarily participate in the experiment as the research subjects, Participants will be assigned to experimental and control groups, with 30 individuals in each group.

### 3.3.3 Implementation

This step is to introduce the constructed mindfulness-based interventions method into a real classroom. The researchers improved the mindfulness-based interventions method to teach the 30 students in the experimental group. The classroom implementation intervention procedure is as follows:

Table 2 classroom implementation intervention procedure

Times	week	session Plan	Objective	Teachnique/Strategy
1	1	Orientation to Mindfulness-Based Interventions and Students' Emotional Regulation	<ol style="list-style-type: none"> <li>1. Introduce the overall framework of the mindfulness-based interventions and session plan.</li> <li>2. Establishing constructive relational dynamics between teachers and students, as well as among peers, serves as a critical prerequisite for the successful implementation of later course content.</li> <li>3. Introduce the concepts and importance of emotional regulation and the mindfulness-based interventions.</li> </ol>	<ol style="list-style-type: none"> <li>1.Power Point</li> <li>2.Video of Emotional Regulation theory and concept</li> <li>3.Group discussion question sheet</li> <li>4.Individual learning dairy</li> </ol>

Table 2 (continued)

Times	week	session Plan	Objective	Teachnique/Strategy
2	1	Awareness and understanding of emotions(1)	<p>1.To understand the concept and importance of self-awareness.</p> <p>2.To help middle school students understand their personal characteristics, strengths and values.</p> <p>3.To develop students' ability of self-awareness.</p>	<p>1.Thinking Habits Assessment Sheet</p> <p>2.Self-Awareness Concept Introduction Video</p> <p>3.Emotion Map and Color Pens</p> <p>4.Self-Awareness Reflection Card</p> <p>5.SWOT Analysis Sheet</p>
3	1	Awareness and understanding of emotions(2)	<p>1.To cultivate students' ability to accurately identify and differentiate their emotional experiences, enabling them to recognize the complexity and variability of emotions in different contexts.</p> <p>2.To enhance students' understanding of the causes and impacts of emotions, helping them develop emotional insight and strengthen their capacity for adaptive emotional responses in both academic and social situations.</p>	<p>1.Individual learning dairy</p> <p>2.Soft Music</p>
4	2	Awareness and understanding of emotions(3)	<p>1.To develop students' ability to set clear goals.</p> <p>2.To develop students' ability to respond effectively to challenges and manage their emotions.</p>	<p>1.Power Point</p> <p>2.Video</p> <p>3.Planning sheets</p> <p>4.Soft music</p> <p>5.Blank paper</p>

Table 2 (continued)

Times	week	session Plan	Objective	Teachnique/Strategy
5	2	Acceptance of emotions(1)	<p>1.To help students develop a non-judgmental attitude towards their emotional experiences, allowing them to accept both positive and negative emotions as natural and valuable parts of their emotional landscape.</p> <p>2.To cultivate students' ability to embrace their emotions without suppression or avoidance, fostering emotional resilience and a healthier approach to emotional regulation in challenging situations.</p>	<p>1.Power Point</p> <p>2.Emotion Expression Prompts</p> <p>3.Role-Play &amp; Scenario-Based Discussions</p> <p>4.Emotion Journals</p>
6	3	Acceptance of emotions(2)	<p>1.To understand the meaning and significance of accepting one's own emotions.</p> <p>2.To recognize that all emotions are valid and serve adaptive functions.</p> <p>3.To foster openness and tolerance toward diverse emotional experiences in oneself and others.</p>	<p>1. Short Video or Image</p> <p>2. Case Study</p> <p>3. Documentary</p>

Table 2 (continued)

Times	week	session Plan	Objective	Teachnique/Strategy
7	3	Acceptance of emotions(3)	1. Enhancing students' awareness of their emotions. 2. Body scan meditation exercises 3.Observing emotional awareness: perceiving the physical reactions of emotions.	1.Power point 2.Yoga mat 3.soft music
8	3	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(1)	1. Further understand the concept of mindfulness and its importance. 2. Reflect on past behaviours and coping mechanisms, and find more effective emotional management strategies. 3.Cultivate self-awareness and self-reflection skills to better understand your own behaviours and emotional responses.	1.Case study information sheet 2.Individual learning dairy
9	4	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(2)	1.To understanding Healthy Relationships 2.To cultivate students' good interpersonal skills. 3.To improve students' teamwork ability.	1.Presentation 2.Video 3.Role-playing 4.Teamwork 5.Journal 6.Summary

Table 2 (continued)

Times	week	session Plan	Objective	Teachnique/Strategy
10	4	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(3)	1. Promote students' teamwork and communication skills. 2. Enhance students' ability to resolve interpersonal conflicts peacefully and improve their reflective skills.	1.Props for the event (blindfold, rope) 2.Scenario cards 3.Discussion guides sheet 4.Reflective question lists
11	5	Access to emotion regulation strategies perceived as effective(1)	1. Identify and understand different types of emotions and their underlying physiological and psychological mechanisms; 2. Learn how to express and regulate emotions, especially negative emotions, in daily life; 3. Master the cultivation techniques of positive emotions and improve the healthy expression of emotions through reflection; 4. Improve self-regulation ability in emotional management and social interaction, reduce conflicts, and enhance interpersonal relationships.	1.Video 2.Whiteboard and colored pens 3.Sticky note 4.Situational information sheet 5.Individual learning dairy
12	5	Access to emotion regulation strategies perceived as effective(2)	1.To understand the importance of respect in interpersonal relationships.To identify personal boundaries in different situations. 2.To developing confident communication skills.	1.Power point 2.Emotion Regulation Strategy Cards 3.Strategy-Triggering Scenarios

Table 2 (continued)

Times	week	session Plan	Objective	Teachnique/Strategy
13	6	Access to emotion regulation strategies perceived as effective(3)	<p>1.To understand the functional roles of both positive and negative emotions in individual psychological development.</p> <p>2.To recognize that emotions are neither inherently good nor bad, but their regulation and expression critically influence personal growth.</p> <p>3.To acquire fundamental strategies for transforming emotional experiences into drivers of self-development.</p> <p>4.To enhance awareness of one's own emotional development and strengthen psychological resilience when facing emotional challeng</p>	<p>1.Individual learning dairy</p> <p>2.Power point</p> <p>3.Decision matrix template</p>
14	6	Reflection and Conclusion	<p>1. To review course content and learning experience.</p> <p>2. To reflect on personal growth and development.</p> <p>3. To measure students' emotional regulation ability level</p>	<p>1.Individual learning dairy</p> <p>2.Emotional regulation cards</p> <p>3.Power point</p> <p>4.Middle School Student Emotional Regulation Scale</p>

### 3.3.4 Structure of the Research Phases

Drawing on the established experimental design, the implementation of the study was organized into four clearly defined stages.

#### 1) Pre-Test Period

Prior to the experiment, participants were randomly allocated to the experimental (E) and control (C) groups. A pre-test was administered to both groups to evaluate baseline levels of emotional regulation (ER for the experimental group and CR for the control group). Subsequently, a meeting was held to finalize and standardize the parameters for the nine learning activities implemented with the sample group.

#### 2) Experiment Period

During the intervention phase, the researchers implemented structured teaching activities based on a mindfulness-based interventions, delivered according to a pre-defined schedule. This phase spanned a period of 6 weeks and comprised 14 instructional sessions, each with a duration of 90 minutes. In contrast, the control group did not participate in any targeted instructional approach or specialized learning methodology during this period.

#### 3) Post-Test Period

After completing the treatment with the mindfulness-based interventions, the researchers administered a post-test to the experimental group (ER), which was used to assess students' emotional regulation. The impact of the mindfulness-based interventions was assessed in a timely manner. The researchers administered a posttest to the control group (CR), which was used to assess students' emotional regulation. To establish a baseline for comparison with the experimental group.

#### 4) Follow-up Period

Randomized testing of the mindfulness-based interventions study was conducted 4 weeks later on both the experimental (ER) and control (CR) groups through the use of randomized testing.

### 3.3.5 Data Analysis

The study employed a General Linear Model (GLM) Repeated Measures ANOVA to assess both within-subject changes and between-group differences across three time points: pre-test, post-test, and follow-up. This statistical approach was used to analyze the main effects of time and group, as well as the interaction effect between time and group, thereby evaluating the effectiveness and sustainability of the intervention over time.



## CHAPTER 4

### RESEARCH RESULTS

Research Topic: “A Development of the Mindfulness-Based Interventions for Promoting Students Emotional Regulation”.

The primary objective of this study is to examine emotional regulation among middle school students, with a particular emphasis on the design and evaluation of a mindfulness-based intervention intended to improve emotional regulatory capacities within this population. In support of the statistical analysis conducted, the study introduces a standardized system of symbols and abbreviations used throughout the data analysis process. These notations are defined and explained below to ensure clarity and consistency in the presentation and interpretation of the research findings.

#### Symbols and Abbreviations Used in Data Analysis

The researcher has identified and defined the following symbols and abbreviations utilized during statistical analysis:

Table 3 Abbreviations and Symbols

Abbr.	Meaning
$\alpha$	Cronbach's Alpha
r	Reliability
IOC	Item-Objective Congruence
E	Experimental Group
C	Control Group
MBIs	Mindfulness-Based Interventions
n	Sample Size
M	Mean
SD	Standard Deviation
SS	Sum of Square

Table 3 (continued)

Abbr.	Meaning
df	Degree of Freedom
MS	Mean of Square
F	F-Test
p	p-value
MD	Mean Difference

Presentation of data analysis results. In this study, three chapters are dedicated to data analysis, detailed as follows:

**Phase 1:** Analysis of the Students' Emotional Regulation of Undergraduates, Including Definition and Component.

**Phase 2:** Development of a Mindfulness-Based Interventions to Enhance Students' Emotional Regulation Among middle Students.

**Phase 3:** Evaluation of the Mindfulness-Based Interventions for Enhancing Students' Emotional Regulation Among middle Students.

#### 4.1 Phase 1: Definition and Components of students' emotional regulation

In formulating a comprehensive definition of student emotional regulation, the researchers synthesized existing theoretical perspectives from a range of scholarly sources. To refine and substantiate the conceptual framework, five education and psychology experts were interviewed regarding their perspectives on the definition and core components of emotional regulation. The integrated findings from this mixed approach are outlined below.

##### 4.1.1 Definition of Students' Emotional Regulation

After reviewing the definitions proposed by different scholars, the study concluded with a definition of emotion regulation (American Psychological Association,

n.d.; McRae & Gross, 2020; Aldao & Plate, 2018; Gratz & Roemer, 2004; Gross, 1998; Gross & John, 2003; Pennebaker & Chung, 2011; Mazzucchelli et al., 2009).

Emotional regulation is a psychological ability that refers to an individual's capacity to recognize, manage, and express their emotional states in various situations. This ability is reflected in the conscious or automatic regulation of the intensity, duration, and expression of emotions, thereby enabling effective adaptation and self-management in social interactions, stress coping, and goal-directed behaviors.

The research found that interviews with experts indicate that the purpose of emotional regulation for middle school students is to better understand and manage their emotions. This psychological ability, which involves goal-directed behavior, action control, and emotional clarity, can impact students' academic performance and daily life.

All five experts consistently highlighted the critical role of emotional regulation in students' holistic development. They underscored its significance not only for fostering self-awareness and emotional self-management but also for promoting constructive interpersonal relationships. Furthermore, emotional regulation was viewed as a foundational competency for cultivating responsible decision-making, particularly within the context of an increasingly complex and dynamic social environment.

*Emotional regulation is a key ability that involves "When individuals avoid or reject their own negative emotions, it often intensifies internal conflicts and hinders psychological development and adaptive capacity. Learning to accept uncomfortable emotions is a crucial prerequisite for cultivating psychological resilience (Expert A).*

*Emotion regulation involves the ability to stay focused on established goals when experiencing intense emotions. This capability represents a combination of emotion regulation and self-efficacy and is particularly crucial for students' persistence in learning (Expert C).*

*Impulse control is an important aspect of emotion regulation. It not only prevents emotional outbursts but also directly influences the*

quality of interpersonal relationships. In the teaching process, teachers' emotional regulation abilities significantly affect classroom atmosphere and student behavior (Expert D).

The starting point of emotion regulation is emotional clarity. Only by accurately identifying the emergence and changes of emotions can individuals respond with effective regulation. This is especially critical for students' mental health education (Expert E).

Concurrently, the expert interviews indicated a shared consensus regarding the overarching objective of emotional regulation for middle school students. The experts agreed that emotional regulation should equip students with the ability to effectively comprehend and manage their own emotional experiences, establish and maintain positive interpersonal relationships, and exercise sound decision-making in the face of an increasingly dynamic and complex social environment. As one expert (Expert D) noted, "Students' emotional regulation encompasses the capacity to navigate social integration, regulate internal emotional states, and interact constructively within interpersonal contexts."

"students' emotional regulation serves as a developmental mechanism through which adolescents learn to connect with both society and those around them. It is described as a foundational learning ability that enables young individuals to manage their behaviors, adapt to emotional experiences, and engage effectively in social interactions." (Expert A).

"An associate professor of psychology, emphasized that emotional regulation involves the capacity to understand emotions, which includes not only self-awareness but also empathetic recognition of the emotional states of others.." (Expert E )

Effective emotion regulation not only helps students maintain a stable psychological state under academic pressure and interpersonal conflict, but also promotes positive learning motivation and a sense of self-efficacy (Gross, 2015).

Middle school students demonstrating stronger emotional regulation skills exhibit greater resilience in academic settings. Such students are more capable of managing impulses, minimizing aggressive behaviors, and enhancing academic outcomes (Gullone et al., 2010).

Insufficient emotional regulation is closely related to the occurrence of psychological problems such as anxiety and depression (Silk et al., 2003). Therefore, it is important to emphasize the development of emotional regulation abilities during the middle school education stage to promote students' overall development and mental health.

#### **4.1.2 Components of students' Emotional Regulation**

The consulted experts reached a consensus that the core dimensions of emotional regulation in middle school students can be effectively conceptualized within a structured framework. This framework includes: (1) emotional awareness and understanding, (2) acceptance of emotional experiences, (3) the capacity to engage in goal-directed behavior and inhibit impulsive actions during negative emotional states, and (4) access to and use of emotion regulation strategies perceived as effective.

Drawing upon a thorough review of the existing literature and expert input, the study synthesizes these findings into four fundamental components that collectively define emotional regulation in the context of middle school students.

##### **Component 1: Awareness and understanding of emotions**

According to the multidimensional model of emotional regulation proposed by Gratz and Roemer (2004), awareness and understanding of emotions refer to an individual's ability to consciously notice, accurately label, and cognitively comprehend their emotional states. This dimension emphasizes not only the attentional aspect of recognizing emotions but also the clarity and depth of understanding regarding emotional experiences.

A lack of emotional awareness and understanding often manifests as confusion, emotional numbness, or difficulty in identifying the causes and meanings of one's emotional responses. In the context of middle school students, who are still developing their metacognitive and emotional competencies, limited emotional awareness is particularly prevalent. For example, some students may report feeling "bad" or "uncomfortable" without being able to differentiate whether they are experiencing sadness, anger, or anxiety. Such vagueness in emotional awareness may hinder the ability to respond appropriately to emotional challenges.

In educational settings, this deficiency can result in maladaptive behaviors such as impulsive outbursts, withdrawal from social interactions, or difficulty seeking help. Educators and school counselors can play a critical role by integrating emotional literacy education into the curriculum, teaching students to identify, name, and reflect on their emotions with specificity and without judgment. Through activities such as emotion journaling, guided discussions, and emotional vocabulary exercises, students can gradually build the skills necessary for emotional insight.

Enhancing emotional awareness and understanding not only fosters improved emotional regulation but also supports students in developing empathy, social competence, and psychological resilience. It lays the foundation for self-reflective thinking, informed decision-making, and adaptive coping strategies in the face of academic and interpersonal stressors.

### **Component 2: Acceptance of emotions**

According to Gratz and Roemer (2004), acceptance of emotions refers to the capacity to experience negative emotions without resorting to judgment, avoidance, or suppression. Within their multidimensional model of emotion regulation, this dimension specifically captures the tendency to respond to unwanted emotional states with openness and tolerance rather than with nonacceptance, such as self-criticism, guilt, or rejection of the emotional experience. Difficulties in this dimension are characterized by patterns such as self-blame, emotional avoidance, or efforts to invalidate one's own feelings.

In the developmental context of middle school students, challenges in emotional acceptance are frequently observed due to their still-maturing cognitive and regulatory capacities. For example, when confronted with failure on an exam or conflict with peers, some students may interpret feelings of sadness, frustration, or anxiety as signs of weakness, attempting to suppress these emotions or distract themselves through avoidance behaviors. Such patterns not only intensify emotional arousal but also impede the formation of adaptive coping strategies, potentially contributing to internalizing problems such as anxiety and depressive symptoms.

From an educational practice perspective, fostering students' acceptance of emotions is essential for cultivating resilience and adaptive regulation. Teachers and school counselors can encourage students to view emotions as neither inherently "good" nor "bad," but as natural and informative signals about their experiences. Structured classroom interventions—such as reflective writing, guided emotion labeling exercises, and mindfulness-based discussions—can help students develop a nonjudgmental stance toward their inner experiences. By normalizing the presence of negative emotions and providing strategies to sit with these feelings rather than reject them, educators create opportunities for students to build psychological flexibility, enhance self-awareness, and strengthen overall emotional well-being.

**Component 3: The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions**

In Gratz and Roemer's (2004) model of emotional regulation, the ability to engage in goal-directed behavior and refrain from impulsive behavior during emotional distress is an essential component of adaptive emotional regulation. This dimension emphasizes an individual's capacity to persist in goal-oriented activities and exercise self-control, even when confronted with intense or unpleasant emotions. Individuals who struggle with this aspect of emotion regulation are often unable to direct their behavior toward productive outcomes in the face of negative emotions and may instead engage in impulsive actions that serve to avoid, suppress, or escape their emotional experiences.

Among middle school students, who are still developing both their emotional and cognitive regulation skills, impulsive reactions are common when they face academic, social, or personal challenges. For example, a student who experiences anxiety before a class presentation might engage in avoidance behaviors, such as skipping class or making excuses, instead of managing the anxiety and completing the task. Similarly, students may act out impulsively in response to feelings of anger or frustration, engaging in disruptive behavior, verbal outbursts, or other actions that undermine their academic and social functioning.

In educational settings, promoting the ability to engage in goal-directed behavior while managing negative emotions is crucial for enhancing students' emotional intelligence and academic success. Teachers and counselors can implement interventions aimed at improving emotional awareness and self-regulation, such as mindfulness exercises, cognitive restructuring techniques, and goal-setting activities. For instance, encouraging students to break down tasks into smaller, manageable steps and to focus on the process rather than the emotional discomfort they may feel can help reduce impulsive responses and increase perseverance. Additionally, fostering an environment where students are encouraged to pause, reflect, and choose constructive responses to emotional triggers can improve their capacity for self-control and support long-term emotional and academic growth.

By strengthening this skill, students are better equipped to achieve their goals, even under emotional duress, which enhances their resilience, academic performance, and overall well-being. Moreover, they have a reduced propensity to exhibit maladaptive behaviors, such as acting impulsively or avoiding challenging situations, ultimately fostering positive psychological development.

#### **Component 4: Access to emotion regulation strategies perceived as effective**

In the multidimensional model of emotion regulation developed by Gratz and Roemer (2004), access to self-identified effective emotion regulation strategies denotes an individual's capacity to employ diverse adaptive approaches for managing and

altering emotional experiences, particularly in the face of distress. This dimension is central to the overall regulation process because it not only involves knowing which strategies to apply but also involves the perception that these strategies will be effective in reducing emotional intensity and improving emotional outcomes.

For middle school students, difficulties in accessing effective emotion regulation strategies are common, as they may lack the emotional literacy or cognitive maturity needed to identify, implement, and evaluate the success of various coping strategies. For instance, when experiencing anxiety during a test, some students might not have the awareness or skills to employ relaxation techniques, cognitive reframing, or problem-solving strategies. Instead, they may resort to maladaptive behaviors, such as procrastination, avoidance, or withdrawal, which can intensify their negative emotional experiences and hinder academic progress.

In educational settings, it is critical to teach students a range of emotion regulation strategies that they can access when experiencing emotional distress. Strategies such as deep breathing, cognitive reframing, affirming internal dialogue and mindfulness techniques are commonly perceived as effective and can be taught explicitly in the classroom. For example, educators can lead students through exercises that practice reframing negative thoughts or guide them through breathing techniques to calm their bodies in stressful situations. By encouraging students to experiment with different strategies, they develop confidence in their capacity for emotion regulation and identify strategies that are most effective within specific emotional contexts.

Additionally, school counselors can provide individualized support, helping students develop personalized emotion regulation toolkits tailored to their unique emotional triggers and needs. Providing students with these resources equips them with a sense of agency over their emotional responses, which can reduce emotional distress, improve coping, and enhance academic performance and interpersonal relationships.

Furthermore, teaching students about the importance of emotional flexibility—recognizing that different strategies may be effective in different situations—can help them build resilience and adaptability. Over time, students become better

equipped to face emotional challenges with a broader repertoire of strategies, enhancing their long-term emotional well-being.

#### **4.1.3 Reliability test of students' emotional regulation questionnaire for middle students**

Appendix F reports the reliability analysis of the Emotional Regulation Questionnaire for middle school students. In research methodology, reliability denotes the stability of a measurement and is essential for ensuring the accuracy of findings. Internal consistency was examined using Cronbach's alpha, with individual items yielding coefficients around 0.5, indicating satisfactory consistency. Item-specific coefficients ranged from 0.26 to 0.70, values deemed acceptable in psychological and educational measurement standards, thus confirming the instrument's suitability for research applications.

The Emotional Regulation Questionnaire developed for middle school students yielded an overall reliability coefficient of 0.90, which is classified as excellent according to conventional psychometric standards. This high level of internal consistency suggests that the items within the instrument reliably capture the construct of emotional regulation as intended for this specific population. Consequently, the questionnaire can be deemed a psychometrically sound and dependable instrument for evaluating emotional regulation competencies among middle school students.

#### **4.2 Phase 2: Development of Mindfulness-Based Interventions to Enhance middle Students' Emotional Regulation**

The researcher has systematically designed a MBIs program specifically tailored to enhance emotional regulation among middle school students. This structured intervention is delivered across 14 instructional sessions. The development process of this program comprises two core components: the first addresses the conceptual underpinnings and guiding principles that inform the design of the intervention; the second focuses on the practical implementation of the intervention itself, detailing the content, structure, and delivery of the mindfulness-based sessions. A comprehensive overview of both aspects is provided below.

#### 4.2.1 Conceptual Foundations and Guiding Principles for the Development of Mindfulness-Based Interventions

During the development of MBIs aimed at enhancing emotional regulation in middle school students, the researchers first established a clear conceptualization of emotional regulation and its constituent components within this developmental stage. In the preliminary phase of the study, an extensive review of relevant scholarly literature on mindfulness-based practices and emotional regulation was conducted. This review was guided by the theoretical framework proposed by Gratz and Roemer (2004), and further informed by insights derived from in-depth interviews with domain experts. Based on this integrative analysis, the researchers identified four core dimensions that characterize emotional regulation among middle school students: (1) awareness and understanding of one's emotional states, (2) acceptance of emotional experiences, (3) the capacity to engage in goal-directed behaviors while inhibiting impulsive reactions in the presence of negative emotions, and (4) the ability to access and apply perceived effective strategies for managing emotional responses.

Various programs aim to enhance students' emotional regulation capabilities among learners. Many evidence-based students' emotional regulation programs have been established as training initiatives both within and outside school settings to improve children's emotional regulation. These programs also assist educators in identifying and implementing the most appropriate emotional regulation interventions for their students. In this study, researchers implemented MBIs for middle school students with the purpose of fostering students' emotional regulation, enabling them to demonstrate these abilities. Additionally, establishing a supportive and positive emotional environment conducive to student growth represents another focal point of this research. The specific implementation of MBIs includes reinforcing emotional regulation abilities through 14 sessions annually and integrating these practices into daily routines. The intervention curriculum is structured into weekly instructional sessions, each with an estimated duration of 10 to 20 minutes per session.

In the initial phase of the research, semi-structured interviews were conducted with five subject-matter experts to gather professional insights into the design and development of mindfulness-based interventions tailored to improve emotional regulation among middle school students. The perspectives obtained from these expert consultations were systematically analyzed and synthesized, and the key findings are summarized as follows:

Within the Chinese educational context, the design of a MBIs program aimed at enhancing emotional regulation among middle school students typically follows a three-step instructional sequence: Lead-In, Learning Activities Process, and Reflection and Conclusion. This instructional structure aligns with the active learning framework proposed by Bonwell and Eison (1991), which provides a foundational theoretical basis for the development of student-centered emotional regulation programs. The incorporation of these sequential stages facilitates both cognitive engagement and emotional reflection, thereby supporting the internalization of emotional regulation strategies.

Experts advocate for the incorporation of diverse instructional activities that actively engage students throughout the learning process. These activities should be grounded in Constructivist Theory, emphasizing a student-centered pedagogical approach. Furthermore, the design of such activities should integrate core psychological principles to promote learners' intrinsic motivation, participation, and sustained engagement. Recommended strategies include peer-to-peer listening and sharing, case-based learning, structured group discussions, and collaborative team-based tasks—each serving to facilitate meaningful learning and emotional development.

Through an extensive review of existing literature and empirical studies, complemented by insights gathered from expert interviews, the researchers identified three essential instructional components that support learner autonomy within the Chinese sociocultural context: Lead-In, Learning Activities, and Reflection and Conclusion. Accordingly, the present study is structured around these components, with

the goal of enhancing emotional regulation among middle school students by integrating them into the design and implementation of mindfulness-based instructional practices.

#### **Theoretical Foundations: Constructivism Theory**

In developing the MBIs, researchers extensively drew on Constructivism Theory, which emphasizes the ability of individuals to clearly distinguish and accurately identify different emotional states, which in turn allows for effective students' emotional regulation. Additionally, Constructivism Theory highlights the influence of the environment on students' emotional regulation, highlighting the critical role of a supportive learning context in fostering effective emotion regulation.

#### **4.2.2 Development of Mindfulness-Based Interventions to Enhance Students' Emotional Regulation of middle Students**

In the development of the MBIs program, the researchers adopted an instructional design framework grounded in the active learning principles proposed by Bonwell and Eison (1991). Drawing upon insights obtained through expert consultations and adhering to learner-centered pedagogical paradigms, the intervention was structured to support progressive engagement through three core instructional phases: Lead-In, Learning Activities, and Reflection and Conclusion.

This tripartite structure was operationalized through the incorporation of interactive and experiential strategies, such as role-play, modeling, and guided practice. These methods were deliberately selected to facilitate the active participation of student-teachers, fostering the internalization of mindfulness-related competencies through contextually relevant and pedagogically sound activities.

Through experiential learning activities centered on emotional regulation, learners were provided with opportunities to engage in peer-to-peer knowledge exchange and collaborative reflection, thereby promoting the development of higher-order cognitive processes. Within this pedagogical framework, students assumed an active and central role, not merely as recipients of information but as co-constructors of knowledge. They were encouraged to articulate their thoughts and emotions openly, contributing to a participatory and autonomous learning environment.

#### **1) Design Objectives of the Mindfulness-Based Interventions**

In this study, MBIs aims to improve students' emotional regulation levels among middle school students. It includes a series of MBIs carefully designed and developed by the researchers, intended to enhance the self-awareness and adaptability of the students participating in the study. The model consists of four components, each with the following objectives:

a) Enable middle school students to awareness and understanding of emotions while learning and participating in important school activities or tasks.

b) Enable middle school students to acceptance of emotions while learning and participating in important school activities or tasks.

c) Equip middle school students with the capacity to maintain goal-directed behavior and inhibit impulsive actions when encountering negative emotions during learning and participation in critical school activities or tasks.

d) To facilitate middle school students' access to effective emotional regulation strategies during academic engagement and participation in essential school-related tasks.

The MBIs implemented in this study aims to enhance emotional regulation capabilities among middle school students. The program comprises a series of fourteen systematically structured instructional sessions. Each session is designed in alignment with learner-centered educational philosophies and incorporates evidence-based psychological strategies, thereby promoting both emotional growth and optimized learning outcomes.

**2) The stages of mindfulness-based interventions comprise three steps, as follows:**

**a) Preparatory Phase:** The initial phase of the intervention focuses on cultivating students' awareness of the activity's relevance and fostering a constructive and proactive attitude toward participation. During this stage, learners are guided to comprehend and articulate the pedagogical and psychological value of the activities, recognize which components contribute meaningfully to their learning, and express personal interests within the group context. Additionally, this phase encourages students

to prepare for reflective thinking following each engagement, thereby promoting sustained attention and cognitive readiness.

**b) Implementation Phase:** The core implementation phase is designed to systematically strengthen students' emotional regulation through diverse pedagogical strategies. This phase consists of three interrelated components:

**i. Lead-In Stage:** At the outset of each session, the instructor facilitates a guided entry into the thematic focus of the lesson. This includes clarifying learning objectives, activating prior knowledge, and stimulating student interest—thus establishing a foundation for deepened cognitive and emotional engagement.

**ii. Active Learning Engagement:** The central portion of the activity involves student participation in collaborative and experiential learning tasks, including collaborative dialogues, simulated role enactments, and focused skill-building activities. These interactive modalities serve not only to construct and exchange knowledge but also to provide practical opportunities for students to cultivate and refine their emotional regulation competencies in authentic contexts.

**iii. Reflective and Concluding Stage:** The final component emphasizes structured reflection and metacognitive processing. Students are encouraged to review their experiences, assess their learning outcomes, and synthesize key insights. This reflective practice facilitates the internalization and application of emotional regulation strategies, supporting both cognitive development and personal growth.

This stage involves a systematic synthesis of the outcomes derived from each learning activity, accompanied by reflective dialogue centered on the acquired knowledge. Such practices are intended to deepen conceptual understanding, facilitate knowledge consolidation, and strengthen the integration of learning experiences.

### **3) Instructional Materials Utilized in the Learning Activities**

This section examines the emotional regulation of middle school students, conceptualized as their capacity to comprehend, control, and convey emotions in both social and academic settings. It encompasses four key components: (1) emotional

awareness and understanding, (2) acceptance of emotions, (3) the capacity to pursue goal-directed behavior and inhibit impulsivity during negative emotional states, and (4) the application of effective regulation strategies.

To support the development of these competencies, instructional design must align with these four domains. Guided by active learning theory, learning activities are structured into three phases: lead-in, to stimulate interest and set goals; core activities, to promote engagement and practice; and conclusion, to encourage reflection and integration of emotional regulation skills.

### **1) Duration (Curriculum Schedule)**

The intervention comprised 14 structured sessions, each with a duration of 90 minutes, delivered over a continuous six-week period.

### **2) Pedagogical Principles Guiding Inquiry-Based Learning Activities**

**a) Integration of Role-Playing Scenarios:** Authentic and contextually relevant role-play situations are incorporated to enable students to apply acquired knowledge within simulated environments, thereby enhancing experiential learning and practical application.

**b) Promotion of Higher-Order Thinking Skills:** The activities are structured to stimulate advanced cognitive processes such as critical analysis, problem-solving, and evaluative judgment, aligning with the goals of deep learning and intellectual development.

**c) Cultivation of Mutual Understanding and Knowledge Exchange:** The learning environment encourages students to actively listen to and share perspectives with peers, promoting empathy, collaborative dialogue, and interpersonal awareness.

**d) Emphasis on Peer Interaction and Cooperative Learning:** Collaborative tasks are embedded to foster meaningful student interaction and teamwork, thereby maximizing the benefits of group-based inquiry and collective problem-solving.

**e) Stimulation of Active Learner Engagement:** A variety of participatory strategies are employed to sustain students' motivation and enhance their involvement, ensuring that learners are fully immersed in the learning process.

**f) Implementation of Positive Reinforcement Strategies:** Constructive reinforcement mechanisms are applied to recognize students' efforts and progress, with the aim of encouraging perseverance, reflective thinking, and strategic problem-solving.

**g) Creation of an Open and Inclusive Intellectual Climate:** An intellectually safe and judgment-free atmosphere is established, where students feel empowered to express diverse ideas, emotions, and viewpoints without fear of criticism or exclusion.

**h) Provision of Targeted and Formative Feedback:** Throughout the learning process, students receive timely, specific, and actionable feedback on their skills, behavioral responses, and learning strategies, facilitating continuous self-improvement and meaningful academic growth.

#### **4) Roles of the Researcher in Facilitating Learning Activities**

In the implementation of learning activities designed to enhance emotional regulation among middle school students, the researcher undertakes a multifaceted and dynamic role, encompassing several key responsibilities:

**Theoretical and Contextual Grounding:** The researcher is responsible for conducting an in-depth examination of mindfulness-based interventions frameworks, with a particular focus on their applicability to adolescent emotional regulation. This includes reviewing relevant literature, educational theories, and empirical evidence to inform pedagogical decisions.

**Instructional Design and Preparation:** A central role of the researcher lies in the systematic planning and preparation of each intervention session. This involves ensuring the logical coherence of the activity structure, the clarity of learning objectives, and the alignment with the developmental characteristics of the target student population.

**Creation of a Supportive Learning Environment:** The researcher facilitates the development of a psychologically safe, inclusive, and engaging classroom climate. Emphasis is placed on creating a positive atmosphere that enhances student motivation, encourages participation, and reduces performance anxiety.

**Monitoring and Responsive Support:** Throughout the course of activities, the researcher engages in continuous observation of student behaviors, emotional responses, and interaction patterns. When challenges arise, timely and context-sensitive support is provided to address students' individual or group needs.

**Goal Orientation and Role Clarification:** The researcher plays a guiding role in helping students comprehend the intended outcomes of each activity, while also clarifying their individual responsibilities within collaborative tasks. By offering ongoing behavioral feedback and instructional cues, the researcher ensures students' participation remains aligned with the core objectives of the intervention.

**Facilitation of Experiential Learning Opportunities:** Rather than evaluating students through traditional assessments, the researcher prioritizes opportunities for authentic expression, interpersonal dialogue, and intellectual collaboration. Activities are designed to encourage students to share ideas, develop communication skills, and engage meaningfully with peers in a non-judgmental, experience-based learning process.

#### **5) Roles of Student Participants in Mindfulness-Based Interventions**

Within the MBIs framework, middle school students serve as active agents in the development of their emotional regulation capacities. Their engagement is essential to the success of the intervention. The primary roles undertaken by participants are as follows:

- 1. Engaged Learners:** Students are expected to participate in each session with enthusiasm and initiative, contributing to the overall effectiveness of the group learning process.

**2. Autonomous Communicators:** Learners are encouraged to express their thoughts, emotions, and perspectives freely, using the intervention as a platform for self-exploration and articulation.

**3. Respectful Peers:** Upholding respect for differing perspectives and cultivating an atmosphere of inclusivity are essential for sustaining a constructive and welcoming learning environment.

**4. Active Listeners and Supporters:** Attentive listening and providing constructive encouragement enhance peer relationships and contribute to a collaborative classroom atmosphere.

**5. Collaborative Contributors:** Students are encouraged to actively engage in group discussions, offer meaningful input, and work toward shared learning objectives.

**6. Empathetic Observers:** Sensitivity to the needs of peers and the willingness to offer support when necessary reinforces social cohesion within the learning community.

**7. Responsible Participants:** Maintaining consistent participation and adhering to the procedural structure of each session reflects students' commitment to personal growth and learning integrity.

**8. Reflective Recorders:** Systematic summarization and documentation of learning outcomes enable students to reflect on progress and reinforce emotional regulation strategies.

This study seeks to cultivate students' emotional regulation competencies through a structured 14-session MBIs. Each session, detailed in Appendix F, integrates these student roles to support holistic emotional and behavioral development.

### **Session 1 Orientation to Mindfulness-Based Interventions and Students' Emotional Regulation**

The first session serves as the introductory phase of this instructional program, aiming to guide students in understanding the importance of MBIs through interactive and participatory methods. This session is dedicated to creating a positive

and harmonious atmosphere, establishing strong teacher-student relationships and peer connections, thereby laying a solid foundation for the smooth implementation of subsequent sessions.

Through the integration of multiple instructional formats—such as PowerPoint presentations, video excerpts, collaborative discussions, and simulated role enactments—this session conveys the foundational principles of students' emotional regulation and the essential framework of mindfulness-based interventions. These pedagogical activities are structured to encourage learners to critically reflect on personal experiences, enhance comprehension of emotional regulation's core dimensions, and examine its practical application in everyday contexts.

Particular attention is devoted to four principal components of emotional regulation: recognizing and interpreting emotions, accepting emotional experiences, sustaining goal-directed behavior while inhibiting impulsive responses under negative affect, and employing perceived effective regulatory strategies. Students are encouraged to participate actively in dialogue and reflection, maintain learning journals, and engage in self-evaluation, thereby promoting sustained involvement in emotional development and supporting comprehensive personal growth.

Moreover, the session highlights the necessity of embedding mindfulness-based interventions within educational practice to advance the holistic development of students.

### **Session 2 Awareness and understanding of emotions(1)**

Awareness and understanding of emotions constitute a fundamental psychological capacity in the development of emotional intelligence and mental health. This dimension refers to an individual's ability to consciously notice, accurately identify, and cognitively comprehend their emotional experiences. It involves recognizing the presence of emotions in real time, naming them with clarity, and understanding the triggers, context, and consequences of these emotional states. Such awareness is a prerequisite for effective emotional regulation and interpersonal communication.

In adolescent development, especially during the middle school years, the capacity to be aware of and understand emotions plays a pivotal role. Adolescents often experience emotional fluctuations yet may lack the language, insight, or attentional control to process these internal experiences effectively. Without sufficient emotional awareness, students may struggle to express their feelings, misinterpret others' behaviors, or respond impulsively to emotional stimuli. This can result in heightened interpersonal conflict, academic disengagement, and internalized distress such as anxiety or frustration.

This learning module emphasizes the foundational role of emotional awareness and understanding in adolescent psychological education. The instructional design aims to help students enhance their internal emotional vocabulary, identify subtle differences between similar emotional states, and connect their emotions to specific experiences. Through structured activities such as emotional journaling, guided reflection, and emotion-mapping exercises, students are encouraged to become more attentive to their internal states and articulate them with clarity and confidence.

MBIs are integrated throughout the module to train students in nonjudgmental attention to present-moment experiences, enabling them to observe emotions without immediate reaction. Complementary tools such as the "Emotion Word Wall," "Daily Mood Tracker," and "Emotional Reflection Log" are used to promote students' daily engagement with their emotional lives. As students develop these skills, they become more capable of recognizing emotional patterns, understanding the needs behind their emotions, and responding in ways that are both thoughtful and adaptive.

Cultivating emotional awareness and understanding not only contributes to self-knowledge and emotional literacy but also lays the groundwork for empathy, self-regulation, and mental resilience. It empowers students to build healthier relationships, make informed decisions, and navigate the challenges of adolescence with greater emotional clarity and stability. Ultimately, strengthening this capacity enables students to move toward psychological maturity with insight, confidence, and compassion.

### **Session 3 Awareness and understanding of emotions(2)**

The concept of emotional awareness and understanding is central to students' emotional learning, as it enables them to recognize, name, and make sense of their inner emotional experiences. When students are guided to consciously attend to their emotions and understand their emotional patterns, they gradually build emotional literacy and improve their ability to respond thoughtfully rather than react impulsively. By participating in structured activities such as "Emotion Diary" writing, guided self-reflection, and emotion-matching games, students can expand their emotional vocabulary and learn to identify subtle emotional differences—for example, distinguishing between frustration and disappointment, or anxiety and excitement.

Emotional awareness also requires students to develop metacognitive insight into the causes and consequences of their emotional states. Teachers can support this process by designing learning tasks that invite students to analyze situations in which they felt specific emotions, explore their emotional triggers, and reflect on how these emotions influenced their behavior. This encourages students not only to recognize what they feel but also to understand why they feel that way and how they can respond effectively. Over time, this deepens students' emotional insight and enhances their capacity for self-regulation.

In classroom practice, teachers can create emotionally responsive environments by modeling emotional awareness themselves—openly acknowledging their own emotions and demonstrating appropriate ways to express and manage them. Group discussions on emotional themes, storytelling, and peer feedback activities further help students develop empathy and realize that emotions are a shared human experience. Visual tools such as "Mood Charts," "Emotion Color Wheels," and "Feelings Check-In Boards" can also be integrated into daily routines to help students monitor and articulate their emotional states.

Ultimately, fostering students' awareness and understanding of emotions contributes to stronger self-knowledge, more effective interpersonal communication, and healthier emotional coping. It allows students to feel more in control of their emotional world, reduce emotional confusion, and interact with others with greater sensitivity and

clarity. In the long term, this foundational competence supports students' overall psychological resilience, academic engagement, and social well-being.

#### **Session 4 Awareness and understanding of emotions(3)**

Awareness and understanding of emotions is a foundational objective in social-emotional learning, as it empowers students to accurately perceive, label, and interpret their internal emotional experiences in various life contexts. This competence enables students to become more conscious of how their emotions arise, how they manifest in thoughts and behaviors, and how they influence academic performance, social interaction, and personal decision-making. With enhanced emotional awareness, students are better equipped to prevent confusion, emotional reactivity, or interpersonal misunderstanding.

The development of this skill relies on students' ability to attentively observe their emotional changes and reflect on the underlying causes. In practical classroom settings, teachers can guide students through structured reflection practices, such as emotion journaling, "What I Felt Today" circles, and scenario-based emotional analysis. These activities help students slow down and engage in mindful introspection, fostering clearer emotional insight and increasing their tolerance for emotional complexity.

When students learn to differentiate between emotions such as sadness, anger, embarrassment, or guilt, they gain a clearer understanding of their emotional needs and can respond in more constructive ways. For example, rather than expressing frustration through disruptive behavior, a student who recognizes their stress might choose to ask for help, take a mindful pause, or use problem-solving strategies. Teachers can support this process by modeling emotional language, offering nonjudgmental feedback, and creating classroom norms that validate emotional expression while encouraging reflection and self-understanding.

Moreover, integrating emotional vocabulary development into daily routines—such as using "Emotion of the Day" prompts or mood-tracking charts—can enhance students' expressive abilities and emotional granularity. This not only facilitates

more effective self-expression but also builds empathy, as students learn to listen and relate to the emotional experiences of others.

In summary, fostering students' awareness and understanding of emotions provides them with essential tools for navigating daily challenges with insight and composure. It supports self-regulation, improves classroom behavior, and enhances interpersonal relationships. As a result, students become more emotionally articulate, socially sensitive, and psychologically prepared to face both the demands of school life and broader developmental transitions.

#### **Session 5 Acceptance of emotions(1)**

Within the framework of emotional learning, this stage focuses on cultivating students' ability to openly experience and accept their emotional states without avoidance, suppression, or judgment. Acceptance of emotions is a key foundation for students' emotional health, allowing them to acknowledge the full range of human emotions—including sadness, fear, anger, and disappointment—as natural and meaningful components of their inner experience. Developing this competence helps students reduce internal conflict and build a stable emotional self-concept.

By analyzing real-life cases of individuals who demonstrated emotional openness—such as Olympic athletes who have spoken candidly about performance anxiety and emotional vulnerability—students can develop a deeper appreciation for the importance of embracing, rather than resisting, their emotions. Classroom activities such as role-playing, emotional storytelling, and empathy mapping allow students to explore the impact of emotional suppression and discover healthier ways to coexist with discomfort. These experiences help students recognize that negative emotions are not signs of weakness, but rather signals that carry important personal information.

Furthermore, this stage emphasizes the development of nonjudgmental awareness and compassion toward one's own emotional responses. Through interventions such as mindfulness meditation, body-scan practices, and the use of the "Emotional Acceptance Log," students are guided to observe their emotions without rushing to fix or deny them. In group discussions, students are encouraged to share their

emotional experiences in a safe, supportive space, fostering mutual understanding and reducing emotional stigma.

In daily academic and social contexts, students will be encouraged to apply acceptance-based strategies to real situations, such as managing disappointment after receiving negative feedback or responding calmly during interpersonal conflict. With teacher guidance and structured self-reflection, students gradually develop the ability to sit with their emotions, regulate their reactions, and make more thoughtful behavioral choices.

In summary, the cultivation of emotional acceptance provides students with a stable internal foundation for managing stress, resolving internal tension, and maintaining self-worth in the face of emotional challenges. By helping students recognize and accept their emotional experiences as valid and valuable, this stage plays a crucial role in fostering resilience, promoting healthy self-perception, and supporting long-term psychological maturity.

#### **Session 6 Acceptance of emotions(2)**

This session aims to further enhance students' understanding and practical ability in accepting their own emotions, guiding them to face inner emotional experiences with openness, tolerance, and self-compassion. Emotional acceptance, as a central component of social-emotional learning, enables students to acknowledge both pleasant and unpleasant emotions without avoidance or excessive self-judgment. Through experiential learning, students will gradually internalize the belief that all emotions are valid and can serve as important signals for self-awareness and personal growth.

In the classroom setting, students will begin by engaging with carefully selected multimedia resources—such as video clips, illustrated stories, and personal narratives—that portray individuals navigating complex emotional experiences. These materials create emotional resonance and open up conversations about the normalcy of emotional fluctuation. Following this, students will participate in structured reflection activities, such as guided journaling and emotion labeling exercises, which help them

name and describe their own emotional responses with greater accuracy and acceptance.

The core activity of this lesson—the “Emotion Acceptance Practice Circle”—invites students to share recent situations in which they experienced strong emotions and to reflect on how they responded. Peers are encouraged to offer supportive, nonjudgmental feedback, fostering a classroom culture that embraces emotional honesty and mutual respect. Through this dialogue-based activity, students practice self-disclosure while also learning to listen empathetically, normalize vulnerability, and deconstruct the stigma associated with “negative” emotions like sadness, anger, or fear.

In addition, mindfulness-based strategies such as breathing awareness and acceptance visualization will be introduced to help students stay present with uncomfortable feelings without the need for immediate reaction or suppression. Teachers will play a facilitative role by modeling emotional openness, guiding reflection, and reinforcing the message that acceptance is a form of emotional strength rather than passivity.

Overall, this lesson utilizes multidimensional instructional strategies to support students in building a healthier relationship with their inner emotional world. By accepting their emotions as natural and meaningful, students can reduce emotional resistance, increase self-understanding, and make more balanced and thoughtful choices in both academic and social contexts. This competence lays a solid foundation for long-term psychological resilience, emotional authenticity, and personal integrity.

### **Session 7 Acceptance of emotions(3)**

Emotional acceptance constitutes a pivotal skill in adolescent social-emotional learning, equipping students to confront and engage with their emotional experiences.—whether pleasant or painful—without avoidance or resistance. By learning to acknowledge emotions as natural and valid responses, students develop a healthier internal dialogue and reduce the tendency toward emotional suppression or self-criticism.

In practice, this module introduces students to classroom strategies such as guided emotional reflection, “emotion check-in” routines, and structured peer sharing. These activities create safe spaces where students can talk about their feelings, normalize emotional discomfort, and learn from others’ experiences. Teachers guide discussions with empathy and neutrality, helping students reframe emotions as useful signals rather than problems to be eliminated.

Additionally, through tools such as acceptance journaling and self-compassion exercises, students practice staying present with difficult emotions without immediate reaction. Over time, this fosters greater emotional resilience, promotes self-understanding, and supports more balanced decision-making in both academic and social contexts.

In summary, emotional acceptance helps students build inner stability and strengthens their capacity to respond to challenges with openness and composure. As part of holistic psychological development, this competency lays a solid foundation for lifelong mental well-being and adaptive interpersonal functioning.

Session 8 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(1)

In the context of social-emotional competence development among middle school students, cultivating the ability to remain focused on goals and resist impulsive reactions under negative emotional states is a vital component of emotional regulation. This ability allows students to maintain behavioral control and make thoughtful decisions even when faced with frustration, anger, disappointment, or anxiety—emotions that commonly arise in both academic and interpersonal contexts.

Through mindfulness-informed and behaviorally anchored interventions, students are guided to recognize how negative emotions can cloud judgment, trigger impulsivity, and disrupt task persistence. For example, teachers can introduce students to structured techniques such as “pause and plan” routines, emotion-behavior mapping, and goal visualization strategies to help them create a mental buffer between emotion

and action. These methods equip students with tools to delay impulsive reactions and reorient themselves toward purposeful, value-aligned behavior.

Core classroom practices include real-life scenario analysis, reflective journaling on emotionally challenging moments, and goal-rehearsal exercises where students practice choosing constructive responses in emotionally charged situations. Teachers may also implement “emotion-interruption protocols,” which encourage students to take mindful pauses, regulate breathing, and cognitively reframe the situation before acting. Over time, students internalize these strategies as part of their behavioral repertoire.

Importantly, this ability also supports students in maintaining long-term motivation. When encountering setbacks—such as a poor test score or peer conflict—students learn to tolerate the emotional discomfort, reflect on their values, and persist toward meaningful goals without resorting to avoidance, aggression, or disengagement.

In summary, guiding students to stay focused on their goals and regulate impulsive behaviors under emotional stress builds executive functioning, emotional maturity, and personal responsibility. This competence not only improves academic performance and classroom behavior but also strengthens students’ long-term adaptability and self-directed growth in increasingly complex social and learning environments.

**Session 9 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(2)**

Cultivating the capacity to pursue goal-oriented actions while inhibiting impulsive responses under negative emotional states is vital for middle school students’ success in academic and social contexts. Such competence allows learners to maintain concentration, exercise deliberate judgment, and regulate behavior when confronted with emotions like anger, frustration, or anxiety. Moreover, it supports effective navigation of interpersonal difficulties and academic obstacles through resilience and self-regulation.

In educational practice, teachers can help students recognize the influence of negative emotions on their behavior by using reflection exercises, such as analyzing past situations where they acted impulsively due to strong emotions. Through discussions, students can identify the triggers that led to impulsive reactions and learn strategies for pausing and refocusing on their long-term goals before acting. Teachers can model techniques such as deep breathing, positive self-talk, and “counting to ten” strategies, which can be integrated into classroom routines to help students manage their emotional impulses.

Another essential aspect of this module is reinforcing the importance of emotional awareness in maintaining goal-oriented behavior. By engaging students in activities such as goal-setting exercises, time management tasks, and scenario-based simulations, teachers can guide students to apply emotional regulation techniques while staying committed to their objectives. For example, when faced with frustration over a challenging assignment, students will learn to use mindfulness practices to regain composure, evaluate the situation from a problem-solving perspective, and continue working toward their academic goals without giving in to negative emotions.

Additionally, through consistent feedback and guided reflection, students will be encouraged to monitor their progress in resisting impulsive behaviors and to assess their emotional responses in various contexts. Group discussions and peer feedback sessions can further reinforce this skill, as students learn from one another’s experiences and develop a deeper understanding of the importance of emotional regulation in reaching personal and academic goals.

In summary, this module supports students in developing the ability to stay focused on their goals and practice emotional self-regulation in the face of negative emotions. By helping students recognize their emotional triggers and apply practical strategies for managing impulsivity, this competency lays a solid foundation for improved decision-making, emotional resilience, and goal attainment in both academic and social settings.

**Session 10 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(3)**

In collaborative settings, middle school students often face emotionally charged situations such as disagreements, delays, or uneven task contributions. These moments can easily trigger frustration, anxiety, or impatience, increasing the risk of impulsive behaviors that may damage group cohesion or hinder task completion. Therefore, developing the ability to maintain goal-directed behavior while regulating negative emotions is essential for effective teamwork.

This module emphasizes helping students recognize their emotional responses during cooperation and respond constructively without deviating from the shared objective. For instance, when feeling frustrated by a lack of progress, a student might say, “I’m feeling a bit stressed because we’re running out of time—can we agree on the next step together?” rather than reacting impulsively with sarcasm or blame. Through such emotionally aware expressions, students learn to stay solution-focused and preserve team dynamics.

In classroom practice, teachers can design group projects that include emotional checkpoints—structured pauses during which students reflect on their emotional state and discuss any tensions. Additionally, role-play and communication drills can teach students how to voice concerns using calm, goal-oriented language. These strategies help students shift from reactive to reflective modes of interaction, ensuring that temporary emotional discomfort does not derail collective efforts.

Furthermore, students are encouraged to establish shared group goals and responsibility agreements at the beginning of tasks. When emotional challenges arise, referring back to these goals serves as a grounding mechanism that reinforces commitment and discourages impulsive responses. Teachers play a key role in modeling how to balance emotional expression with cooperative intent, guiding students to regulate their emotions without losing sight of the group’s purpose.

In summary, by learning to manage their emotional impulses and stay focused on task goals during moments of tension, students strengthen their collaboration

skills and enhance team productivity. This ability supports not only individual self-regulation but also fosters respectful, emotionally intelligent group interactions that are essential for success in academic and real-world collaborative environments.

**Session 11 Access to emotion regulation strategies perceived as effective(1)**

In the development of emotional regulation among middle school students, gaining access to and internalizing effective regulation strategies is a foundational component. This dimension refers to students' ability to identify, recall, and actively use emotional regulation strategies that are not only theoretically sound but are also perceived by the students themselves as effective and personally applicable. At a stage where emotional intensity increases and social complexity deepens, the mastery of practical, effective emotional regulation tools significantly contributes to students' mental well-being and adaptive functioning.

Middle school students who perceive certain strategies as effective—such as deep breathing, journaling, positive self-talk, physical movement, or seeking social support—are more likely to engage in proactive emotional regulation rather than reacting impulsively or withdrawing. The sense of efficacy attached to these strategies enhances students' willingness to use them in emotionally challenging situations, whether they are facing academic pressure, peer conflict, or interpersonal misunderstandings.

To support this development, educators must not only teach a repertoire of evidence-based strategies but also provide students with structured opportunities to practice, personalize, and reflect on their use. Classroom activities may include “strategy testing labs,” where students apply specific regulation techniques to hypothetical or real-life scenarios, and then evaluate their usefulness. Teachers can also guide reflective discussions that prompt students to explore which strategies align best with their emotional tendencies and social contexts.

Moreover, incorporating emotion regulation modeling into daily teaching—where educators verbalize their own emotional coping strategies—can increase students' exposure to practical methods and normalize the process of self-regulation. Peer sharing and collaborative reflection further enhance this by allowing students to

learn from one another's experiences, expanding their emotional toolbox through real, relatable examples.

In summary, access to effective emotion regulation strategies is not merely about having options, but about cultivating a personalized and confidence-based understanding of what works. When students can identify and apply strategies they find effective, they are empowered to manage emotional challenges with greater competence and independence, thereby supporting long-term emotional resilience and social success.

#### **Session 12 Access to Emotion Regulation Strategies Perceived as Effective (2)**

Beyond the initial acquisition of emotion regulation strategies, it is equally important to support students in applying these strategies flexibly across different emotional and social contexts. In middle school, students face a variety of emotionally demanding situations—from academic evaluations to peer pressure and social exclusion—each requiring distinct regulation responses. Thus, this phase of development emphasizes not only what strategies students possess, but how, when, and why they choose to apply them.

An essential educational goal is to help students develop contextual sensitivity in their use of strategies. For instance, while a student might find that deep breathing is helpful during test anxiety, they may need a more socially interactive approach—such as seeking support from a peer—when feeling isolated during group work. Teachers should provide structured scenarios and decision-making prompts that guide students in selecting strategies based on situational factors, emotional intensity, and desired outcomes. This process helps build strategy-selection competence and prevents rigid or ineffective patterns of coping.

Furthermore, Recognizing variability in emotional regulation preferences is essential, as certain students may favor cognitively oriented approaches such as reappraisal or positive self-talk, while others may respond better to physical or sensory methods like stretching or listening to music. By encouraging students to explore a

range of options and reflect on what aligns with their personal temperament and lived experiences, educators foster a more inclusive and empowering regulation environment.

To support this individualized application, educators should create emotionally responsive classrooms in which students feel safe to experiment with and talk about their regulation efforts. This can be achieved through regular emotion strategy journaling, peer mentoring systems, and classroom norms that validate emotional expression and coping attempts. Teachers should also track students' development in regulation usage—not through judgment, but through supportive feedback and coaching that help students refine their strategies over time.

In summary, the second stage of cultivating access to effective emotion regulation strategies centers on flexible, context-sensitive application and personalized growth. When students are not only equipped with diverse strategies but also confident and thoughtful in choosing what works best for them, they build emotional autonomy, resilience, and the capacity to navigate increasingly complex social and academic demands.

### **Session 13 Access to emotion regulation strategies perceived as effective(3)**

Middle school students are situated at a developmental juncture where the ability to regulate emotions is critical to their academic engagement, interpersonal functioning, and psychological well-being. As they navigate emotionally charged experiences across both school and everyday life—ranging from exam anxiety and peer conflict to family tensions and self-doubt—the availability and perceived effectiveness of emotion regulation strategies becomes a key determinant of their adaptive capacity.

At this stage, it is essential to ensure that students are not only introduced to a range of emotional regulation strategies in isolated settings, but that these strategies are systematically embedded within daily learning and life practices. When strategies such as deep breathing, emotion labeling, journaling, cognitive reframing, or peer consultation are integrated into routine activities—such as pre-exam preparation, group collaboration, or conflict resolution—students begin to perceive them as meaningful and practically useful. The habitual use of such strategies reinforces students' belief in their

effectiveness, increasing the likelihood of long-term retention and independent application.

Moreover, effective emotional education should help students internalize the principle that all emotions—positive or negative—are valid signals rather than threats to be suppressed. Students who perceive emotion regulation as a process of understanding and working with emotions, rather than avoiding or controlling them, are more likely to seek out and apply adaptive strategies when difficulties arise. This shift in perspective enhances emotional self-efficacy, reduces maladaptive coping (such as avoidance or aggression), and supports psychological resilience.

Teachers play a crucial role in this process by creating emotionally responsive environments where strategy use is normalized, modeled, and positively reinforced. For example, teachers can guide students through structured emotional reflections after significant events (e.g., exams, conflicts, achievements) and encourage them to articulate what strategies they used, how effective they felt, and what they might adjust next time. Over time, students build a personalized and dynamic “strategy repertoire” that supports emotional regulation across diverse and evolving life contexts.

In summary, the third phase of developing access to emotion regulation strategies emphasizes the sustained, integrated application of perceived-effective strategies in real academic and social scenarios. By helping students consolidate strategy use into daily habits and internal frameworks, educators foster not only short-term emotional adjustment, but also long-term psychological resilience and emotional intelligence essential for future development.

#### **Session 14 Reflection and Conclusion**

The "Reflection and Conclusion" component constitutes a critical element of the instructional design in this mindfulness-based intervention program, serving both to consolidate learning outcomes and to support students' emotional and personal development. Through structured reflective practices, students revisit course content while evaluating their progress in key domains such as emotional awareness, clarity of

emotional expression, mindfulness application, and the regulation of both positive and negative emotional experiences.

This reflective process enables learners to acknowledge personal growth, recognize areas requiring further development, and establish individualized goals for enhancing emotional competencies. Both individual reflection and group sharing deepen students' self-understanding and foster empathetic peer relationships, contributing to the cultivation of a supportive and collaborative learning community.

Furthermore, post-intervention assessment tools—such as reflective surveys—offer formative feedback on students' social-emotional competencies, guiding their continued development beyond the scope of the program.

This intervention comprises 14 systematically structured sessions (see Table XXX), each designed to promote emotional regulation among middle school students. The curriculum integrates core mindfulness principles with student-centered pedagogical strategies, aiming to equip learners with adaptive emotional regulation skills for both academic and everyday contexts.

#### **4.3 Phase 3 The evaluate the effectiveness of the mindfulness-based interventions in improving the emotional regulation of middle school students**

##### **4.3.1 Descriptive Analysis of Emotional Regulation Scores Among Middle School Students in the Experimental and Control Groups Across Pre-Test, Post-Test, and Follow-Up Stages**

The mean and standard deviation of emotional regulation scores for the experimental and control groups were computed at three stages—pre-test, post-test, and follow-up. Table 4 presents these descriptive statistics, offering a summary of group performance throughout the intervention period.

Table 4 Mean and standard deviation of emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up (n=60)

Group	Before Experiment			After Experiment			Follow Experiment		
	M	SD	Level	M	SD	Level	M	SD	Level
Experiment Group(n=30)	1.95	0.25	Low	3.00	0.42	Moderate	3.06	0.37	Moderate
Control Group (n=30)	1.93	0.18	Low	1.96	0.17	Low	2.01	0.16	Low

Table 4 shows the emotional regulation scores of middle school students in both groups across the study period. In the experimental group, the pre-test mean was 1.95 (SD = 0.25), indicating a low level; the post-test mean increased to 3.00 (SD = 0.42), reflecting a moderate level; and the follow-up mean was 3.06 (SD = 0.37), also at a moderate level. In contrast, the control group recorded a pre-test mean of 1.93 (SD = 0.18), a post-test mean of 1.96 (SD = 0.17), and a follow-up mean of 2.01 (SD = 0.16), all remaining at a low level.

#### 4.3.2 The effectiveness of the mindfulness-based interventions in improving the emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up

Before effectiveness of emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up. Researcher examined the assumption of normality test by Shapiro-Wink have p-value of between .06 to .10 found that the mean of emotional regulation of middle school students in experiment group during time have distributed as a normal curve and analyzed assumption of size of relationship and size of repeated variance for effectiveness of the mindfulness-based interventions to promote emotional regulation of middle school

students in experiment group during before experiment, after experiment and follow-up which is shown in the table 5.

Table 5 Assumption of size of relationship and size of repeated variance for effectiveness of the mindfulness-based interventions to promote emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up (n=60)

Mauchly's W	Approx. Chi-Square	df	p	Epsilon		
				Greenhouse-Geisser	Huynh-Feldt	Lower-bound
0.34*	29.84	2	.00	0.60	0.62	0.50

\*p<.05

Table 5 Assumption of Mauchly's sphericity test of emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up found sphericity assumption was violated (p=.00). Therefore, researchers use Geisser-Greenhouse correction increases the p-value.

**4.3.3 The comparison of effectiveness of the mindfulness-based interventions in improving the emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up.**

Researcher comparison of effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up analyzed One way Repeated ANOVA which is shown in the table 6.

Table 6 The compare emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up (n=30)

Emotional Regulation	SS	df	MS	F	p
Time	23.41	1.21	19.38	130.50*	.00
Error	5.20	35.03	0.15		

\*p<.05

Table 6 The comparison of emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up found that there was a statistically significant difference in emotional regulation between before experiment, after experiment and follow-up of .05 level (F=130.50 df=1.21 p=.00). Therefore, the researcher analyzed the emotional regulation pairwise comparison between before experiment and after experiment, between before experiment and follow-up and follow-up and after experiment by Bonferroni which is shown in the table 7.

Table 7 The pairwise comparison of emotional regulation of middle school students in experiment group during before experiment, after experiment and follow-up (n=30)

Pairwise Comparison of Emotional Regulation	MD	p
After experiment (M=3.00) - Before experiment (M=1.95)	1.05*	.00
Follow-up (M=3.06) - Before experiment (M=1.95)	1.11*	.00
Follow-up (M=3.06) - After experiment (M=3.00)	0.06	.31

\*p<.05

Table 7 After experiment and follow-up middle school students in experiment group have emotional regulation higher before the experiment of significant at a .05 level excluding follow-up have emotional regulation higher after experiment of not significant.

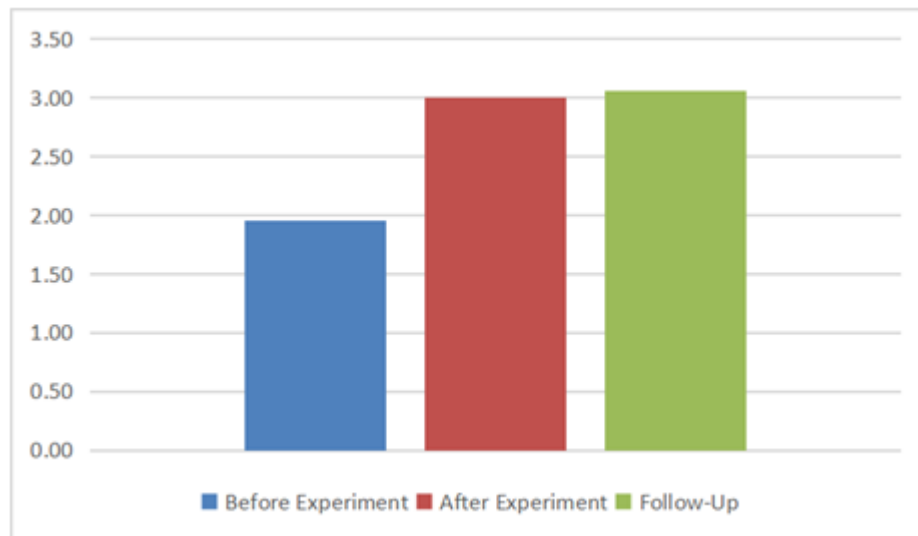


Figure 4 Mean of emotional regulation for middle school students in experiment group during before experiment, after experiment and follow-up

#### 4.3.4 The effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up.

Before effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students experiment group and control group during before experiment, after experiment and follow-up. Researcher examined the assumption of normality test by Shapiro-Wilk have p-value of .06 to .51 found that the mean of emotional regulation of middle school students in experiment group and control group during time have distributed as a normal curve and analyzed assumption of size of relationship and size of repeated variance for effectiveness of the mindfulness-based interventions to promote emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up which is shown in the table 8.

Table 8 Assumption of size of relationship and size of repeated variance for effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up (n=60)

Mauchly's W	Approx. Chi-Square	df	p	Epsilon		
				Greenhouse-Geisser	Huynh-Feldt	Lower-bound
0.40	52.83*	2	.00	0.62	0.64	0.50

Table 8 Assumption of Mauchly's sphericity test of emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up found sphericity assumption was violated ( $p=.00$ ). Therefore, researchers use Geisser-Greenhouse correction increases the p-value.

#### 4.3.5 The comparison of effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up

Researcher comparison of effectiveness of the MBIs in improving emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up which is shown in the table 9.

Table 9 The comparison of effectiveness of the mindfulness-based interventions in improving emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up (n=60)

Emotional Regulation	SS	df	MS	F	P
Within-Subjects					
Time	12.92	1.25	10.36	137.72*	.00
Time+Group	10.58	1.25	8.49	112.83*	.00
Error	5.44	72.31	0.08		
Between					
Group	22.54	1	22.54	164.82*	.00
Error	7.93	58	0.14		

\*p<.05

Table 9 presents the comparison of emotional regulation scores between the experimental and control groups across three time points: pre-test, post-test, and follow-up. Results indicated statistically significant differences at the .05 level in emotional regulation over time ( $F = 137.72$ ,  $df = 1.25$ ,  $p < .001$ ), between groups ( $F = 164.82$ ,  $df = 1$ ,  $p < .001$ ), and for the time  $\times$  group interaction ( $F = 112.83$ ,  $df = 1.25$ ,  $p < .001$ ). Consequently, pairwise comparisons of emotional regulation across the three measurement points for both groups were conducted, as shown in Table 9.

Table 10 The pairwise comparison of emotional regulation of middle school students in experiment group and control group during before experiment, after experiment and follow-up (n=60)

Time	Pairwise Comparison of Emotional Regulation	MD	p
Before	Experiment Group (M=1.95)–Control Group (M=1.93)	0.02	.69
Experiment			
After	Experiment Group (M=3.00)–Control Group (M=1.96)	1.04*	.00
Experiment			
Follow-Up	Experiment Group (M=3.06)–Control Group (M=2.01)	1.05*	.00

\*p<.05

Table 10 After experiment and follow-up middle school students in experiment group have emotional regulation a statistically significant higher students in control group of .05 level and before experiment students in experiment group have emotional regulation a statistically significant higher students in control group of .05 level.

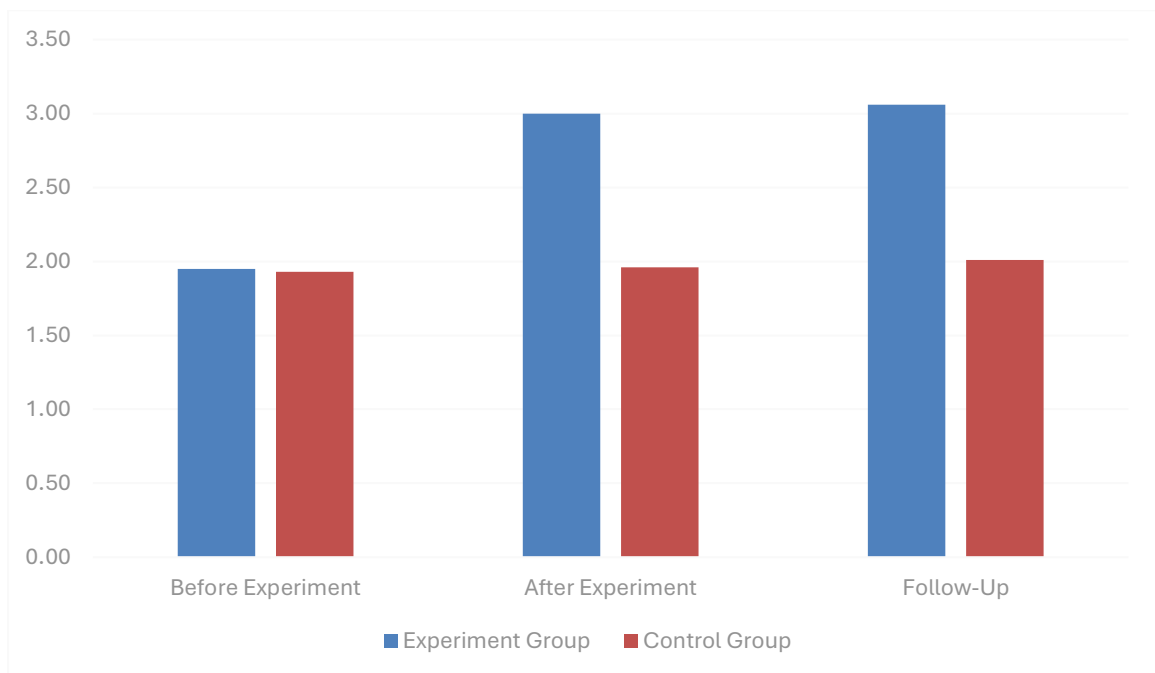


Figure 5 Mean of emotional regulation for middle school students in experiment group and control group during before experiment, after experiment and follow-up

In summary, Mindfulness-based interventions has a significant impact on students' emotional regulation abilities. Specifically,

1) Students' emotional regulation abilities in the pre-test were significantly lower than those in the post-test and follow-up test.

2) Post-test assessments revealed a marked improvement in students' emotional regulation abilities compared to pre-test levels.

3) At the follow-up assessment, students demonstrated sustained improvements in emotional regulation, with no statistically significant decline observed relative to post-intervention scores.

Participant feedback highlights the reflections and insights of middle school students after completing MBIs sessions. These sessions targeted essential aspects of emotional regulation, such as emotional awareness and understanding, goal-oriented behavior, and impulse control during negative emotional experiences. The students'

remarks reflect the program's perceived benefits for their personal growth and interpersonal interactions.

Table 11 Student Feedback on Mindfulness-Based Interventions sessions

Lessons and objectives	Post-Instruction Student Feedback
<p><b>Lesson1:</b> Orientation to MBIs and Students' Emotional Regulation</p> <p><b>Objective:</b></p> <ol style="list-style-type: none"> <li>1. Introduce the overall framework of the mindfulness-based interventions and course plan.</li> <li>2. Establish good teacher-student relationships and student-student relationships to lay the foundation for subsequent courses.</li> <li>3. Introduce the concepts and importance of emotional regulation and the MBIs .</li> </ol>	<p>Student A: "reflected that the orientation session effectively established a foundational understanding of emotional regulation and the conceptual framework of MBIs. The student specifically appreciated the clarity of the course structure and instructional guidance provided at the outset."</p> <p>Student B:"emphasized that the interactive activities conducted during the early stages of the program played a key role in fostering group cohesion. These activities created a supportive atmosphere that made the student feel comfortable participating in discussions and sharing personal experiences."</p> <p>Student C described the initial exposure to the importance of MBIs as enlightening. The session enabled the student to recognize the relevance of mindfulness practices not only in academic contexts but also in personal growth and emotional self-awareness.</p>

Table 11 (continued)

Lessons and objectives	Post-Instruction Student Feedback
<p><b>Lesson 5: Acceptance of emotions(1)</b></p> <p><b>Objective:</b></p> <p>1.To help students develop a non-judgmental attitude towards their emotional experiences, allowing them to accept both positive and negative emotions as natural and valuable parts of their emotional landscape.</p> <p>2.To cultivate students' ability to embrace their emotions without suppression or avoidance, fostering emotional resilience and a healthier approach to emotional regulation in challenging situations.</p>	<p>Student D:"I found the emotional acceptance exercises helpful in better managing my emotions, allowing me to stay calm under pressure."</p> <p>Student E: "Through learning emotional regulation, I am now able to find balance more quickly when faced with negative emotions, no longer easily controlled by them."</p> <p>Student F:"Exploring emotional acceptance has taught me how to maintain inner stability during emotional fluctuations. I can now handle complex emotional issues more rationally."</p>
<p><b>Lesson6: Acceptance of emotions(2)</b></p> <p><b>Objective:</b></p> <p>1.To understand the meaning and significance of accepting one's own emotions.</p> <p>2.To recognize that all emotions are valid and serve adaptive functions.</p> <p>3.To foster openness and tolerance toward diverse emotional experiences in oneself and others.</p>	<p>Student G:"Through this lesson, I've started to realize that my actions can impact others, which makes me consider others' feelings more before making decisions."</p> <p>Student H:"Learning about social awareness has helped me understand the thoughts and reactions of people from different backgrounds. I have become more inclusive and respectful of others' perspectives."</p> <p>Student I:"The discussions on empathy in the course made me reflect on some of my past behaviors. Now, I consciously try to understand others rather than just viewing things from my own perspective."</p>

Table 11 (continued)

Lessons and objectives	Post-Instruction Student Feedback
<p data-bbox="288 499 836 622"><b>Lesson 10: The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(3)</b></p> <p data-bbox="288 658 836 692"><b>Objective:</b></p> <ol data-bbox="288 728 836 987" style="list-style-type: none"> <li data-bbox="288 728 836 808">1. Promote students' teamwork and communication skills.</li> <li data-bbox="288 853 836 987">2. Enhance students' ability to resolve interpersonal conflicts peacefully and improve their reflective skills.</li> </ol>	<p data-bbox="836 499 1394 741">Student J: "Through teamwork activities, I learned how to express my emotions positively in collaboration, which strengthened the team's cohesion. I am now more open in communicating with others."</p> <p data-bbox="836 779 1394 1070">Student K: "Learning to manage the expression of negative emotions has allowed me to handle conflicts calmly and avoid emotional reactions. I can now stay composed during difficult moments and help the team find constructive solutions."</p> <p data-bbox="836 1108 1394 1503">Student L: "In the process of building cooperation, I learned how to boost team motivation by expressing positive emotions, and also realized that the expression of negative emotions can affect the group's atmosphere. Now, I pay more attention to how I express emotions, maintaining harmony in collaboration."</p>

## CHAPTER 5

### CONCLUSIONS AND DISCUSSION

This study developed and applied a MBIs to enhance emotional regulation in middle school students. The principal outcomes are outlined as follows:

#### 5.1 Summary of Research

##### 5.1.1 Objectives and Hypotheses of the Study

1) To study the definition and components of students' emotional regulation in middle school students.

2) To develop a mindfulness-based interventions for enhancing students' emotional regulation in middle school students.

3) To evaluate the effectiveness of mindfulness-based interventions in improving students' emotional regulation in middle school students.

Two hypotheses were formulated to achieve the above three objectives.

**Hypotheses 1:** In the experimental group, students' emotional regulation after receiving the mindfulness-based interventions and after the follow up period is higher than before beginning the experiment.

**Hypotheses 2:** In the experimental group, students' emotional regulation after receiving the collaborative MBIs and after the follow up period is higher than the students in the control group.

##### 5.1.2 Summary of Research

**Phase 1:** To study the definition and components of students' emotional regulation of middle school students.

In the first phase of Study 1, a combination of literature review, semi-structured interviews, and measurement development techniques was employed. Participants included five experts in the field of educational psychology and a cohort of 100 middle school students. These methods facilitated a comprehensive understanding of the relevant variables and enabled the construction of measurement instruments demonstrating high reliability and validity.

**Phase 2: To develop the MBIs to promote students' emotional regulation of middle school students.**

In the second phase of the study, a curriculum was designed based on the mindfulness-based interventions, with the primary aim of enhancing emotional regulation among middle school students. The program comprised three key stages: introduction, learning activities, and conclusion. This phase involved five subject-matter experts and twenty middle school participants. Prior to finalizing the course structure, a thorough analysis of relevant factors was conducted, followed by expert evaluations and pilot teaching sessions to ensure both feasibility and instructional effectiveness.

**Phase 3: To evaluate the effectiveness of the MBIs in improving the students' emotional regulation of middle school students.**

In the third phase of the study, a pre-test/post-test design involving an experimental group and a control group was implemented to enhance the effectiveness of the instructional program and to examine the potential impact of MBIs on the emotional regulation of middle school students. The experimental group participated in a six-week MBIs, whereas the control group received conventional instruction. To monitor progress and assess the durability of learning outcomes, three evaluation points were incorporated: a pre-test (assessing baseline emotional regulation in both groups), a post-test (administered immediately after the intervention), and a follow-up assessment (conducted six weeks later).

## **5.2 Discussion of the Study**

This section primarily elaborates on the significance of the key findings explored in depth across each phase of the study, thereby addressing the research questions.

### **5.2.1 Definition and Components of Emotional Regulation**

In this phase of the study, the focus was placed on examining emotional regulation and its constituent components among middle school students. The research first established a precise conceptual definition of emotional regulation, with particular attention to its applicability within the adolescent student population. For the purposes of this study, Emotional regulation is conceptualized as a multidimensional developmental

process that equips students with the knowledge, skills, and dispositions necessary to manage emotional experiences, maintain a positive self-concept, pursue personal and collective goals, demonstrate empathy, build healthy interpersonal relationships, and make thoughtful decisions.

Gross (1998) proposed an emotion regulation model that has been widely adopted in the field of educational psychology. He defines emotion regulation as “the processes by which individuals influence their own emotions—how they experience and express them—whether consciously or unconsciously, and particularly with regard to when and how these emotions occur.” This definition underscores that emotion regulation is not merely a reactive coping strategy, but rather a cognitively and affectively driven process through which individuals actively shape their emotional experiences within specific contexts. In the educational setting, this perspective aligns with the understanding that emotion regulation impacts not only students’ emotional well-being, but also their learning motivation, interpersonal adjustment, and decision-making behaviors (Gross, 1998). By extending the conceptual scope of emotion regulation, it can be recognized as a core competency essential for fostering students’ social-emotional development and academic achievement.

In a complementary view, Eisenberg, Spinrad, and Morris (2002) conceptualize emotion regulation as “the processes by which individuals initiate, maintain, or modulate the occurrence, intensity, and expression of emotions in specific contexts, in ways that facilitate the attainment of social and personal goals.” They emphasize that the development of emotion regulation in children and adolescents is closely linked to their social competence and psychological adjustment, representing a key component of overall social-emotional competence. This definition highlights the adaptive social function of emotion regulation and resonates with contemporary educational research that focuses on positive self-construction, goal-directed behavior, and interpersonal understanding (Eisenberg, Spinrad, & Morris, 2002). Viewing emotion regulation as a cross-contextual and cultivable skill not only deepens its theoretical significance, but

also enhances its applicability in the design and implementation of educational interventions.

This definition aligns closely with the conceptual framework adopted in the present study. On one hand, adolescents in middle school are in a developmental stage characterized by emotional instability and impulsivity, which necessitates their ability to accurately experience and appropriately express emotions, as well as to select effective strategies for emotional regulation. On the other hand, this study employs MBIs to enhance students' capacity for emotional regulation, situating the definition within specific instructional contexts to ensure greater precision and reliability.

In this study, the conceptual framework for emotional regulation is delineated into four primary components, the details of which are presented as follows. The structure and content of these components have undergone expert validation, with consensus achieved among five specialists in the field.

**1) Awareness and understanding of emotions:** is the foundation of emotional regulation. It refers to an individual's ability to consciously identify, accurately label, and meaningfully interpret both their own and others' emotional states. This ability includes recognizing the physiological signals, cognitive responses, and contextual factors associated with emotions, as well as understanding the causes, intensity, and potential impact of emotions (Gross, 2015; Saarni, 1999; Gratz & Roemer, 2004).

**2) Acceptance of emotions** refers to the individual's capacity to allow themselves to experience various emotional responses without judgment, avoidance, or suppression. This dimension reflects an open and non-reactive attitude, emphasizing the view of emotions as natural responses to internal and external stimuli rather than negative elements, and advocates accepting present emotional experiences through mindfulness-based approaches (Hayes et al., 2006; Shallcross et al., 2010; Gratz & Roemer, 2004).

**3) The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions:** refers to an individual's capacity to maintain purposeful, intentional actions aligned with personal or external goals, while resisting impulsive, emotionally driven reactions during states of emotional distress. This

ability reflects a high level of emotional self-regulation, executive functioning, and psychological flexibility, enabling individuals to manage frustration, anger, anxiety, or sadness without allowing those emotions to derail their decision-making or behavior. This ability is demonstrated by maintaining purposeful actions in emotionally distressing situations and avoiding impulsive responses, reflecting a combination of executive functioning, psychological flexibility, and emotional self-regulation (Compas et al., 2017; Silk et al., 2003; Gratz & Roemer, 2004).

**4) Access to emotion regulation strategies perceived as effective:** refers to an individual's awareness of, confidence in, and ability to utilize a repertoire of emotion regulation strategies that they personally believe to be effective in managing their emotional experiences. This includes not only knowledge of different strategies (e.g., cognitive reappraisal, deep breathing, seeking support), but also the perceived efficacy and appropriateness of these strategies across emotional contexts, which strongly influences actual use and long-term emotional well-being. The ability to access and effectively use emotion regulation strategies involves whether individuals are aware of a variety of regulatory strategies (such as cognitive reappraisal, deep breathing, or seeking social support), whether they believe in the effectiveness of these strategies, and whether they can flexibly apply them in specific contexts. This dimension is not only related to the number of strategies available but also closely tied to the individual's subjective perception of their effectiveness, making it a key factor in long-term emotional adaptation (Gross & John, 2003; Gratz & Roemer, 2004; Aldao et al., 2010).

The present study conceptualizes emotional regulation as comprising four interrelated dimensions: the capacity to perceive and comprehend one's emotions, the willingness to accept emotional experiences, the ability to pursue goal-oriented actions while inhibiting impulsive responses under negative affect, and the accessibility of regulation strategies deemed effective. This conceptualization aligns with the multidimensional model articulated by Gross (1998) and subsequently refined by Gratz and Roemer (2004). Gross (1998) emphasized that emotional awareness and the strategic modulation of emotions are essential to adaptive functioning. In parallel, Gratz

and Roemer (2004) identified the acceptance of emotions and the regulation of impulsive behaviors as pivotal mechanisms within the regulation process. Collectively, these scholarly contributions highlight the importance of synthesizing cognitive, behavioral, and acceptance-based approaches to foster effective emotional regulation, particularly within adolescent populations.

In conclusion, the integration of these four interrelated components provides both a solid theoretical underpinning and practical applicability for the operational definition of emotional regulation in this study. Collectively, they ensure that the construct of emotional regulation among middle school students is both comprehensive and reflective of their developmental emotional characteristics. Moreover, the methods and theoretical models of emotional regulation adopted herein are consistent with established scholarly frameworks, meeting academic rigor while retaining practical relevance, thereby offering a sound theoretical basis for the subsequent implementation of MBIs.

### **5.2.2 Phase 3 :Development of a MBIs Aimed at Enhancing Emotional Regulation in Middle School Students**

In this phase, the primary objective was to design a MBIs aimed at enhancing the emotional regulation abilities of middle school students. The intervention was structured around four proposed steps, with the instructional framework ultimately organized into three sequential stages: **(1) Lead-in, (2) Learning Activity, and (3) Conclusion**. This tripartite structure has been consistently acknowledged in prior scholarship as an effective pedagogical model for implementing mindfulness-based programs in school settings (Shelach-Inbar et al., 2025; Phan, 2022). comprising an introductory segment, a central learning activity, and a reflective closing—have likewise been demonstrated to foster improvements in both emotional regulation and student engagement across varied educational contexts (Buttjer, 2025).

These three stages constitute a systematic instructional process that ensures effective introduction, active engagement, and reflective closure.

**(1) Lead-in:** introduces the session topic and relevant background knowledge to activate prior learning and enhance student motivation:

(2) **Learning Activity:** focuses on targeted emotional regulation skills, taught through mindfulness-based strategies identified and validated by expert consultation

(3) **Conclusion:** emphasizes reflection, review of learning objectives, and feedback to consolidate knowledge and promote skill application.

The present intervention framework integrates four mindfulness-based strategies—emotional awareness and self-reflection (Gross, 1998; Goleman, 1995; Mayer & Salovey, 1997), social support and peer interaction (Eisenberg & Fabes, 1992; Zimmermann & Iwanski, 2014), mindfulness training (Zeidan et al., 2010; Roeser et al., 2013), and teacher-provided emotional support with contextual adjustment (Rosenberg & McCullough, 2015; Jennings & Greenberg, 2009). Collectively, these approaches offer a comprehensive mechanism for enhancing emotional regulation among middle school students while simultaneously promoting their social adaptation and academic achievement. The principal elements of this integrated model are outlined as follows.

#### **1. Body Awareness: Strengthening Self-Awareness and Emotional Monitoring**

Body awareness is the conscious perception of internal bodily sensations, such as breathing, heart rate, and muscular tension, which plays a central role in recognizing and regulating emotions (Mehling et al., 2012). The concept is rooted in interoceptive awareness theory, which posits that heightened sensitivity to bodily states facilitates early detection of emotional arousal and allows for timely application of regulatory strategies (Hanley et al., 2015). In adolescents, cultivating body awareness supports greater self-monitoring, emotional clarity, and the capacity to respond adaptively in stressful learning environments.

#### **2. Body Scan: Promoting Impulse Control and Emotional Clarity**

The body scan is a formal mindfulness practice in which attention is systematically guided through different regions of the body to develop nonjudgmental awareness of physical sensations (Kabat-Zinn, 1990). Research has demonstrated that regular body scan practice reduces physiological stress responses, increases emotional clarity, and enhances self-regulation capacity (Creswell et al., 2014). For middle school students, body scan exercises can foster greater tolerance for discomfort, reduce

impulsive behaviors, and promote reflective rather than reactive responses in emotionally charged situations.

### **3. Mindful Eating: Encouraging Self-Regulation and Stress Reduction**

Mindful eating involves bringing full awareness to the sensory and physiological aspects of eating, including the tastes, smells, textures, and bodily cues of hunger and satiety (Kristeller & Wolever, 2011). Evidence shows that mindful eating reduces emotional and stress-related eating, improves self-control, and fosters a healthier relationship with food. For adolescents, integrating mindful eating practices into school wellness programs can help reduce maladaptive coping behaviors related to stress, promote patience, and reinforce mind–body awareness as part of emotional regulation skills.

### **4. Loving-Kindness Meditation: Fostering Emotional Acceptance and Positive Affect**

Loving-kindness meditation (LKM) involves silently repeating phrases of goodwill and compassion toward oneself and others, promoting warmth, empathy, and nonjudgmental awareness (Hofmann et al., 2011). Studies have found that LKM enhances positive emotions, reduces self-criticism, and strengthens interpersonal relationships (Fredrickson et al., 2008). For middle school students, LKM can be especially beneficial in fostering emotional acceptance, reducing hostility, and encouraging prosocial behavior, thereby creating a more supportive school environment.

Collectively, body awareness, body scan, mindful eating, and loving-kindness meditation offer evidence-based strategies to enhance key aspects of emotional regulation in middle school students. These practices strengthen self-awareness, promote impulse control, encourage emotional acceptance, and cultivate positive affect. When implemented in school-based mindfulness programs, they provide both theoretical grounding and practical applicability, equipping students with lifelong emotional management skills that support academic engagement, social relationships, and overall psychological well-being.

### 5.2.3 Phase 3: Evaluating the Effectiveness of Mindfulness-Based Interventions

Phase 3 primarily employed a quasi-experimental design to evaluate the effectiveness of the MBIs, with data analyzed using repeated-measures ANOVA. In this phase, the experimental group participated in a six-week MBIs, whereas the control group received conventional instruction. The discussion of findings in this stage is structured around two hypotheses: (1) Hypothesis 1 — the model's effectiveness as evidenced by within-group improvements; and (2) Hypothesis 2 — its comparative effectiveness relative to traditional teaching methods. The interpretation of these results is grounded in the intervention's procedural framework and core strategies, supported by both empirical data and participant feedback, thereby reinforcing the design and theoretical foundations of the MBIs.

**Hypotheses 1:** In the experimental group, students' emotional regulation after receiving the MBIs and after the follow up period is higher than before beginning the experiment.

This study strongly supports the first hypothesis: the emotional regulation abilities of middle school students in the experimental group showed significant improvement from the pre-test to the post-test, and these abilities were maintained during the follow-up phase. All four components of emotional regulation demonstrated marked enhancement, confirming that MBIs can produce lasting changes in students' emotional regulation.

These results align with prior research, indicating that MBIs strengthen students' emotional regulation by fostering greater awareness and acceptance of their current emotional experiences. MBIs helps reduce emotional reactivity, strengthens self-regulation and psychological flexibility, and thus improves adolescents' emotional adaptability (Zoogman, Goldberg, Hoyt, & Miller, 2015). In addition, mindfulness-based interventions enhances the efficiency with which students use emotion management strategies when facing stressful situations (Beauchemin, Hutchins, & Patterson, 2008).

MBIs typically consist of three basic steps: introduction, student activities, and summary. The introduction phase aims to help students clarify learning objectives and

connect new knowledge with prior experience, thereby facilitating cognitive readiness and psychological engagement. The student activity phase involves a variety of instructional methods—such as guided meditation, loving-kindness visualization, body scanning, and role-playing—to help students deeply experience and understand mindfulness content, enhancing their awareness and comprehension of emotional states. The summary phase focuses on guiding students to review, reflect on, and integrate what they have learned, helping them consolidate knowledge, correct cognitive distortions, and promote the transfer and application of mindfulness skills to daily life.

Through these three systematic steps, MBIs achieves an organic integration of theory and practice. Students not only acquire theoretical knowledge about emotional regulation but also deepen their understanding of emotional states and regulation strategies through practical experience. Most students reported that this learning approach was both enlightening and effective, helping them better identify, accept, and regulate their emotions in real-life situations. Reflections and feedback from students clearly demonstrate the practical effectiveness of the intervention in enhancing their emotional regulation abilities.

*"The introduction phase let me know in advance what we were going to learn today. It felt easier to get into the right mindset, and I could also recall things I had learned before." (Student A)*

*"During body scanning and meditation, I could clearly feel my emotions. I felt very relaxed and gained a better understanding of how to deal with negative emotions." (Student B)*

*"The summary phase gave me a chance to organize what I had learned and hear what others thought. I felt that was really helpful for me." (Student C)*

The four strategies employed in this study's MBIs played a key role in enhancing students' emotional regulation abilities. Body awareness helps students better recognize the physiological signals of emotional changes by increasing attention to bodily

sensations, thereby strengthening self-regulation (Kabat-Zinn, 1990). Body scanning, which involves systematically focusing on sensations in different parts of the body, guides students to relax tension and reduce anxiety and emotional distress (Creswell, 2017). Mindful eating, which emphasizes focused awareness on the present eating experience, trains attention control and the ability to delay gratification, contributing to greater emotional stability (Kristeller & Wolever, 2011). Loving-kindness meditation fosters compassionate feelings toward oneself and others, reduces negative emotions, and enhances the positive aspects of emotion regulation (Hofmann, Grossman, & Hinton, 2011).

*"Through mindfulness breathing and body scanning exercises, I've learned to pause and observe my feelings before my emotions get out of control, instead of reacting immediately like I used to. Now, I can face pressure more calmly and feel like I have more control over my emotions." (Student D)*

Interviews with students confirm that the intervention not only enhanced their emotional regulation abilities but also increased their motivation to learn.

**Hypotheses 2:** In the experimental group, students' emotional regulation after receiving the collaborative MBIs and after the follow up period is higher than the students in the control group.

These research findings validate the second hypothesis: in both the post-test and follow-up phases, the experimental group scored higher than the control group on all four components of emotional regulation, while the control group showed no statistically significant changes over time. This highlights the limitations of traditional lecture-based teaching in enhancing students' emotional regulation abilities.

MBIs has shown significant effects on emotional regulation in middle school students. Mindfulness training effectively reduces negative emotions such as anxiety and depression, while enhancing students' emotional self-regulation abilities. A meta-analysis by Zoogman et al. (2015) found that mindfulness interventions can improve

adolescents' emotional management skills, helping them remain calm and rational in stressful situations.

In addition, the study by Beauchemin et al. (2008) also demonstrated that through mindfulness-based interventions, students' emotional fluctuations were significantly reduced, and their emotional reactivity decreased, promoting the development of more positive emotional regulation strategies. These results indicate that mindfulness-based interventions has broad application potential in enhancing emotional regulation abilities in middle school students.

The effectiveness of the MBIs lies primarily in its capacity to enhance four core components while extending beyond the scope of conventional emotional regulation activities typically associated with such interventions. Through an integrated and comprehensive curriculum design, the model demonstrates not only effectiveness but also sustainability and scalability.

1. By engaging in body awareness and body scanning practices, students can enhance their capacity to recognize and comprehend their own emotional states.

2. Through the practice of loving-kindness meditation, students are encouraged to cultivate an accepting attitude toward both positive and negative emotions.

3. Incorporating mindful eating and body scanning techniques supports students in maintaining goal-directed behavior and exercising impulse control when experiencing negative emotions.

4. The integrated application of mindfulness strategies enables students to identify and implement emotional regulation techniques most appropriate to their individual needs.

Feedback from students in the experimental group offered additional empirical support for the model.

*“The course was structured in a progressive manner, transitioning from body awareness to body scanning, which allowed me to gradually adapt to and master mindfulness techniques at different*

*stages. I believe this design is particularly suitable for individuals like me who previously had little understanding of mindfulness (Student B).*

*“The introductory segment of the course enabled me to quickly become engaged and to clearly grasp the purpose of each practice .”(Student C)*

*“The concluding reflections at the end of each session provided me with opportunities to review what I had learned and to apply mindfulness skills beyond the classroom.” (Student D)*

These reflections indicate that students not only acquired theoretical knowledge but also developed a deeper understanding of the instructional practices.

The effectiveness of MBIs stems from its curriculum design, which aims to enhance four components and integrate them into emotional regulation learning activities. This comprehensive teaching model not only improves the effectiveness of the intervention but also ensures its sustainability and broad applicability in students, giving the model strong potential for expansion.

The adoption of a quasi-experimental approach safeguarded the methodological soundness of the study, while its alignment with a constructivist framework maintained conceptual coherence. The intervention demonstrated not only short-term effectiveness but also sustained improvements across all four components of emotional regulation, thereby offering broader and more enduring support for the emotional regulation of middle school students.

In summary, this study offers further empirical support for the research field, demonstrating that MBIs not only foster student engagement but also provide both theoretical and practical foundations for the development of curricula aimed at enhancing emotional regulation among middle school students.

### **5.3 Insights on Middle School Teacher Education**

This research holds significant implications for the teaching design and activities related to emotional regulation for middle school students, especially those in

the critical adolescent phase. The study explores three aspects: the characteristics of emotional development in middle school students, the redefinition of the teacher's role, the educational value of mindfulness-based interventions, and the cultivation of teachers' mindfulness literacy.

### **5.3.1 Characteristics of Emotional Development and Redefining the Teacher's Role**

Adolescence is a key period in which the emotional system of middle school students develops rapidly. During this stage, individuals often exhibit more intense emotional reactions while their self-regulation abilities are still developing (Steinberg, 2005). Students dealing with academic pressure, interpersonal conflicts, and identity issues often show frequent emotional fluctuations, impulsive behaviors, anxiety, and frustration. In this context, the role of the teacher is no longer limited to that of a knowledge transmitter or classroom manager, but must evolve into a facilitator of emotional support and a creator of a growth environment. Teachers need to understand the emotional development characteristics of adolescents, apply emotional support strategies, and create an inclusive, safe, and understanding classroom atmosphere to promote both students' emotional development and learning effectiveness.

#### **(1) Focusing on Students' Emotional Changes, Enhancing Teachers' Emotional Sensitivity**

Teachers should be able to recognize and understand students' emotional changes, sensitively detecting emotional signals such as distracted attention, excessive anxiety, or withdrawal behavior in the classroom, and providing timely and appropriate emotional feedback and guidance. This emotional sensitivity helps build positive teacher-student relationships and provides the basis for effective emotional intervention and teaching regulation

#### **(2) Creating a Safe Environment to Promote Emotional Expression and Understanding**

Teachers should create an emotionally safe classroom environment, encouraging students to express their true emotions without judgment and guiding them to understand and accept their emotional states. By incorporating emotional sharing

sessions and establishing class-based emotional support mechanisms, students can learn the social expression of emotions and improve their emotional understanding and empathy skills.

### **(3) Strengthening Teachers' Emotional Regulation Abilities, Optimizing Educational Responses**

Teachers' emotional states directly affect both teaching quality and students' emotional experiences. Therefore, teacher training should include emotional regulation and stress management content, such as mindfulness training and reflective writing, to improve teachers' self-awareness and regulation abilities. This enables teachers to respond to students' emotional behaviors with a stable, positive mindset, guiding students to form healthy emotional coping mechanisms.

#### **5.3.2 Educational Value of MBIs**

MBIs break away from the traditional teacher-centered and classroom-bound teaching model, leading to a restructuring of teaching spaces and methods and transitioning from "teaching" to "learning." This shift aligns closely with Vygotsky's (1978) social constructivist learning theory, which emphasizes that learning is a process of meaning construction through social interaction. Students actively construct knowledge through interactions with their environment, others, and their own experiences. Mindfulness practices guide students in self-awareness and internal dialogue, enhancing learners' agency and expanding the space and pathways for learning, reflecting a student-centered educational philosophy.

Based on the above discussion, the following points are proposed:

#### **(1) Embedding Mindfulness Practices in the Classroom to Activate Student Agency**

Teachers should systematically introduce mindfulness activities into daily teaching, such as breath awareness, emotional scanning, and mindful writing, to guide students in actively identifying and regulating their emotional states, increasing their internal focus on the learning process. By improving emotional awareness, students can participate more actively in class interactions, increasing engagement and self-efficacy, thus transitioning from "passive reception" to "active construction."

### **(2) Expanding Learning Spaces, Building a Multi-Dimensional Mindfulness Support System**

Schools should move beyond the limitations of the classroom as the sole teaching venue, extending mindfulness practices into extracurricular activities, family cooperation, and community resource integration, forming a multi-dimensional collaborative emotional regulation support system. This spatial expansion helps students continue to practice and internalize mindfulness skills in different life contexts, promoting the stability and adaptability of emotional regulation.

### **(3) Teacher Role Transformation, Promoting Constructivist Learning for Students**

Teachers should shift from the traditional role of knowledge transmitter to that of a learning facilitator, guiding students through collaborative learning, group discussions, and mindful dialogue, allowing them to co-construct knowledge and meaning through social interaction and self-reflection. Mindfulness interventions not only provide emotional support for students but also offer teachers a pathway to transform teaching concepts and promote deeper learning.

Overall, the integration of mindfulness practices into education requires a multi-level framework that encompasses classroom instruction, extended learning environments, and the evolving role of teachers. Embedding mindfulness activities within daily teaching enhances students' emotional awareness, agency, and engagement, enabling a shift from passive knowledge reception to active knowledge construction. At the institutional level, expanding learning spaces through school–family–community collaboration establishes a sustainable support system that reinforces the stability and adaptability of students' emotional regulation across diverse contexts. Furthermore, by adopting the role of facilitators rather than mere transmitters of knowledge, teachers can foster constructivist learning processes that simultaneously advance emotional support and deeper cognitive development. Collectively, these strategies highlight the dual potential of MBIs to strengthen students' emotional regulation capacities and to enrich educational practice through transformative pedagogical approaches.

### 5.3.3 Cultivating Teachers' Mindfulness Literacy

Teachers' mindfulness literacy refers to their ability to be present, self-accepting, and non-judgmentally attentive in educational settings (Roeser et al., 2013). This literacy not only helps teachers regulate their emotions and stress but also enables them, through modeling, to foster students' emotional regulation and learning engagement. Research shows that teachers who receive mindfulness training experience significant reductions in job burnout, emotional exhaustion, and classroom management stress, while showing improvements in teacher-student interaction quality and teaching creativity (Flook et al., 2013). Therefore, cultivating teachers' mindfulness literacy should be seen as an essential part of enhancing educational quality and promoting school mental health.

#### (1) Systematically Introducing Mindfulness Courses in Teacher Training

Mindfulness theories and practices, such as mindfulness breathing, body scanning, and mindful listening, should be systematically incorporated into both pre-service and in-service teacher training programs to help teachers maintain focus and balance in daily teaching. This will not only enhance teachers' emotional stability but also improve their classroom management and decision-making quality.

#### (2) Establishing Teacher Mindfulness Support Communities

Schools can establish mindfulness practice communities, organizing regular group meditation, experience-sharing, and case discussions to provide teachers with ongoing mutual support and reflection platforms. Through peer support and collective practice, teachers can better internalize mindfulness concepts as teaching beliefs and apply them flexibly in diverse contexts.

#### (3) Integrating Mindfulness Concepts into Daily Teaching

Teachers can incorporate brief mindfulness practices into the classroom, such as a one-minute sitting session before class or guiding students in mindful breathing, which not only helps students focus their attention but also enhances teachers' own awareness. With long-term practice, this will help create a low-stress, highly focused classroom atmosphere, improving overall teaching effectiveness.

In summary, the complexity of emotional development in adolescent students presents new demands on the role of teachers. Teachers need to possess emotional sensitivity, create a classroom environment that ensures emotional safety, and enhance their own emotional regulation abilities. Mindfulness, as an effective tool for emotional regulation and awareness, provides a practical path for teachers to transform their roles. By systematically integrating mindfulness courses into teacher training, establishing supportive practice communities, and incorporating mindfulness principles into daily teaching, teachers can not only better manage their own emotions and teaching pressures but also respond to students' emotional needs with a positive and stable mindset. This, in turn, promotes students' emotional well-being and academic growth, contributing to the creation of a more human-centered, collaborative, and sustainable educational ecosystem.

In conclusion, the mindfulness-based intervention designed in this study is not merely a collection of instructional techniques but a strategically developed framework adaptable to diverse educational contexts, with the primary aim of enhancing middle school students' emotional regulation skills. The findings at this stage indicate that well-structured and contextually relevant preparatory learning activities contribute to the long-term and effective impact of mindfulness practices on students' emotional regulation. This perspective is consistent with Kabat-Zinn's (1990) foundational view that mindfulness programs should cultivate sustainable attentional and emotional balance, as well as with Roeser et al.'s (2013) argument that mindfulness in educational settings can improve both emotional resilience and academic engagement. Moreover, Jennings and Greenberg (2009) emphasize that embedding mindfulness within classroom environments fosters not only emotional regulation but also healthier teacher–student relationships, thereby reinforcing the broader applicability and durability of such interventions.

## 5.4 Research Recommendation

### 5.4.1 Practical Implications for Teaching

#### 5.4.1.1 Systematically Integrating Mindfulness Training into School Curricula

It is recommended that schools integrate mindfulness-based interventions modules into routine instruction as a central element of mental health education. Consistent implementation of practices such as mindful breathing, body scans, and emotional awareness activities can effectively strengthen students' emotional regulation capabilities and foster psychological resilience.

#### 5.4.1.2 Emphasizing Both Teacher Training and Role Modeling

Teachers, as the primary implementers of mindfulness-based interventions, should receive systematic training in mindfulness education. They need to understand its principles and techniques, and serve as role models through their own mindful behavior, encouraging students to actively engage and internalize mindfulness strategies.

#### 5.4.1.3 Creating a Supportive Environment to Promote Daily Practice

A safe, inclusive, and low-pressure school atmosphere should be cultivated to provide students with the time and space for continuous mindfulness-based interventions. This could include setting up mindfulness corners, holding mindfulness morning meetings, or organizing quiet reflection activities, thereby enhancing the practicality and sustainability of the intervention.

### 5.4.2 Implications for Future Research

Future research could focus on individual differences, such as students' emotional sensitivity or social backgrounds, to explore how to develop personalized mindfulness-based interventions plans tailored to different student characteristics. It is also recommended to further examine the moderating effects of environmental factors such as family, school, and peer relationships on the outcomes of mindfulness-based interventions, in order to refine and target intervention strategies more effectively.

In addition, future studies may benefit from integrating quantitative assessments with qualitative tools (such as teaching portfolios) to gain a more comprehensive and in-depth understanding of the causes and processes behind students' emotional changes.

This multi-method approach not only helps capture students' subjective experiences during the emotional regulation process but also reveals the underlying mechanisms of emotional changes, providing stronger theoretical and practical support for precise interventions in emotional education.

### 5.5 Conclusion

This study makes a substantial contribution to the field of emotional regulation among middle school students. It clearly defines the connotation of emotional regulation in this age group and proposes a theoretical framework consisting of four components. A systematic MBIs was developed and its effectiveness empirically evaluated through a teaching experiment.

The results show that the MBIs significantly improves middle school students' emotional regulation abilities. It helps students maintain a positive attitude and behavioral performance when facing academic pressure and interpersonal challenges, thereby promoting their mental health and social adaptability. By integrating theoretical construction with practical application, the intervention proposed in this study offers a scientific, systematic, and practically meaningful framework for enhancing emotional regulation in middle school students.

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APPENDIX



Appendix A Expert information

List of experts and teachers who conducted informal conversational interviews to study the current state of emotional regulation among middle school students (definitions, characteristics, etc.) and provide recommendations

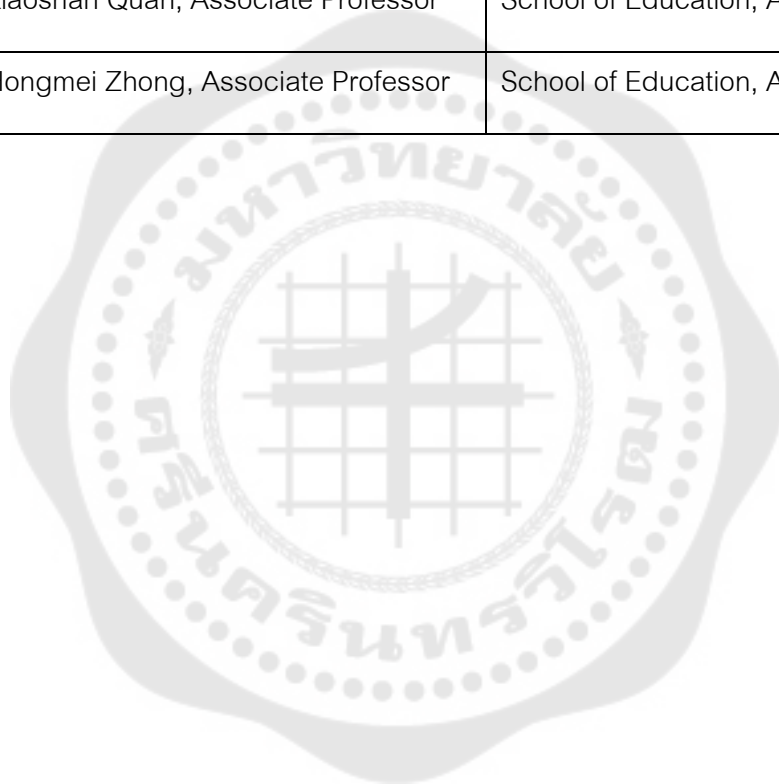
No.	List Experts	Resume/Position
1	Ji Sun, Associate Professor, Ph.D.	School of Education, Anshun University
2	Ying Yang, Professor, Ph.D.	School of Education, Anshun University
3	Yongfei Ban, Professor	School of Education, Anshun University
4	Xiaoshan Quan, Associate Professor	School of Education, Anshun University
5	Hongmei Zhong, Associate Professor	School of Education, Anshun University

List of experts who participated in interviews regarding the questionnaire used in this study to assess emotional regulation in middle school students

No.	List Experts	Resume/Position
1	Ji Sun, Associate Professor, Ph.D.	School of Education, Anshun University
2	Ying Yang, Professor, Ph.D.	School of Education, Anshun University
3	Yongfei Ban, Professor	School of Education, Anshun University
4	Xiaoshan Quan, Associate Professor	School of Education, Anshun University
5	Hongmei Zhong, Associate Professor	School of Education, Anshun University

**List of experts for the review of the mindfulness-based interventions**

No.	List Experts	Resume/Position
1	Ji Sun, Associate Professor, Ph.D.	School of Education, Anshun University
2	Ying Yang, Professor, Ph.D.	School of Education, Anshun University
3	Yongfei Ban, Professor	School of Education, Anshun University
4	Xiaoshan Quan, Associate Professor	School of Education, Anshun University
5	Hongmei Zhong, Associate Professor	School of Education, Anshun University



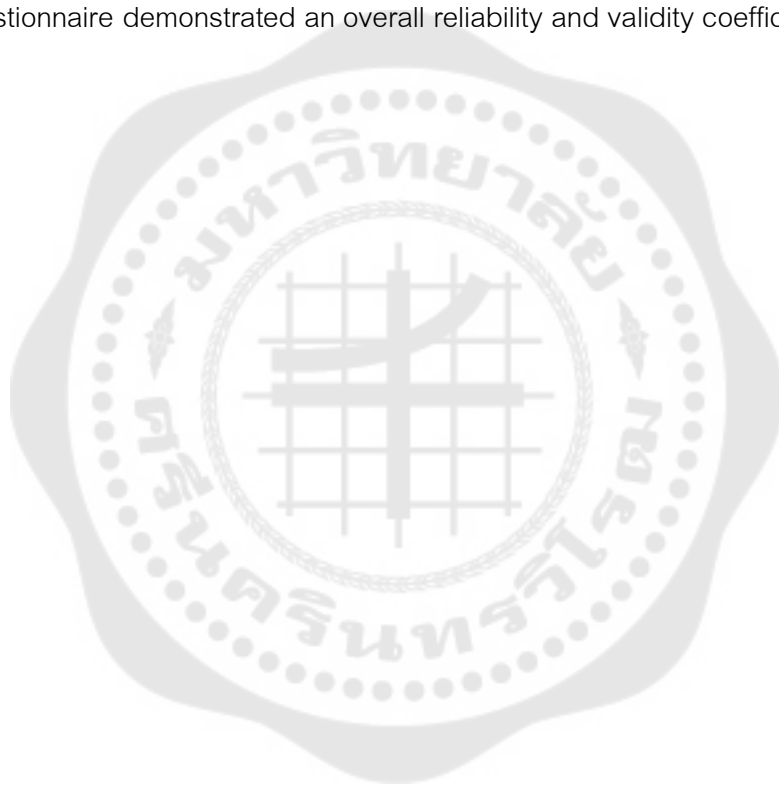


Appendix B Questionnaire Reliability and Validity

<b>Emotional Regulation Scale</b>	
<b>Awareness and understanding of emotions</b>	
Items	r
1.I am clear about my feeling	0.33
2.I have no idea how I am feeling	0.42
3.I have difficulty making sense out of my feeling	0.42
4. I know exactly how I am feeling.	0.45
5. I care about what I am feeling.	0.26
6. I am confused about how I feel.	0.42
<b>Acceptance of emotions</b>	
7. I become angry with myself for feeling upset.	0.41
8. I become embarrassed for feeling upset.	0.52
9. I feel ashamed with myself for having depression.	0.52
10.When I'm upset, I feel like I am weak.	0.57
11. I feel guilty for feeling bad.	0.56
12. I become irritated with myself for feeling upset.	0.62
<b>(c ) The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions</b>	
13.When I'm upset, I have difficulty getting work done.	0.32
14. I become out of control for being bad.	0.60
15.When I'm upset, I have difficulty focusing on other things.	0.42
16.When I'm upset, I feel out of control.	0.64
17.I have confidence for concentration in every situation.	0.44
18. I have difficulty controlling my behaviors when I make a mistake.	0.66
19.When I'm upset, I am able to control my behaviors.	0.64
<b>(d) Access to emotion regulation strategies perceived as effective</b>	
20.When I'm upset, I believe that I will remain that way for a long time.	0.62
21.When I'm upset, I believe that I will end up feeling very depressed.	0.59

22. When I'm sad, I believe that there is nothing I can do to make myself feel better.	0.63
23. When I'm upset, I start to feel very bad about myself.	0.59
24. When I'm upset, I believe that wallowing in it is all I can do.	0.70
25. When I'm upset, it takes me a long time to feel better.	0.54
26. When I'm upset, my emotions feel overwhelming.	0.63

The questionnaire demonstrated an overall reliability and validity coefficient of 0.90.





Appendix C Expert Interview Results

Section One	
1.1 Definition of emotional regulation	
<p>Emotional regulation is a psychological ability that refers to an individual's capacity to recognize, manage, and express their emotional states in various situations. This ability is reflected in the conscious or automatic regulation of the intensity, duration, and expression of emotions, thereby enabling effective adaptation and self-management in social interactions, stress coping, and goal-directed behaviors.</p>	
Expert 1	<p>Emotional regulation in adolescence encompasses the ability to manage emotions through self-acceptance, emotional stability, and appropriate expression. This process entails sustaining positive emotions (e.g., happiness, pride) while moderating negative emotions (e.g., anxiety, anger). Proficient regulation supports middle school students' psychological well-being across academic, social, and personal domains, facilitating adaptive behavior and promoting holistic development.</p>

Expert 2	<p>Emotional regulation is a key developmental task in adolescent psychological growth. As middle school students' cognitive and emotional systems continue to mature, they need to learn to accept their emotional states and maintain psychological stability in the face of stress and challenges. Their emotional experiences include positive emotions (such as happiness) and negative emotions (such as frustration), and effective regulation strategies can enhance positive experiences while mitigating negative impacts. Additionally, appropriate emotional expression is crucial for social skill development, as it fosters better peer relationships, strengthens family bonds, and improves overall social adaptability.</p> <p>Emotional regulation is regarded as a crucial component of students' psychological competence development. An effective ability to regulate emotions enables students to accept both their strengths and weaknesses, achieving self-acceptance while maintaining emotional balance amid academic</p>
Expert 3	<p>pressure and social interactions. Students need to learn how to experience and express positive emotions—such as confidence and joy—while also employing adaptive strategies like cognitive reappraisal or problem-solving when facing negative emotions such as frustration or anxiety. This contributes to both their mental well-being and academic success.</p>

<p><b>Expert 4</b></p>	<p>middle school students' emotional regulation involves their ability to recognize, assess, and manage their emotions. This process includes understanding and accepting their emotional states rather than suppressing or denying them, as well as maintaining emotional stability amid academic pressure, peer relationships, and family environments. Additionally, it requires appropriate cognitive reappraisal and behavioral adjustments in response to both positive and negative emotional experiences (such as a sense of achievement, anxiety, or anger). Furthermore, expressing emotions appropriately—whether through verbal communication, nonverbal behavior, or social interactions—is essential for fostering healthy interpersonal relationships and psychological well-being. Educational psychology research suggests that developing students' cognitive regulation skills (such as reflection, problem-solving, and cognitive reappraisal) can significantly enhance their ability to regulate emotions, reduce stress and anxiety, and improve both academic performance and social adaptability.</p>
<p><b>Expert 5</b></p>	<p>Emotional regulation in middle school students is regarded as a developmental skill, encompassing self-awareness, social awareness, self-management, relationship skills, and responsible decision-making. Firstly, self-acceptance enables individuals to acknowledge and embrace their emotional responses rather than excessively criticizing or avoiding them. Secondly, emotional balance is reflected in a student's ability to maintain emotional stability when facing academic challenges and social pressures, preventing overreactions or emotional outbursts. Additionally, both positive and negative emotional experiences need to be appropriately recognized and managed. Students should be able to enjoy positive emotions (such as confidence and happiness)</p>

	<p>while also learning to cope with negative emotions (such as frustration and anger). Finally, expressing both positive and negative emotions plays a crucial role in shaping students' interpersonal relationships and classroom atmosphere. Proper emotional expression helps establish effective communication patterns, prevents conflicts from escalating, and fosters cooperation and empathy.</p>
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<b>1.2 The components of emotional regulation</b>	
<ol style="list-style-type: none"> <li>1. Awareness and understanding of emotions</li> <li>2. Acceptance of emotions</li> <li>3. The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions</li> <li>4. Access to emotion regulation strategies perceived as effective</li> </ol>	
<b>Expert 1</b>	<p>Adolescence is a stage characterized by significant emotional fluctuations; therefore, these four elements of emotional regulation are crucial for middle school students. Self-acceptance helps reduce adolescent anxiety, emotional balance enhances psychological resilience, positive emotional experiences foster interest in learning, and healthy emotional expression improves social relationships. These elements form a comprehensive framework for emotional regulation, making them highly suitable for the developmental needs of middle school students.</p>

<p><b>Expert 2</b></p>	<p>In educational settings, emotional awareness and understanding form the foundation for the development of students' emotional competence. Only when students can accurately identify their own emotional states can they effectively implement emotional regulation strategies. When students become aware of the specific emotions they experience in response to academic challenges or interpersonal conflicts—such as anxiety, frustration, or excitement—they are better able to purposefully choose appropriate coping strategies. Moreover, understanding others emotions is equally important, as it helps students demonstrate greater empathy and social sensitivity in group collaboration and communication.</p>
<p><b>Expert 3</b></p>	<p>Many teenagers experience conflicts within their families, schools, and friendships because they struggle to manage their emotions properly. These four elements are key to helping them build healthy social relationships. For example, learning self-acceptance can reduce social anxiety caused by low self-esteem, while appropriate emotional expression can enhance communication skills and social adaptability. Therefore, I believe these elements are not only suitable for middle school students but should also be a focal point in their development.</p>
<p><b>Expert 4</b></p>	<p>Merely knowing the four core elements of emotional regulation is not enough; schools must provide practical opportunities for students to apply them. For example, we can incorporate mental health courses, classroom discussions, and emotion management workshops to help students learn how to recognize, regulate, and express their emotions in a safe environment. Furthermore, the support of teachers and parents is crucial—when they provide positive feedback and model healthy emotional regulation strategies, students are more likely to accept and apply these elements effectively.</p>

Expert 5	<p>These four elements form the foundation of adolescent mental health development, with self-acceptance being particularly crucial for psychological adjustment during puberty. Adolescents are in the process of establishing self-identity, and the level of self-acceptance directly affects their self-esteem and confidence. Students who lack self-acceptance are more vulnerable to academic pressure, peer comparisons, and social evaluations, which can lead to anxiety and depression. Therefore, in school psychological education, it is essential to strengthen guidance on self-acceptance, helping students understand and embrace their emotions rather than overly criticizing themselves.</p>
1.3 Other Factors Affecting Emotional Regulation	
Expert 1	Social and Cultural Background
Expert 2	Academic Pressure
Expert 3	Parenting Style
Expert 4	Social Support
Expert 5	Physiological and Neurological Factors
1.4 In response to if there are additional components, what should the behaviors guided by those components you mentioned look like?	
Expert 1	<p>In the context of Chinese culture, adolescents' emotional regulation is influenced not only by individual factors but also by deep-rooted social and cultural norms. For example, collectivist culture emphasizes interpersonal harmony, leading middle school students to suppress negative emotions to maintain relationships. Additionally, the values of filial piety and respect for elders may encourage students to repress rather than openly express their true feelings. Therefore, when studying</p>

	<p>the emotional regulation patterns of Chinese middle school students, it is essential to consider the influence of social and cultural factors.</p>
<b>Expert 2</b>	<p>Chinese middle school students face immense pressure from the college entrance examination system and academic competition, which makes their emotional regulation patterns different from those of their peers in Western countries. Many students in high-pressure environments tend to engage in emotion suppression, as expressing anxiety or fatigue may be perceived as a sign of weakness. Additionally, the school teaching model often places greater emphasis on academic achievement while paying less attention to mental health education.</p>
<b>Expert 3</b>	<p>The family is a crucial environment for the formation of adolescents' emotional regulation patterns, and parenting styles directly influence students' ability to regulate their emotions. In China, authoritative and authoritarian parenting styles are relatively common. An overly strict family environment may restrict children's freedom to express their emotions, leading to long-term emotional suppression and increasing the risk of anxiety.</p>
<b>Expert 4</b>	<p>A strong social support system can significantly enhance adolescents' emotional regulation abilities. For Chinese middle school students, friends, teachers, and parents serve as essential external resources for managing their emotions. For example, having a supportive peer group can help relieve stress, while a trust-based relationship with teachers allows students to seek help when facing difficulties. Schools can promote healthier emotion regulation by implementing peer counseling programs and mental health education, helping students build an effective support system.</p>

Expert 5	Brain development, sleep, and diet also directly impact emotional stability.
Section Two	
2.1 Definition of mindfulness-based interventions	
<p>Mindfulness-based interventions involves participants being aware of their emotional state in the present moment, observing their inner experiences, and accepting their imperfections and shortcomings, including negative emotions, distressing thoughts, and physical sensations. Like an observer, they watch and understand their current physical and emotional state without evaluating or reacting to it. This process shifts the focus away from ongoing thoughts and redirects attention to the task at hand. In other words, mindfulness allows individuals to observe their emotional awareness in the present moment, recognize cues for achieving their goals, and ultimately enhance their behavioral performance.</p>	
Expert 1	Mindfulness-Based Interventions help adolescents better perceive their emotions by focusing on the present moment, self-awareness, and emotional acceptance. This approach reduces impulsive reactions and fosters more mature emotional regulation skills.
Expert 2	Mindfulness-Based interventions emphasize attention training, breath regulation, and body scanning techniques to help students reduce unnecessary anxiety, improve focus, and apply emotional regulation strategies more effectively during exams or classroom activities. This not only enhances academic performance but also boosts learning motivation and self-efficacy.
Expert 3	Mindfulness-Based interventions encourage students to observe their emotions rather than react immediately, helping them remain calm during conflicts, better understand others' emotions, and resolve issues in a more mature manner. Through mindfulness meditation or peer

	mindfulness activities, students can enhance empathy, patience, and communication skills, thereby fostering healthy social relationships.
<b>Expert 4</b>	Mindfulness-Based interventions, through non-judgmental awareness, teach students to accept their emotions rather than suppress or deny them, which is especially important for those prone to anxiety and depression. Additionally, mindfulness-based interventions strengthens students' psychological resilience, helping them remain composed when facing setbacks or academic pressure.
<b>Expert 5</b>	Mindfulness-Based interventions can enhance the function of the prefrontal cortex and reduce the overactivation of the amygdala, enabling students who practice mindfulness to better regulate their emotions when facing stress or challenges. This approach helps individuals reduce overthinking and self-criticism, promoting mental well-being and effectively improving emotional regulation abilities in middle school students.
<b>2.2 Mindfulness-Based Interventions</b>	
<b>Expert 1</b>	Mindful Breathing is a core method for enhancing emotional awareness and self-regulation in middle school students. By focusing on the rhythm of their breath, students can quickly regain balance in situations of anxiety, anger, or stress. Regular breathing exercises not only reduce the amygdala's sensitivity to stress but also strengthen the executive functions of the prefrontal cortex, improving their attention and emotional stability.
<b>Expert 2</b>	Mindful Yoga and Body Scan can help students better recognize the connection between their body and emotions. Mindful Yoga, through gentle postures and synchronized breathing, enhances body awareness, patience, and self-control. Meanwhile, Body Scan training allows students

	to gradually identify areas of tension in their body, release emotional stress, reduce anxiety, and improve overall psychological resilience.
<b>Expert 3</b>	Mindful Movement. Exercise effectively promotes neurotransmitter regulation, and Mindful Movement emphasizes focusing on body movements, muscle sensations, and breathing rhythms during physical activity, while avoiding distractions. Whether it is mindful walking, jogging, or simple stretching exercises, these practices help students develop more stable emotional regulation skills in daily life while enhancing their resilience to academic stress.
<b>Expert 4</b>	Mindful Eating is a practice that trains students to maintain awareness while eating, focusing on the taste, texture, and sensations of fullness, which helps address eating disorders caused by anxiety or stress, such as emotional eating or loss of appetite. Developing healthy eating habits not only enhances physical well-being but also optimizes the gut-brain axis connection, indirectly improving emotional regulation abilities.
<b>Expert 5</b>	Loving-Kindness Meditation (LKM) cultivates self-compassion and empathy toward others, reducing social anxiety and self-criticism. Neuroscientific research shows that long-term practice of LKM can enhance prefrontal cortex function and reduce the overactivation of the amygdala, enabling individuals to remain calm and emotionally stable when facing challenges.

<p>2.3 What are the characteristics or steps of the Positive Mindfulness-Based Interventions content and activities offered to improve emotional regulation in middle school students ?</p>	
<p>Expert 1</p>	<p>Mindfulness-based interventions should align with the cognitive development characteristics of middle school students and adopt a gradual intervention approach. The Positive Mindfulness-Based Interventions (PMBI) for improving emotional regulation must first consider adolescents' cognitive and emotional development stages.</p> <ol style="list-style-type: none"> <li>1. Mindful Moments in Class – Conduct 2-3 minutes of mindful breathing exercises before each lesson to enhance students' focus.</li> <li>2. Mindfulness-Based Curriculum – Integrate mental health education by offering courses on emotional awareness, stress management, and self-regulation.</li> <li>3. Teacher Mindfulness Training – Equip teachers with mindfulness techniques, enabling them to model and implement mindfulness strategies in classroom management.</li> </ol>
<p>Expert 2</p>	<p>Mindfulness practice can enhance the regulatory functions of the prefrontal cortex while reducing the overactivation of the amygdala, enabling individuals to maintain emotional stability in stressful situations. Therefore, the Positive Mindfulness-Based Intervention Model (PMBI) should include:</p> <ol style="list-style-type: none"> <li>1. Train students to focus on the texture, taste, and chewing process of food, reducing stress-induced overeating or loss of appetite.</li> <li>2. Cultivate self-compassion, reduce self-criticism, and enhance overall well-being.</li> </ol>

	<p>3.Utilize body scans and deep relaxation exercises to help students improve sleep quality and enhance overall mental health.</p>
<p><b>Expert 3</b></p>	<p>Social-Emotional Regulation directly impacts an individual's mental well-being. Therefore, the Positive Mindfulness-Based Intervention Model (PMBI) should integrate social interaction training, helping students apply mindfulness strategies in peer relationships and conflict resolution. Examples include:</p> <ol style="list-style-type: none"> <li>1.Mindful Listening-Train students in focused listening, avoiding interruptions, and practicing empathetic expression to enhance communication skills.</li> <li>2.Nonviolent Communication (NVC)-Combine mindfulness practices to reduce social conflicts and improve interpersonal adaptability.</li> <li>4.Group Mindfulness Meditation-Engage students in Loving-Kindness Meditation (LKM) within a team setting, fostering a sense of belonging and a supportive social environment.</li> </ol>
<p><b>Expert 4</b></p>	<p>Each student's emotional regulation needs vary, so the Mindfulness-Based Interventions should adopt a personalized training approach to meet individual psychological needs. Based on neuroplasticity, long-term mindfulness practice can optimize brain function and enhance students' resilience to stress.</p>
<p><b>Expert 5</b></p>	<p>Adolescents are still developing their emotional control and self-awareness, so mindfulness-based interventions should be structured and progressively implemented. This includes the following stages:</p>

	<p>Awareness &amp; Recognition (Foundation Stage) – Train students to recognize their emotional states through Mindful Breathing and Body Scan to enhance self-awareness.</p> <p>Regulation &amp; Control (Adjustment Stage) – Teach students cognitive reappraisal strategies for emotional regulation, integrating Mindful Yoga and Mindful Movement to improve emotional stability.</p> <p>Application &amp; Maintenance (Practical Stage) – Use situational simulations and real-life exercises (e.g., exam anxiety management, social pressure coping) to help students apply mindfulness techniques in real-life situations, fostering long-term emotional regulation skills.</p>
<p><b>2.4 In your opinion, Are there psychological techniques or other activities that can be used to improve emotional regulation in middle school students in the development of mindfulness-based interventions? If so which techniques or activities?</b></p>	
<p><b>Expert 1</b></p>	<p>Cognitive reappraisal is an effective emotional regulation strategy that can be combined with mindfulness training to help students respond to emotions more rationally.</p>
<p><b>Expert 2</b></p>	<p>At the middle school stage, many students attempt to suppress their negative emotions due to academic pressure and social challenges. Acceptance and Commitment Therapy (ACT) can help students recognize their emotions while learning to coexist with them, rather than trying to suppress them.</p>
<p><b>Expert 3</b></p>	<p>Expressive Writing is a psychological intervention technique that encourages individuals to express their emotional experiences through writing, helping to reduce anxiety and depression. This method can be integrated with mindfulness-based interventions, allowing students to gain a deeper understanding of their emotions while cultivating non-judgmental awareness.</p>

Expert 4	Emotional regulation in social contexts is particularly important. Integrating mindfulness training can help reduce interpersonal conflicts and enhance social adaptability.
Expert 5	Mindful Breathing & HRV Training: Using heart rate monitoring devices, students are guided to observe their physiological changes after practicing mindful breathing, helping them learn how to regulate their heart rate through controlled breathing.
Section Three	
3.1 scale	
Expert 1	Emotional Regulation Scale, Positive and Negative Experiences Scale, Self-Acceptance Scale, Mindfulness Cognitions and Emotions Scale
Expert 2	Appropriateness
Expert 3	Emotional Regulation Scale, the Positive and Negative Experiences Scale, the Self-Acceptance Scale, and the Mindfulness Cognitions and Emotions Scale
Expert 4	Mindfulness Cognitions and Emotions Scale
Expert 5	Self-Acceptance Scale
3.2 Are there other measures that can be used to evaluate emotional regulation in middle school students? If so, which measures are used?	
Expert 1	Several other tools can effectively assess emotional regulation in middle school students, such as the Difficulties in Emotion Regulation Scale (DERS), Emotion Regulation Questionnaire (ERQ), and Mindful

	Attention Awareness Scale (MAAS). These scales provide a well-rounded evaluation by capturing different aspects of emotional regulation, including coping strategies, emotional awareness, mindfulness, and emotional reactivity. Combining these tools will provide a comprehensive understanding of students' emotional regulation abilities, helping to tailor interventions that target specific areas of need.
Expert 2	Emotional Experiment
Expert 3	Emotional Regulation Questionnaire, Mindful Attention Awareness Scale,
Expert 4	Emotional Regulation Checklist
Expert 5	Mindfulness-Based Interventions



Appendix D Session plan

Times	week	Session Plan
1	Orientation to Mindfulness-Based Interventions and Students' Emotional Regulation	1
2	Awareness and understanding of emotions(1)	1
3	Awareness and understanding of emotions(2)	1
4	Awareness and understanding of emotions(3)	2
5	Acceptance of emotions(1)	2
6	Acceptance of emotions(2)	3
7	Acceptance of emotions(3)	3
8	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(1)	3
9	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(2)	4
10	The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(3)	4
11	Access to emotion regulation strategies perceived as effective(1)	5
12	Access to emotion regulation strategies perceived as effective(2)	5
13	Access to emotion regulation strategies perceived as effective(3)	6
14	Reflection and Conclusion	6



Appendix E Emotional Regulation Questionnaire

## Guanling Ethnic Middle School Students' Emotional Regulation Questionnaire

This anonymous survey is conducted solely for academic research to enhance the emotional regulation skills of middle school students. Participants are requested to read the instructions carefully and respond honestly and attentively, ensuring the collection of reliable data for the study. There are no right or wrong answers, and all information provided will remain strictly confidential. The researchers appreciate your cooperation and contribution to this work.

### part1: General Information

1 Grade:

2 Sex:

### Part 2: Description of Response Method

Please read each paragraph carefully and place a checkmark ( $\checkmark$ ) in the appropriate box. Each question in this test has only one correct answer. Please select the option that best matches your situation and mark the corresponding number with a ( $\checkmark$ ) .

		1 Almost Never	2 Sometimes	3 About half the time	4 Most of the time	5 Almost always
1	I am clear about my feeling					
2	I have difficulty making sense out of my feeling					
3	I care about what I am feeling.					
4	I become angry with myself for feeling upset.					
5	I feel ashamed with myself for having depression.					

		1 Almost Never	2 Sometimes	3 About half the time	4 Most of the time	5 Almost always
6	I feel guilty for feeling bad.					
7	When I'm upset, I have difficulty getting work done.					
8	When I'm upset, I have difficulty focusing on other things.					
9	I have confidence for concentration in every situation					
10	when I'm upset, I am able to control my behaviors.					
11	When I'm upset, I believe that I will end up feeling very depressed.					
12	When I'm upset, I start to feel very bad about myself.					
13	When I'm upset, it takes me a long time to feel better.					
14	When I'm upset, my emotions feel overwhelming.					
15	I have no idea how I am feeling					
16	I know exactly how I am feeling.					
17	I am confused about how I feel.					
18	I become embarrassed for feeling upset.					

		1 Almost Never	2 Sometimes	3 About half the time	4 Most of the time	5 Almost always
19	When I'm upset, I feel like I am weak.					
20	I become irritated with myself for feeling upset					
21	I become out of control for being bad.					
22	I have difficulty controlling my behaviors when I make a mistake.					
23	When I'm upset, I believe that I will remain that way for a long time.					
24	When I'm upset, I feel out of control.					
25	When I'm sad, I believe that there is nothing I can do to make myself feel better.					
26	When I'm upset, I believe that wallowing in it is all I can do.					



Appendix F Mindfulness-Based Interventions

## Teaching Model for Improving Emotional Regulation

### Part I: Introduction to the Teaching Model and Emotional Regulation

#### Learning

#### Concept

This teaching model introduces emotional regulation to middle school students through interactive and experiential learning methods, aiming to cultivate core emotional competencies within a supportive and engaging environment. From the outset, the course emphasizes the creation of a positive classroom atmosphere to promote strong teacher–student and peer relationships, thereby laying the foundation for meaningful emotional learning. Instructional strategies include multimedia presentations, video clips, group discussions, and role-playing activities, which not only enhance engagement but also guide students in reflecting on their emotional experiences and recognizing the practical relevance of emotional regulation in daily life. The model focuses on four key dimensions: emotional awareness and understanding, acceptance of emotions, the ability to engage in goal-directed behavior and inhibit impulsive responses during negative emotional states, and access to effective regulation strategies. Students are encouraged to participate actively, document reflections in personal learning journals, and take ownership of their emotional development. By integrating emotional regulation into the educational process, the model supports students' holistic growth and equips them with essential life skills for academic success and personal well-being.

#### Objective

1. Introduce the overall work of the mindfulness-based interventions and course plan.
2. Establish good teacher-student relationships and student-student relationships to lay the foundation for subsequent courses.
3. Introduce the concepts and importance of emotional regulation and the mindfulness-based interventions.

**Time: 90 minutes**

**Learning Materials**

1. Power Point
2. Video of Emotional Regulation theory and concept
3. Group discussion question sheet
4. Individual learning diary

**Step/ Learning Process**

**3. Lead-in:**

1.1 The researcher and 20 students form a circle. The researcher first introduces herself and says her name, then the students next to her repeat the names of all the others in turn and add their own names. This helps everyone to remember each other's names and promotes communication and interaction.

1.2 The researchers divided the students into pairs and asked them to share an experience that made them feel proud and explain why. We work together to create a positive and supportive atmosphere that promotes discussion of social-emotional learning.

**2. Learning Activities Process:**

2.1 The researcher will use a PowerPoint presentation to introduce the learning model and the 14 lesson plans. The researcher will then utilise interactive elements such as polling questions in order to get a sense of the students' prior knowledge and engage them in a discussion about their expectations of the course.

"Did you learn about our learning topics and content through the presentation?"

"What part of this are you most looking forward to?"

"What do you know about the concept of emotional regulation?"

The researcher will encourage students to discuss their responses with their peers and share any prior experiences or knowledge related to emotional regulation.

**2.2 The researcher will show a video clip introducing the theory of social-emotional learning, the component parts, the importance of SEL and practical applications. Pause the video at key points and ask reflective questions such as.**

"How would you define self-awareness?"

"Can you point to a challenging situation where self-awareness helped you?"

The researcher will encourage students to discuss their answers in pairs before sharing them with the class.

**2.3 The researchers divided the students into four groups of five. Then provide each group with a list of questions related to SEL core components, success factors, importance, and areas for improvement.**

-Sample Discussion Questions.

"How does self-management contribute to personal and academic success?"

"Can you think of a situation in which awareness contributed to group dynamics?"

"What strategies can you adopt to improve your interpersonal skills?"

The researchers assign roles in each group (facilitator, recorder, timekeeper) to ensure active participation and collaboration.

**2.4 The researchers put the students through a scenario in which two classmates were in the school library arguing about borrowing the same popular book.**

Student A wants to borrow the book because he has been waiting for a long time and is very eager to read it. Student B is also interested in the book and thinks he has a right to borrow it. The goal of the scenario is to give students the ability to experience the five components of emotional regulation.

Following the role play, the researcher can lead the following discussions and reflections:

You are student A/B, if a person with strong self-awareness, what kind of awareness would be in this situation?

Did the students demonstrate active listening and empathy during the role play? Do these skills contribute to conflict resolution?

What emotional information can you read from student A/B's language and expressions?

Can students suggest alternative conflict resolution strategies? Are these strategies more effective or appropriate for the situation?

The researchers then led the students to discuss their observations in pairs and share them with the class.

### **Conclusion**

3.1 The researchers will have students sit in a circle to lead a structured reflection session. Then, ask specific, open-ended questions about the valuable insights gained, the enjoyable parts of the activity, and areas that need improvement.

"What valuable insights did you gain from emotional learning today?"

"What did you enjoy the most about today's event?"

"What do you think you need to improve in terms of emotional learning?"

3.2 The researchers will invite each student to write a commitment in their individual learning diary to improve one aspect of their mindfulness-based interventions throughout the course. They will be encouraged to share their commitment with the class to increase a sense of responsibility and support.

### Evaluation

Observe the degree to which students participate in learning activities, including ice-breaking activities, group discussions and sharing sessions.

Record students' ability to interact and collaborate, including with teachers and classmates, and how often they ask questions and share ideas in group discussions.

At the end of the course, collect students' personal reflection logs and give feedback on their learning engagement based on their records.

Assess the feasibility and measurability of the student's commitment, and their attitude towards participation in the course, based on their commitment.

Observe whether students have fulfilled their commitments at the end of the course and document their progress and challenges in this regard.

### Section 2 Awareness and understanding of emotions(1)

#### Concept:

Self-awareness serves as a foundational construct in personal development, encompassing the ability to recognize and understand one's emotions, thoughts, values, strengths, and limitations. As a core competency, self-awareness enables individuals to make intentional decisions, regulate emotions, and establish meaningful interpersonal relationships. In the context of this instructional module, the objective is to enhance university students' self-awareness by facilitating structured opportunities for introspection and self-reflection. The module incorporates a range of experiential learning activities—including peer interviews, reflective journaling, emotional mapping, and diagnostic tools such as SWOT analysis and thinking habits assessments. These strategies are designed to guide students through a process of self-discovery, ultimately strengthening their capacity for self-regulation and goal-directed behavior, and supporting their academic and personal development.

### Objective

- 1.To understand the concept and importance of self-awareness.
- 2.To help middle school students understand their personal characteristics, strengths and values.
- 3.To develop students' ability of self-awareness.

**Time: 90 minutes**

### Learning Materials

- 1.Thinking Habits Assessment Sheet
- 2.Self-Awareness Concept Introduction Video
- 3.Emotion Map and Color Pens
- 4.Self-Awareness Reflection Card
- 5.SWOT Analysis Sheet

### Step/ Learning Process

#### 1. Lead-in:

1.1 The researcher divided the students into groups of two by two and each student had 2-3 minutes to interact with a partner in an interview. Student A could ask questions through the interview to find out from Student B what kind of person they are. Students were interviewed to find out about themselves as seen by others and could ask questions about various aspects of their personality, abilities and interests.

1.2 The researchers will give small cards to each student. Each student chooses a question to think about and answer according to the questions in the self-cognition reflection card.

"What emotions have I been experiencing lately?"

"How do I feel in my relationships?"

"What challenges or difficulties have I faced recently?"

"How do I feel about my physical and emotional state?"

"Have you discovered anything new about yourself lately?"

"What are your hopes and concerns for the future?"

Through these questions, students can gain a deeper understanding of their emotional states, thoughts and behavior patterns, thereby increasing their level of self-awareness. Students take turns sharing the results of their reflections within the class, and other students can ask questions or provide feedback. During the discussion, the researchers will guide the students to notice the similarities and differences between each other and encourage them to learn from each other.

## **2. Learning Activities Process:**

2.1 The researcher will present a short video introducing the concept and importance of self-awareness. Give students a quick understanding of self-awareness. After watching the videos, the researchers will ask questions that lead students to think and discuss, "How do you think self-awareness has affected your life?"

2.2 The researchers divided the students into groups of four to five. Each group was given an emotion map on which they could label different emotions, such as happiness, anxiety, anger, and so on, and use different colors to distinguish them. After the drawing is completed, students discuss and explain their reasons for choosing a particular emotion, sharing their recent emotional experience. Students will be encouraged to listen to and understand each other, promoting communication and empathy between them.

2.3 Researcher will use the thinking Habits assessment form (Annex I) to let students evaluate their own thinking patterns, so that students can better understand their thinking habits. Upon completion, the students were instructed to share their thinking characteristics in small groups of 4-6, discuss each other's thinking tendencies,

and think about how to improve negative thinking habits. Students can share personal experiences and strategies, as well as how they think they can cultivate positive thinking patterns.

2.4 The researcher will ask the students to think independently as the students complete a personal SWOT analysis sheet (Appendix II) to analyse their strengths, weaknesses, opportunities and threats. Once completed, the researcher will divide the students into groups of 4 and will be asked to share the results of their SWOT analysis within the group. Students shared the results of their analyses and discussed how they could use their personal strengths and opportunities to overcome weaknesses and threats and achieve their personal goals and growth.

### **3. Conclusion:**

3.1 The researchers will invite students to share the gains and growth of this class in 4-6 groups, which can be the improvement of self-cognition, the creation experience of emotional maps, and the understanding of thinking habits.

3.2 Students conduct personal reflection, summarize their own learning experience and next learning plan, which can be written on the independent learning diary as a personal feedback at the end of the course.

### **Evaluation**

Observe students' participation and enthusiasm in the class. Evaluate based on overall performance.

At the end of the class, assess students' learning by having them share their experiences and takeaways from the learning activities. By listening to students' sharing, teachers can gauge whether students' self-awareness has improved.

At the end of all classes, students' independent learning diaries are collected. Assess student engagement, attitude, growth and progress based on feedback.

### Section 3 Awareness and understanding of emotions(2)

#### Concept

Self-acceptance plays a vital role in the development of emotional regulation, as it enables students to recognize, understand, and manage their emotional experiences with greater clarity and control. By engaging in structured activities such as reflective journaling, emotional awareness tasks, and role-playing exercises, students are encouraged to identify emotional triggers, articulate their responses, and approach their inner experiences with openness and non-judgment. This process cultivates mindfulness and introspection—key elements in fostering a deeper sense of self-acceptance. As students engage in these reflective practices and exchange emotional regulation strategies with peers, they not only strengthen their emotional intelligence but also contribute to the formation of a supportive, empathetic classroom climate. Ultimately, the cultivation of self-acceptance serves as a foundational element in emotional development, equipping learners with essential competencies for both personal well-being and effective social interaction.

#### Objective

1.To cultivate students' ability to accurately identify and differentiate their emotional experiences, enabling them to recognize the complexity and variability of emotions in different contexts.

2.To enhance students' understanding of the causes and impacts of emotions, helping them develop emotional insight and strengthen their capacity for adaptive emotional responses in both academic and social situations.

**Time: 90 minutes**

#### Learning Materials

1.Individual learning dairy

2.Soft Music

### **Step/ Learning Process**

#### **Lead-in:**

1.1 The researcher will guide the students to review the events of the day and ask open-ended questions, "Did anything happy, anxious, or frustrating happen today and how did you deal with those emotions?" . Students will share their emotional experiences of the day in a free talk format. The researcher will facilitate students to think about their own emotional states and relate them to what they have learnt in previous lessons through questioning and guidance.

#### **Learning Activities Process:**

The researcher will explain the purpose of the emotion journal, which is to help students record and understand their emotional experiences. The students then learned to record their emotions, the events that triggered those emotions, and their responses. As students record their emotions, researchers will provide guidance and cues to help them analyze the causes and triggers behind their emotions. After the students complete the record, they have 4-6 group discussions to share each other's observations and reflections. They can share their emotional experiences with each other and their understanding of their own and others' emotional responses.

Before starting the exercise, the researcher will briefly introduce the importance of emotional awareness exercises. This exercise teaches students to observe and accept their emotions instead of trying to suppress them. Researchers need to ensure that the classroom is quiet, comfortable, and free from distractions. The lights may be dimmed or soft music played. Then, guide the student to sit in a comfortable position, close their eyes, pay attention to their breathing, and return their attention to their body, becoming aware of any sensations such as physical tension or relaxation, mood swings, etc. The researcher will remind students that meditation is not a process of eliminating thoughts and emotions, but a process of observing and accepting them.

2.3 Researcher will choose common scenarios, such as facing criticism. Students will then be assigned roles in these scenarios, such as challenger, critic, empathizer, and provided with some background information and a description of the relevant emotions. After making sure the students understood their task and the character's expected behavior, the researchers divided the students into groups of four, and each group role-played in a scenario. Students should act authentically in their roles, interacting based on events and dialogue in the scene. Then, at the end of the activity, the researchers would ask questions like:

How did each character perform?

What emotions are involved?

How do they control their emotions?

How do they express their values?

Students can share their observations and experiences and learn from each other's perspectives. Finally, the researcher will summarize the main lessons of the activity and encourage students to reflect on their own performance. Discuss successful strategies for managing emotions and self-expression in situations and how to apply these techniques in everyday life.

### **3. Conclusion:**

3.1 Students are asked to develop a personal emotional management action plan, including specific steps and strategies they intend to take, as well as guidelines on how to react in different emotional states. Students can share these plans with fellow students and give each other advice and feedback.

3.2 Students will be invited to share the emotional management strategies they have learned in this course and to explore which strategies have had the greatest impact on them. This session helps students summarize the course content and motivates them to apply the skills they have learned to real life situations.

## Evaluation

Assessing students' level of active participation and interaction during classroom activities. This includes observing their performance in role-play, group discussions, and sharing sessions, as well as their ability to actively listen and respond to classmates' viewpoints.

Encouraging students to reflect on their performance in the course, including whether their strategies for managing emotions have been effective, and whether they have been able to apply the skills learned in class to real-life situations. This can be achieved through personal reflection in notebooks, individual discussions, or group sharing.

## Section 4 Awareness and understanding of emotions(3)

### Concept

Emotional balance constitutes a critical dimension of emotional regulation, particularly for secondary school students navigating academic demands, social dynamics, and personal development. It involves the ability to maintain psychological stability and appropriately manage emotional responses in the face of internal and external stressors. By recognizing emotional patterns and applying evidence-based regulation strategies, students can develop the capacity to remain composed during challenging situations. With instructional support from teachers and emotional reinforcement from peers, learners are guided to identify their emotional triggers, understand underlying causes, and apply techniques such as mindful breathing and positive self-talk to modulate both positive and negative affect. Cultivating emotional balance not only strengthens students' psychological resilience and adaptability but also enhances cognitive functions such as focus and decision-making, thereby supporting both academic success and the development of healthy interpersonal relationships.

**Objective**

- 1.To develop students' ability to set clear goals.
- 2.To develop students' ability to respond effectively to challenges and manage their emotions.

**Time: 90 minutes**

**Learning Materials**

- 1.Power Point
- 2.Video
- 3.Planning sheets
- 4.Soft music
- 5.Blank paper

**Step/ Learning Process****Lead-in:**

1.1 The researchers will use PowerPoint to present a specific scenario: the anxiety, stress and nervousness of middle school students before the exam. Students are then encouraged to share and explore strategies and the importance of emotional balance in the face of stress and challenges.

**Learning Activities Process**

2.1 The researcher will introduce the concept and importance of emotional balance in emotional regulation through a short video. Then the question will be asked, "How does self-management help you when facing final exams and social pressure?" The researcher will arrange the students into groups of five and share their views and experiences through group discussions and how they apply emotional balance to their studies and life.

2.2 The researcher will distribute the planner, and students are asked to set a specific goal, such as an academic goal, a social goal, improving their grades in a certain subject, or strengthening their relationship with roommates. The researcher then guides each student to develop a specific plan and strategy, which should include clear steps, timelines, and resource utilization. Through this process, students learn how to make plans for themselves and take the time to execute them.

2.3 Researcher introduce students to a common emotion-management technique: deep breathing to relax. The researchers then guided the students to sit comfortably and encouraged them to close their eyes to reduce external distractions and focus on their minds. They breathe in deeply, allowing the abdomen to expand, and then exhale slowly and thoroughly. The focus is on breathing in slowly through the nose and exhaling slowly through the mouth. Students count to four when they breathe in and six when they breathe out. Students are encouraged to pay attention to the sensations of their breathing as they breathe deeply. This deep breathing relaxation exercise helps reduce tension, relieve anxiety, and promote physical and mental relaxation. Once students have mastered this technique, they can use it any time they are faced with stress or mood swings.

### **Conclusion**

3.1 The researcher will remind students of the importance of emotion balance through a short summary that highlights the key points and skills covered in today's lesson.

3.2 Students will be invited to summarize their understanding and gains from today's lesson in a one-minute paper. The researcher will quickly hand out blank sheets of paper, and students will quickly jot down their thoughts, reflections, or questions about today's lesson. Finally, the researcher will take the paper back for feedback at the next class.

## Evaluation

Assess students' understanding of emotion balance concepts and their ability to apply these concepts to solve real-life problems through classroom discussions, group sharing, and individual plan development.

Evaluate whether students' set goals are clear, feasible, and include clear steps, timelines, and resource utilization plans.

Collect feedback from students through one-minute papers to understand their understanding and gains from the lesson, and to identify any unresolved questions or concerns. Track students' actual behaviors and attitudes in the next class or future sessions to assess the long-term impact of the course on their emotion balance abilities.

## Section 5 Acceptance of emotions(1)

### Concept

The core concept of this lesson lies in enhancing students' emotional balance through the framework of emotional regulation. This ability is crucial as it helps students maintain inner calm and stability when faced with academic pressure, social challenges, and personal emotional fluctuations—factors that significantly impact both their academic performance and mental health. By analyzing how successful individuals cope with emotional ups and downs and participating in group discussions to share strategies for managing emotional challenges, students not only learn practical emotional regulation techniques but also develop the capacity to remain calm and positive under pressure. Encouraging students to reflect on their emotional experiences and set personal goals for emotional management guides them to apply these skills in their daily lives. Thus, it fosters enhanced self-regulation, resilience, and adaptability, ultimately equipping students with the skills to manage emotional fluctuations effectively and support their holistic psychological well-being and growth.

### Objective

1.To help students develop a non-judgmental attitude towards their emotional experiences, allowing them to accept both positive and negative emotions as natural and valuable parts of their emotional landscape.

2.To cultivate students' ability to embrace their emotions without suppression or avoidance, fostering emotional resilience and a healthier approach to emotional regulation in challenging situations.

**Time: 90 minutes**

### Learning Materials

- 1.Power Point
- 2.Emotion Expression Prompts
- 3.Role-Play & Scenario-Based Discussions
- 4.Emotion Journals

### Step/ Learning Process

**Lead-in:**

#### **2.1 Researchers Provide Successful Case Examples**

The researchers present real-life cases of secondary school students who effectively regulated their emotions when faced with emotional distress. For example, one student, dealing with emotional stress from failing an exam and family conflicts, gradually regained emotional stability through journaling, exercising, and seeking support from teachers or friends. The students analyze these cases, exploring the emotional management strategies used, such as emotion identification, self-soothing, and positive thinking training. They then engage in group discussions to share similar emotional challenges they may encounter in their own lives and the possible coping strategies they could adopt.

## 2.2 Group Discussion and Practical Activities

The researchers divide the students into groups of five, with each group selecting a real-life emotional challenge scenario to explore, such as interpersonal conflicts, exam anxiety, family pressure, or self-identity confusion. Group members collectively analyze the causes of the issue and develop a practical emotional regulation plan, which includes emotion expression techniques, meditation relaxation methods, and strategies for seeking psychological support.

During the discussion, students are encouraged to collaborate, listen, express, and support each other, working together to design an “Emotional Balance Action Plan.” They then present their findings in class, fostering experience-sharing and the development of empathy skills.

### **Conclusion:**

3.1 Students will be asked to reflect independently on their own learning or life experiences and set a specific emotional balance goal. For example, practicing 3 minutes of mindful breathing during emotional fluctuations or taking 10 seconds of deep breaths before responding in a conflict. These goals should be specific and actionable, aiming to help students master practical strategies for maintaining emotional balance under pressure or during conflicts.

3.2 The researchers will guide the students in a class-wide discussion to summarize the core strategies for emotional balance discussed during the day, including emotion identification, regulation techniques, and appropriate methods for emotional expression. They will explore how these strategies can be practically applied in learning, family, or social interactions. During the discussion, students will be encouraged to share the emotional challenges they encounter in daily life and collectively explore how to respond to them with a balanced mindset.

## Evaluation

**Group Discussion Participation:** Observe and evaluate students' frequency of contributions, depth of reflection, and their ability to listen and respond to others during the emotional balance group activities.

**Case Analysis Understanding:** Assess whether students are able to identify the triggers of emotional fluctuations and propose scientifically sound balance strategies when analyzing typical emotional imbalance scenarios (e.g., an athlete losing control due to stress during a competition).

**Strategy Design and Practical Application Ability:** Evaluate whether the emotional imbalance action plans proposed by students are logical, realistic, and actionable, as well as their understanding of the specific application of mindfulness techniques or regulation methods.

## Section 6 Acceptance of emotions(2)

### Concept

This instructional session focuses on cultivating emotional regulation and the capacity for acceptance through experiential and reflective learning. Students engage with short films, visual materials, and real-life scenarios to deepen their understanding of others' emotional states and diverse perspectives. Through structured activities such as role-playing, case analyses, and empathy-building exercises, learners are encouraged to experience and interpret emotional responses in varied situational contexts. The culminating activity, an empathy circle, facilitates peer-to-peer sharing and active listening, reinforcing the significance of empathy and mutual understanding in emotional regulation. These pedagogical strategies aim to strengthen students' emotional intelligence, enhance their interpersonal sensitivity, and foster respect for diverse emotional expressions, thereby establishing a solid foundation for effective social functioning and adaptive life skills.

### Objective

- 1.To understand the meaning and significance of accepting one's own emotions.
- 2.To recognize that all emotions are valid and serve adaptive functions.
- 3.To foster openness and tolerance toward diverse emotional experiences in oneself and others.

**Time: 90 minutes**

### Learning Materials

1. Short Video or Image
2. Case Study
3. Documentary

### Step/ Learning Process

#### Lead-in:

Participation 1.1 Researchers will present a series of images depicting interactions and expressions in various social contexts. Ensure that the selected materials are emotionally resonant and reflective. After playing the video or displaying the images, students are asked the following questions:

- What are these people thinking?

- How do they feel?

- If you were one of them, how would you feel? nt: 5 education and psychology experts, 3 IOC experts, 100 middle school students from Guizhou Province with similar backgrounds Research tools: Semi-structured interview questionnaire Middle school students' emotional regulation questionnaire IOC expert scoring form

### **Learning activities process.**

2.1 The researcher divided the students into groups of 3-4, with one student as the initiator and the other as the responder. Present different scenarios, such as one person being ignored in public and another person starting a conversation with someone else. Students alternate between these two roles, experiencing the feelings and emotions associated with different roles and situations.

2.2 Students are divided into groups of five and each group is assigned a case study.

**Case study:** Communication problems in teamwork

**Situation Description:** During a team project, five members are facing serious communication problems. One member is always dictatorial and unwilling to listen to the opinions of other members, resulting in inefficient team cooperation. Other members feel frustrated and helpless, and do not know how to effectively communicate with this member to improve the team atmosphere.

They read cases and discuss how different individuals feel and behave, as well as possible solutions. Students are encouraged to come up with novel and diverse perspectives and guided to effective discussion and collaborative techniques.

2.3 Students will be shown a true documentary or read a true story describing an individual or group life experience. Students are asked to think, imagine, and describe the possible emotions and challenges of these people from their own perspective. Students may choose to express their thoughts and feelings through writing, drawing, or group discussion.

### **3. Conclusion**

3.1 At the end of the course, the researcher will organize an empathy circle activity. Students sit together and share their experiences and feelings during the learning process. Students are encouraged to listen to and respect each other's views and to ask questions or offer support. Emphasize the importance of empathy in fostering

social awareness and relationships through understanding the emotions and perspectives of others.

### **Evaluation**

Observe students' responses to others' shared experiences and feelings, assessing their understanding and support towards others. Encourage students to ask constructive questions or provide positive feedback, evaluating their social skills and emotional intelligence in this context.

Observe and assess students' performance in role-play activities, including their expression of feelings and emotions in different scenarios, as well as their understanding and response to others' behaviors. Assessment criteria may include the accuracy and appropriateness of facial expressions, language, and non-verbal communication.

Require students to create a mind map or concept map about social awareness, emotional recognition, and empathy, demonstrating their understanding of the relationships between these concepts. Evaluate the completeness, clarity, and accuracy of the diagrams.

### **Section 7 Acceptance of emotions(3)**

#### **Concept**

Introducing mindfulness-based interventions into the learning model, combined with emotional awareness, is crucial for fostering students' self-awareness and emotional regulation skills. By guiding students to engage in activities such as breath meditation, body scanning, emotional journaling, and mindful observation, the goal is to help them become aware of their current emotional state, understand the underlying mechanisms of emotional fluctuations, and approach their emotional experiences with a non-judgmental attitude. Through these exercises, students not only enhance their sensitivity to internal emotional responses but also learn to remain calm and focused in stressful or conflicting situations. Encouraging students to reflect on their mindfulness practice and feelings helps deepen their understanding of their emotions and strengthens their

awareness of emotional self-regulation. This, in turn, provides strong support for cultivating a more stable and healthy psychological state in their academic, interpersonal, and daily lives.

### **Objective**

1. Enhancing students' awareness of their emotions.
2. Body scan meditation exercises
3. Observing emotional awareness: perceiving the physical reactions of emotions.

**Time:** 90 minutes

### **Learning Materials**

1. Power point
2. Yoga mat
3. soft music

### **Step/ Learning Process**

#### **Lead-in :**

1.1 Students are asked to bring an item that represents a recent emotional experience—such as a photograph, a piece of song lyrics, a drawing, or a small object—and present it in groups of 6 to 8 using PowerPoint. Each student is expected to share the connection between the item and their emotional state, describing the context in which the emotion arose, the physical sensations associated with it, and how the emotion evolved over time. Group members are encouraged to engage in open-ended discussions, exploring the similarities and differences in each other's emotional experiences. They will also reflect together on how to more consciously identify and accept their emotions using mindfulness strategies, such as breath awareness, emotion labeling, and non-judgmental listening. This activity aims to enhance students' ability to

understand and express their emotional states, while fostering mindfulness awareness and a sense of empathy.

### **Learning Activities Process**

2.1 The researchers will use PowerPoint to introduce the core concepts of mindfulness-based interventions and emotional awareness, emphasizing the importance of emotional awareness in self-management and interpersonal relationships. By demonstrating how mindfulness techniques (such as deep breathing, body scanning, and emotion labeling) can be applied in daily life, the researchers will help students understand how mindfulness helps them recognize emotional fluctuations, maintain emotional balance, and effectively cope with stress and challenges. The researchers will highlight how mindfulness awareness enhances students' emotional regulation abilities, particularly when facing academic pressure, interpersonal conflicts, or other emotional disturbances, enabling them to remain calm and focused.

2.2 The researchers will divide students into an inner circle and an outer circle, with each inner circle student facing an outer circle student. The researchers will pose questions related to emotional awareness, such as, "When you experience emotional fluctuations, how do you use mindfulness techniques to regain calm?" In this discussion, inner circle students will first discuss how they use mindfulness awareness to cope with emotional fluctuations, while outer circle students observe the emotional responses and communication styles of the inner circle students. Students will be encouraged to focus on their emotional experiences during the discussion and apply mindfulness techniques, such as paying attention to their breath, body sensations, and non-judgmental observation of emotions, to help them more clearly identify and express their emotions. After the discussion, students will swap roles and start a new round of discussions. Through this interaction, students will improve their self-awareness and emotional regulation skills with the help of emotional awareness and mindfulness techniques. Finally, the researchers will summarize the discussion and emphasize the application and value of emotional awareness and mindfulness in responding to life challenges.

2.3 The researchers will divide the students into groups of four to five and assign each group a scenario involving emotional conflict or misunderstanding. The scenario will be: "In a cross-cultural team, misunderstandings and conflicts arise due to differences in communication styles." Each group member will play a different role in the scenario, simulating emotional responses and applying mindfulness techniques to regulate emotions and resolve conflicts. During the role-play, students will use mindfulness practices (such as breathing exercises and awareness of emotional physiological responses) to manage their emotional states, enhancing the clarity and effectiveness of their emotional expression. While resolving the conflict in the scenario, students will encourage themselves and others to maintain emotional awareness, avoid emotional reactions, and attempt to find a mutual solution through calm communication and collaboration. After the role-play, the researchers will lead a discussion with the students to review the application of mindfulness techniques in the scenario and summarize the key points of emotional awareness and conflict resolution. Students will share their emotional experiences during the role-play and discuss how they used mindfulness techniques to enhance their emotional regulation skills, enabling them to better handle similar situations in real life.

#### **Conclusion:**

3.1 The researcher gathered the students in a circle and asked reflective questions, such as "What surprised you most about today's discussion?" "How are you going to apply what you've learned to your daily life?" Students took turns sharing their ideas and experiences and answering questions raised. Researchers summarize students' reflections and sharing, emphasizing the importance of learning about multiculturalism and respecting different perspectives.

#### **Evaluation**

1. Observe and evaluate students' performance in role-play scenarios. Assessment criteria may include their ability to cooperate, problem-solving skills,

understanding of different cultural backgrounds, and their effectiveness in conveying and respecting diverse viewpoints.

2. Evaluate students' performance in group discussions, including their level of participation, frequency of speaking, degree of respect for others' viewpoints, and their ability to engage in constructive discussions and resolutions regarding cultural differences.

3. Require students to complete a reflection assignment, reviewing the knowledge and experiences they have gained in class. They can write about their perspectives on multiculturalism and diverse viewpoints, as well as their plans for applying this knowledge to daily life.

**Section 8 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(1)**

#### **Concept**

The concept of this lesson revolves around fostering social awareness among students, a crucial component of emotional regulation. By engaging in activities such as brainstorming, case studies, role-playing scenarios, and reflective journaling, students are guided to recognize and understand the various social influences present in their lives. Through analyzing case studies and embodying different perspectives in role-play scenarios, students develop empathy, critical thinking skills, and a deeper understanding of how individual actions impact the broader social environment. The interactive reflection journal encourages students to introspectively explore their own experiences with social influences, fostering self-awareness and personal growth. The emphasis on group discussions, peer feedback, and action planning empowers students to actively contribute to creating a supportive and inclusive social community. Overall, this concept aims to equip students with the skills and mindset necessary to navigate complex social dynamics, make informed decisions, and positively influence their social environments.

**Objective**

1. Further understand the concept of mindfulness-based interventions and its importance.
2. Reflect on past behaviours and coping mechanisms, and find more effective emotional management strategies.
3. Cultivate self-awareness and self-reflection skills to better understand your own behaviours and emotional responses.

**Time: 90 minutes**

**Learning Materials**

1. Case study information sheet
2. Individual learning diary

**Step/ Learning Process****Lead-in:**

1.1 Students will be asked to list examples of social influences they have experienced or observed in their lives. They are also encouraged to think about positive and negative influences, such as peer pressure, cultural norms, media images, etc. This activity will activate prior knowledge and lay the foundation for discussing the meaning of social impact.

**Learning Activities Process:**

2.1 **Case Study:** Divide students into groups of five and provide them with case studies describing various social situations. Each group will analyze the case studies, identify influential social factors, and discuss the potential consequences of different actions individuals might take in these scenarios. Afterwards, each group will present their findings to the whole class, fostering discussion and critical thinking about the impact of individual behavior on the social environment.

**2.2 Role-play Scenario:** Engage students in role-playing activities where they act out different social situations, focusing on how their actions impact others and broader social dynamics. Students role-play scenarios, allowing them to embody different perspectives and deepen their understanding of social awareness.

**2.3 Interactive Reflection Journal:** Teachers offer guiding prompts for students to individually reflect on their social awareness. They can write about moments when they became aware of social influences, how they responded, and the outcomes of their actions. Encourage self-reflection on the importance of social awareness and its role in fostering a positive social environment.

**Conclusion:**

**3.1 Gallery Walk:** Teacher create a gallery walk activity where students display their reflections from the journaling exercise. As they walk around the room, they can read each other's reflections and leave comments or questions on sticky notes. This allows for peer feedback and further discussion on the importance of social awareness in creating a supportive community.

**3.2 Group Discussion and Action Plan:** Facilitate a whole-class discussion where students share insights gained from the case studies, role-playing, and reflection activities. Encourage them to identify actionable steps they can take to enhance their social awareness and positively impact their social environments. Guide them in developing an action plan outlining specific strategies they can implement in their daily lives.

**3.3 Closing Reflection:** End the class with a final reflection where students revisit the initial objectives of the lesson. Ask them to consider how their understanding of social influence has evolved and how they plan to apply their learning moving forward. Emphasize the importance of ongoing self-awareness and proactive engagement in fostering a socially aware community.

## Evaluation

Reflection Evaluation: Assess students' understanding and application of social impact by observing their final reflections at the end of the course. Focus on their understanding of course objectives and their plans and willingness to apply the knowledge learned in the future.

Role-play Assessment: Evaluate students' social awareness by observing their performance in role-play activities. Focus on whether they can appropriately portray behaviors and thinking patterns of different roles, as well as their understanding of social interactions.

**Section 9 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(2)**

### Concept

Understanding the relational skills for expressing both positive and negative emotions within the framework of emotional regulation is crucial for enhancing students' communication abilities and emotional intelligence. By learning how to appropriately express emotions such as joy, anger, disappointment, or gratitude in different contexts, students can more effectively convey their inner states while fostering mutual understanding and trust in their relationships. Healthy emotional expression emphasizes honesty, respect, and moderation, helping students maintain their stance during conflicts or misunderstandings without hurting others' feelings.

Through interactive methods such as role-playing, group discussions, and situational analysis, students will practice identifying their emotions, understanding the underlying causes, and learning to express themselves non-violently using "I" statements. Additionally, students will learn how to listen to others' emotional expressions, develop empathy, and respond appropriately. The course particularly focuses on how to use regulation techniques like deep breathing and pausing to think in emotionally intense situations or conflicts, helping students avoid impulsive reactions and promoting constructive communication.

Internalizing and applying these skills in daily life will help students establish open, honest, and respectful communication with peers, family members, and broader social circles. This not only helps prevent misunderstandings and the escalation of conflicts, but also lays a solid foundation for creating more inclusive and emotionally supportive social environments, further enhancing their social adaptability and overall psychological well-being.

### **Objective**

- 1.To understanding Healthy Relationships
- 2.To cultivate students' good interpersonal skills.
- 3.To improve students' teamwork ability.

**Time: 90 minutes**

### **Learning Materials**

- 1.Presentation
- 2.Video
- 3.Role-playing
- 4.Teamwork
- 5.Journal
- 6.Summary

### **Step/ Learning Process**

#### **Lead-in:**

Icebreaker Relationship Skills Game: Encourage students to reflect on their interpersonal skills. Provide each student with a social scenario, such as "Facing disagreements in a team project" and "Meeting strangers at a social gathering." Pair students up and ask them to discuss how they would use effective relationship skills to

handle these situations. Students can imagine how they would behave, communicate with others, and resolve potential conflicts in these scenarios. This activity will engage students and pave the way for subsequent course content.

**Learning Activities Process:**

2.1 Group Role-Play Scenarios: Divide the whole class into four groups and assign each group a different role-play scenario depicting various interpersonal interactions. Allow time for each group to discuss and plan their scenes, then have them perform in front of the whole class. After each performance, organize a debrief session for students to reflect on the interpersonal skills demonstrated and discuss alternative approaches.

A.Scene One: Conflict Resolution

Student A and Student B have a disagreement over their roles in a group project. Students will act out the roles and demonstrate an effective conflict resolution method.

B.Scene Two: Active Listening

Student C is expressing their concerns to Student D. Student D will demonstrate active listening skills including eye contact, body language, and providing feedback.

C.Scene Three: Showing Empathy

Student E shares a personal challenge with Student F. Student F will demonstrate understanding, sympathy, and offer support and encouragement.

D.Scene Four: Setting Boundaries

Student G faces online harassment and seeks support from Student H. Student H will demonstrate how to maintain personal boundaries and support others.

2.2 Interactive Presentation on Healthy Relationships: The teacher will play a video describing characteristics of healthy relationships, such as respect, trust,

communication, and support. Students can watch and share their views and observations during discussions. The teacher will provide an infographic illustrating key components of healthy relationships in a visual format. Students will interpret and discuss the content of the infographic together to deepen their understanding of healthy relationships.

**2.3 Pairing and Sharing Reflection:** Pair students and provide them with prompts related to the concept of healthy interpersonal relationships. Reflection Question 1: What do you think are the characteristics of a healthy relationship? Share your thoughts with your partner and discuss the agreements and differences between you. Reflection Question 2: What good examples of interpersonal relationships have you encountered in real life? Share your experiences with your partner and consider what you can learn from them. Reflection Question 3: How do you maintain healthy interpersonal relationships in your daily life? Share your strategies and experiences with your partner, and listen to their advice and feedback. The teacher encourages students to share their thoughts and insights with their partners, promoting peer learning and meaningful dialogue. Afterwards, invite several pairs of students to share their reflections with the whole class to foster a collaborative learning atmosphere.

**Conclusion:**

**3.1 Interactive Mind Mapping:** Provide students with large sheets of paper or digital tools to create a collaborative mind map summarizing key concepts and strategies for cultivating good relationship skills and fostering healthy relationships. Encourage them to use visuals, keywords, and examples discussed throughout the lesson to enhance understanding and retention.

**3.2 Role Reversal Activity:** Divide the class into pairs and assign each pair a role-play scenario related to a common interpersonal challenge. After they perform the scenario, ask them to switch roles and try again, encouraging them to apply the insights and skills discussed during the lesson. This activity promotes empathy, perspective-taking, and skill application in real-life situations.

**3.3 Reflective Journal:** Allocate time for students to individually reflect on their learning experiences during the class. Provide guiding prompts such as "What did you learn about relationship skills today?" or "How do you plan to apply these skills in your own life?" Encourage students to write down their thoughts and insights in their journals, fostering meta-cognition and self-awareness.

### Evaluation

1. Use questions to check if students understand the concept and importance of healthy relationships introduced in the lesson.

2. Observe students' performance in role-play and group discussions to see if they can effectively demonstrate skills like conflict resolution, active listening, expressing empathy, and setting personal boundaries.

3. Ask students to describe what they've learned and how they plan to apply relationship skills learned in everyday life in their reflective journals after class.

Section 10 The ability to engage in goal directed behavior and refrain from impulsive behavior, when experiencing negative emotions(3)

### Concept

Understanding the relational skills for expressing both positive and negative emotions within the framework of emotional regulation is crucial for enhancing students' communication abilities and emotional intelligence. By learning how to appropriately express emotions such as joy, anger, disappointment, or gratitude in different contexts, students can more effectively convey their inner states while fostering mutual understanding and trust in their relationships. Healthy emotional expression emphasizes honesty, respect, and moderation, helping students maintain their stance during conflicts or misunderstandings without hurting others' feelings.

Through interactive methods such as role-playing, group discussions, and situational analysis, students will practice identifying their emotions, understanding the underlying causes, and learning to express themselves non-violently using "I"

statements. Additionally, students will learn how to listen to others' emotional expressions, develop empathy, and respond appropriately. The course particularly focuses on how to use regulation techniques like deep breathing and pausing to think in emotionally intense situations or conflicts, helping students avoid impulsive reactions and promoting constructive communication.

Internalizing and applying these skills in daily life will help students establish open, honest, and respectful communication with peers, family members, and broader social circles. This not only helps prevent misunderstandings and the escalation of conflicts, but also lays a solid foundation for creating more inclusive and emotionally supportive social environments, further enhancing their social adaptability and overall psychological well-being.

#### **Objective**

1. Promote students' teamwork and communication skills.
2. Enhance students' ability to resolve interpersonal conflicts peacefully and improve their reflective skills.

**Time:** 90 minutes

#### **Learning Materials**

1. Props for the event (blindfold, rope)
2. Scenario cards
3. Discussion guides sheet
4. Reflective question lists

#### **Step/ Learning Process**

##### **Lead-in:**

1.1 Team Building Game: Start the class with a team-building game to energize students and foster cooperation. teacher could have students participate in a trust fall

exercise where they must work together to accomplish a task within a time limit. This will set the tone for the importance of teamwork and communication in building relationships.

#### **Learning Activities Process:**

2.1 Role-play scenarios: Students are divided into groups of five and provided with different interpersonal conflict scenarios related to college life: "Roommate disagreement". Each group role-plays and practices effective communication and problem-solving skills to resolve the conflict peacefully. Afterwards, a discussion is organised for students to reflect on their experiences and share the strategies they used.

2.2 Students work in teams of 10 to create a promotional video aimed at raising awareness about environmental protection. They choose an environmental theme, write a script, assign roles and film footage, and eventually present the results in class. This creative task promotes teamwork and communication skills, while deepening understanding of environmental issues and fostering creativity and expression.

2.3 Peer Feedback Session: Have students participate in a peer feedback session where they provide constructive feedback to their classmates on their teamwork and communication skills during the collaborative project. This will give students the opportunity to reflect on their own strengths and areas for improvement while also learning from their peers' experiences.

#### **Conclusion:**

3.1 Reflection and Goal Setting: Lead a guided reflection session where students reflect on what they've learned about teamwork and communication skills throughout the class. Ask them to identify specific strategies or techniques they found most helpful and how they plan to apply them in future interpersonal interactions. Encourage students to set personal goals for improving their relationship skills based on their reflections.

3.2 Closing Circle: Form a closing circle where students come together to share their reflections on the class and express gratitude for their classmates' contributions.

Encourage students to acknowledge each other's efforts and reaffirm their commitment to fostering positive relationships through teamwork and communication.

### **Evaluation**

Assess students' level of active participation in classroom activities, including discussion, role play, sharing of ideas, etc. It can be assessed by observing students' performance, listening to their answers, and observing their interactions with their partners.

Assess students' understanding of healthy relationships through class discussion, sharing and reflection. It is possible to observe whether students have a clear understanding of the definition of relationship skills, their importance, and the characteristics of healthy relationships.

Assess students' performance in collaborative activities, including their degree of cooperation with partners, communication skills, and ability to complete tasks together. Students can be observed in group discussions, shared reflections, and collaborative mind mapping.

Students' understanding and application of the course content are assessed through their personal reflective diaries. It can focus on students' understanding of relationship skills, how to apply them to real life and future learning plans.

### **Section 11 Access to emotion regulation strategies perceived as effective(1)**

#### **Concept**

This course aims to help middle school students gain a deeper understanding of the nature of positive and negative emotions and their impact on personal behavior and interpersonal relationships. By learning emotion recognition and emotion regulation skills, students will be able to better cope with emotional fluctuations in daily life, improve emotional intelligence, and demonstrate higher empathy and self-regulation abilities in social interactions.

### Objective

1. Identify and understand different types of emotions and their underlying physiological and psychological mechanisms;
2. Learn how to express and regulate emotions, especially negative emotions, in daily life;
3. Master the cultivation techniques of positive emotions and improve the healthy expression of emotions through reflection;
4. Improve self-regulation ability in emotional management and social interaction, reduce conflicts, and enhance interpersonal relationships.

**Time: 90 minutes**

### Learning Materials

1. Video
2. Whiteboard and colored pens
3. Sticky note
4. Situational information sheet
5. Individual learning dairy

### Step/ Learning Process

#### Lead-in:

1.1 Boundary Setting Ice Breaking activity: Have students participate in a boundary setting ice breaking activity. Each student receives a post-it note to write down a personal boundary in a social or academic setting. They then put their sticky notes on a whiteboard or wall and discuss their boundaries with their classmates, emphasizing the importance of respecting each other's boundaries.

**Learning Activities Process:**

2.1 Role-play Boundaries: Divide the class into pairs and provide them with scenarios involving setting boundaries and respect. Each pair takes turns playing different roles.

**Scenario One:** In a college dorm, two roommates have different sleeping schedules, causing one roommate to be frequently noisy late at night, disturbing the other's rest. One student needs to communicate their sleep boundaries, while the other needs to respect their roommate's sleep needs.

**Scenario Two:** In a group project, one member keeps shifting responsibilities onto others, making other group members feel unfair. One student needs to assertively communicate their responsibility boundaries, while other group members need to respect everyone's responsibilities.

After the role-play, discussions can be held to explore the effectiveness of communication strategies adopted by each role-player and the importance of respecting boundaries. Emphasize the use of affirmative and honest language when asserting one's boundaries, while respecting others' boundaries can foster more harmonious relationships.

2.2 Interactive Boundary Maps: Provide students with large sheets of paper or a whiteboard and ask them to create visual representations of their personal boundaries in different contexts (such as academic, social, family). Encourage them to use symbols, colors, and text to depict their boundaries and influencing factors. Afterwards, students share and discuss their boundary maps, identifying common themes and challenges.

2.3 Interactive Presentation: Use multimedia presentations, videos, and interactive quizzes to reinforce key concepts related to respect, boundaries, and communication skills.

**Conclusion:**

Through the study of this course, students will be able to gain a deeper understanding and regulate their own emotions, especially in adopting positive and healthy coping strategies when facing negative emotions. Through the cultivation of emotional regulation skills, students will improve their social emotional intelligence, enhance understanding and support with others, establish healthier and more harmonious interpersonal relationships, and improve their overall mental health level.

**Evaluation**

Emotional awareness and expression ability: Evaluate whether students express their emotions appropriately in group activities, and whether they can clearly identify and express their emotions.

Application of emotion regulation techniques: Evaluate whether students can effectively apply emotion regulation techniques in conflict or stress situations through role-playing and situational simulation.

Group collaboration and feedback: Through group discussions and interactions, observe students' emotional management abilities and expression of emotional support within the team.

Reflection log and self-assessment: Students regularly submit emotional reflection logs to assess their progress and challenges in emotional regulation.

**Section 12 Access to emotion regulation strategies perceived as effective(2)****Concept**

In adolescence, emotional changes are frequent and intense, and the alternating experience of positive and negative emotions is not only a part of growth, but also a key factor in self-awareness and psychological development. Understanding the function of emotions and cultivating emotional regulation skills can help students better cope with academic pressure, interpersonal conflicts, and self-identity exploration. In this process,

emotions are not only a response to external stimuli, but also the result of the interaction between the inner psychological world and the external environment. By effectively understanding and managing positive and negative emotions, students can gradually develop good emotional regulation abilities and lay the foundation for their future mental health.

### **Objective**

1.To understand the importance of respect in interpersonal relationships.To identify personal boundaries in different situations.

2.To developing confident communication skills.

**Time: 90 minutes**

### **Learning Materials**

- 1.Power point
- 2.Emotion Regulation Strategy Cards
- 3.Strategy-Triggering Scenarios

### **Step/ Learning Process**

#### **Lead-in:**

**1.1 Scenario Discussion:** Present students with a real-life scenario where they must make responsible decisions. The teacher prompts students to discuss in pairs how to handle the situation and what factors to consider when making decisions.

Scenario: You are a college student. Your friend invites you to a party, but you know the party might violate the school's social distancing regulations and could increase your risk of contracting COVID-19. How would you decide?

During the group discussion, students can explore the following questions:

- What do you think are the most important factors in this situation?
- How would you weigh the pros and cons of attending the party?

- Do you think it's worth taking the health risk to attend the party? Why?

1.2 Interactive Poll: Use the "Learning Tong" app's polling feature to ask students questions related to responsible decision-making.

Question 1: What do you think is the most important factor when making responsible decisions?

- A. Personal values and moral standards
- B. Influence from others
- C. Consequences and risk assessment
- D. Current emotional state

Question 2: Have you ever faced situations where you needed to make difficult decisions? How did you handle them?

- A. Yes, I have faced such situations before.
- B. No, I haven't experienced such situations yet.

1.3 Reflective Journaling: Provide students with a few minutes to individually reflect on their own experiences with responsible decision-making. Prompt them to write about a time when they made a decision they were proud of and why it was important to them.

Learning Activities Process:

(1) Introduction: The Relationship between Emotions and Growth

Teachers use guided questioning, such as:

Have you ever known yourself better because of a sad experience

Which joyful experience in memory changed your perception of something? "This leads to the theme of emotions as participants and moderators of individual psychological development.

## **(2) Teaching and Analysis: The Mechanism of Emotions**

The functions of positive emotions: enhancing motivation, strengthening interpersonal connections, stimulating creativity, and learning interest.

The significance of negative emotions: triggering alertness, guiding introspection, driving problem-solving, and psychological adjustment.

From the perspective of developmental psychology, the development of emotional experience and regulation ability is crucial for adolescent identity construction, self-esteem formation, and social skills development.

## **(3) Group Discussion Activity: Emotions Change My Story**

Each student shares a personal experience centered around how an emotionally intense event propelled their growth or brought about significant reflection. Group members provide feedback and analyze the role of emotions from both positive and negative perspectives.

### **Conclusion:**

Through a deep understanding and mastery of techniques for regulating positive and negative emotions, students will make significant progress in psychological growth and social skills. The course not only focuses on the emotional experience itself, but also emphasizes the importance of emotional regulation for the long-term development of individuals. On this basis, students can more confidently face challenges in life, promote mental health, and establish more harmonious personal and social relationships.

### **Evaluation**

Group Discussion Performance: Observe students' level of participation and contribution to the group discussion, including their understanding of the scenario discussion and the comprehensiveness of their thinking about responsible decision-making. Each student's performance and their acceptance of and response to their peers' ideas can be recorded.

Feedback from guest speakers: Gather feedback from students on guest speakers or group discussions, including their understanding of and inspiration from the experiences shared by alumni. Design a verbal feedback session to find out what students thought of the session and whether they gained new insights and inspiration from it.

### **Section 13 Access to emotion regulation strategies perceived as effective(3)**

#### **Concept**

In middle school, students face multiple challenges in their growth, and their emotional experiences exhibit high volatility and complexity. Emotional fluctuations are not only influenced by external factors such as academic pressure and interpersonal relationships, but also closely related to individual physiological and psychological changes. The gradual formation of self-awareness, exploration of self-identity, emotional expression, and the cultivation of regulatory abilities among middle school students during this period are important components of their mental health development.

#### **Objective**

- 1.To understand the functional roles of both positive and negative emotions in individual psychological development.
- 2.To recognize that emotions are neither inherently good nor bad, but their regulation and expression critically influence personal growth.
- 3.To acquire fundamental strategies for transforming emotional experiences into drivers of self-development.
- 4.To enhance awareness of one's own emotional development and strengthen psychological resilience when facing emotional challenges.

**Time: 90 minutes**

### **Learning Materials**

1. Individual learning diary
2. Power point
3. Decision matrix template

### **Step/ Learning Process**

#### **Lead-in:**

The teacher introduces the theme of emotions as participants and moderators of individual psychological development through guided questioning, such as: Have you ever learned more about yourself because of a sad experience? Which joyful experience in your memory changed your perception of something.

#### **Learning Activities Process:**

2.1 Each student shares a personal experience centered around how an emotionally intense event propelled their growth or brought about significant reflection. Group members provide feedback and analyze the role of emotions from both positive and negative perspectives.

#### **2.2 Emotional regulation practice exercise**

Guide students to use the "Emotional ABC Model" (A Event - B Belief - C Emotional/Behavioral Outcome) to analyze a typical negative emotional experience; Practice transforming non constructive emotional reactions (such as impulsiveness and avoidance) into constructive action plans; Simple mindfulness exercises (such as 3-minute emotion awareness) help students identify their current internal emotional state.

#### **3. Conclusion:**

Guide students to write a reflective essay titled 'What Have I Learned from Emotions?'

The teacher summarizes the value of positive and negative emotions in personality development, emphasizing that emotions are not obstacles, but signals and drivers of growth;

Encourage students to practice emotional awareness and regulation in their daily lives, and view emotional experiences with a growth mindset.

#### **4.Evaluation**

**Decision Matrix Completion and Interpretation:** Students are assessed on their accuracy and comprehensiveness in completing the decision matrix. This is assessed by observing the various criteria they chose as well as their final decision, and by explaining their decision in a class discussion.

**Teamwork and Communication Skills:** assesses students' performance in team decision-making activities, including how they allocate resources, resolve conflicts, and coordinate opinions. This can be assessed by observing interactions during team discussions and performance when presenting on behalf of the team.

**Reflection and application skills:** Assess students' ability to reflect on what they have learnt in class and to apply it in their daily lives. This can be assessed by collecting students' summaries of learning outcomes in their journals, their responses to questions posed, and their sharing in class discussions.

### **Section 14 Reflection and Conclusion**

#### **Concept**

The Reflection and Conclusion component of the instructional design serves as a critical phase for reinforcing learning outcomes and promoting the holistic development of students' emotional regulation capacities. This segment encourages learners to engage in structured self-reflection and group dialogue, enabling them to assess progress in key areas such as self-awareness, social awareness, relationship skills, and responsible decision-making. By reviewing their emotional growth and identifying areas for future improvement, students enhance their capacity for self-regulation and personal

goal setting. The reflective process also fosters a collaborative and empathetic classroom environment, contributing to the formation of a supportive peer community. Additionally, the integration of a post-intervention questionnaire provides evaluative feedback on emotional regulation competencies, thereby informing students' continued learning trajectories. Overall, this section plays a vital role in consolidating emotional learning, advancing self-acceptance and emotional balance, and equipping students with the resilience necessary to navigate social and academic challenges.

### **Objective**

1. To review course content and learning experience.
2. To reflect on personal growth and development.
3. To measure students' emotional regulation ability level

**Time:** 90 minutes

### **Learning Materials**

1. Individual learning dairy
2. Emotional regulation cards
3. Power point
4. Middle School Student Emotional Regulation Scale

### **Step/ Learning Process**

#### **Lead-in:**

1.1 The teacher hides cards in the classroom, each with a word or phrase related to social-emotional learning, such as 'friendship', 'teamwork', 'challenge', "emotional management," "self-management," "relationship skills," "goal setting," and so on. Students were divided into 2 groups and were asked to find as many cards as possible within 5 minutes. Once the cards were found, the group members were asked to share in turn their understanding of the word or phrase, as well as any experiences they had

encountered or applied the concept in their lives. This activity was designed to kick-start students' thinking about the course topic and help them make an emotional connection.

## **2.Learning Activities Process:**

2.1 Students were divided into five groups, each of which was responsible for discussing one of the core components covered in the course: self-awareness, self-management, awareness, relationship management and responsible decision-making. Within their groups, students share their understanding of these concepts, discuss important ideas they have learnt in the course, and explore how they can apply these ideas to their daily lives. One group might share how they manage their emotions and behaviour by setting goals and creating a timetable when discussing self-management. Another group might discuss how they develop effective communication skills in teamwork. Students should be encouraged to share their personal experiences with each other and to support and listen to each other.

## **3.Conclusion:**

3.1 Students are asked to go through their individual learning notebooks that they have recorded throughout the programme. They will spend some time reviewing their notes, reflecting on and recording their greatest progress and achievements during their social-emotional learning. Students may consider the following questions:

- What new knowledge or skills did they learn during the course?
- What are the areas in which they have made the most progress?
- What are some specific examples of growth?
- What challenges did they encounter in the course and how did they respond?

Next, students will share their reflections and growth insights. Each student will have the opportunity to share their personal experiences and receive encouragement and support from the rest of the class. The teacher acts as a facilitator in this process, encouraging students to think and share deeply.

At the end of the personal sharing, the teacher will guide the students in their future planning. Pupils are asked to think about and record plans for future enhancements in emotional regulation. They may consider the following questions:

-What are their own goals for emotional regulation?

-How can they improve further in the future in response to the progress they have already made?

-What specific action plans are in place to help achieve the goals?

-Do they need to seek external support or resources?

Pupils will have the opportunity to share their future plans in groups of 5 and provide feedback and advice to each other. Teachers will provide guidance and support where needed, encouraging students to set specific, achievable goals and develop realistic plans to achieve them. Finally, teachers can encourage students to continue the habit of reflection and planning for personal growth and development after the programme.

3.2 Teachers will distribute the Emotional Regulation post-test questionnaire to students. This questionnaire is designed to help students assess the emotional regulation knowledge and skills they have acquired during the course, as well as their perceptions of their social-emotional competence. Students will have 30 minutes to complete the questionnaire. The questionnaire includes questions about self-acceptance, emotion balance, positive/negative emotional experiences, positive/negative emotional expression. Upon completion of the questionnaire, students can either hand it in to their teacher or submit it via the online platform within the allotted time. This post-test questionnaire will be used as an assessment tool for students' personal emotional regulation, helping them to understand their own growth and development, and informing them to set goals and plans for their future learning and development.

#### 4.Evaluation

Individual Learning Diary Assessment: students will be asked to record their reflections on course content and personal growth in their Individual Learning Journals. The teacher will design a short assessment form (including an evaluation of the topic, depth, and coherence of the content of the student's reflections) that will be used to assess the student's level of reflection, their understanding of the course content, and their growth in emotional regulation. Students are also assessed and given feedback on their learning and engagement throughout the course through their individual learning diaries.

Post-course questionnaire: the post-course questionnaire will be used as a tool to assess students' knowledge and skills in emotional regulation. The questionnaire covers core concepts covered in the course such as, Emotional awareness and comprehension, acceptance of emotions, capacity to pursue goal-directed actions while controlling impulsive tendencies during negative emotional states, and utilization of effective regulation strategies collectively contribute to enhancing students' self-knowledge and understanding of their personal development.



Appendix G Mindfulness Diary

## 正念日记

姓名：\_\_\_\_\_

日期：\_\_\_\_\_

练习类型（请打✓）：

 正念呼吸练习 正念聆听练习 其他（请注明）：\_\_\_\_\_

A. 练习过程记录

1. 练习时长（分钟）：\_\_\_\_\_

2. 当前的情绪状态（可多选）：

 放松 紧张 焦虑 愉快 困倦 其他（请注明）：\_\_\_\_\_

3. 练习过程中出现的分心次数：\_\_\_\_\_ 次

4. 练习过程中出现的主要想法或分心内容：

## 练习体验反思

练习后的情绪变化 (请在相应选项上打√, 评估您在练习后的感受变化)

内容	1=完全没有变化	2=轻微改善	3=有一些改善	4=明显改善	5=非常明显的改善
放松感					
专注力					
对自我情绪的觉察力					
情绪稳定性					
压力感减少					
对当前任务的投入感					
内心平静感					
对负面情绪的接受能力					

2.今天练习中的收获或感悟：

3.练习中的挑战或困难

4.明天练习的改进目标：

## C. 总结与计划

我计划明天的练习时间是 (分钟)：\_\_\_\_\_

我希望在下次练习中专注于改善 (例如：减少分心次数、延长练习时间)：



Appendix H Emotional card

## 每日自我肯定语

'I will be OK' because

我的头脑、我的智慧、我的身体一直陪伴着我

我接纳自己的所有感受，无论是好是坏，它们都是我生命的一部分，我接受它们

我敞开心扉，接受无限好运和丰盛我用正念和感恩之心，吸引幸福和好运的连续流动今天又是美好的一天

我相信自己是一个有价值、有能力的人，值得被尊重和爱护比心

我相信自己的直觉和内在智慧，能够指引我走向正确的方向我一定变得越来越好

我允许一切好事情进入我的生活我总是能得到我想要的东西。我是一块吸引机会的磁铁

我用正念去感受和理解自己的情绪，从而更好地管理它们

## How do you feel today?



## 情绪的背后是需求

♥每一个情绪背后，都有一个未满足的心理需求♥

开心



是为了强化自我认同 当下幸福

愤怒



是为了自我保护而攻击别人

悲伤



是为了得到同情 安慰和帮助

害怕



是为了自保而规避风险

得意



是为了赢得欣赏和尊重

嫉妒



是为了找到自己真正想要的

压抑



是为了获得安全而拒绝冲突

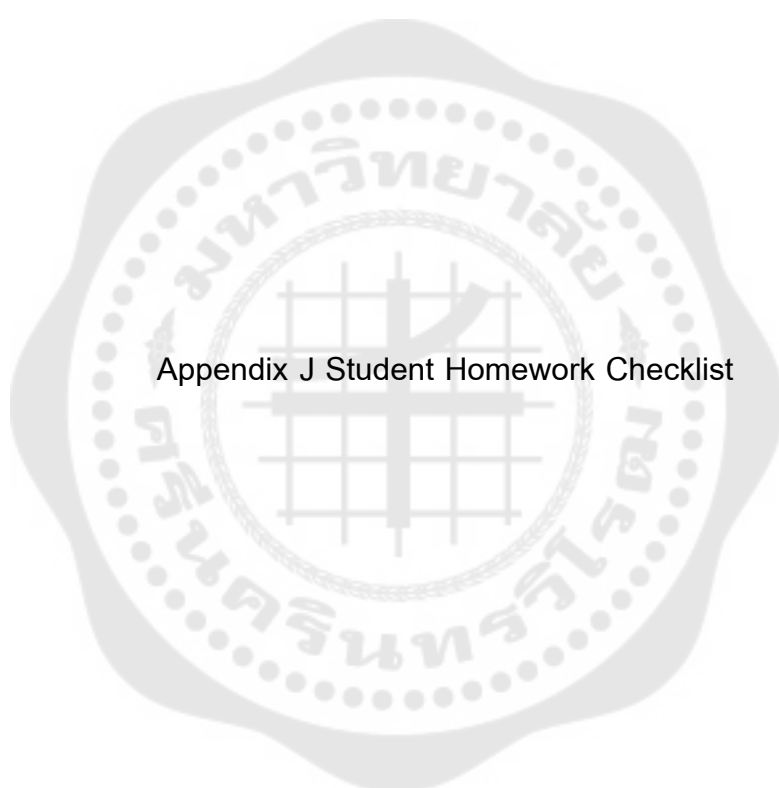
抱怨



是为了被倾听 理解和关注

## 情绪怪兽





Appendix J Student Homework Checklist

## 积极情绪练习

### 每日清单

①感恩日记：每天写下三件让你感到感恩的事情。

②正念冥想：每天花5-10分钟进行正念冥想，专注于呼吸或身体感受。

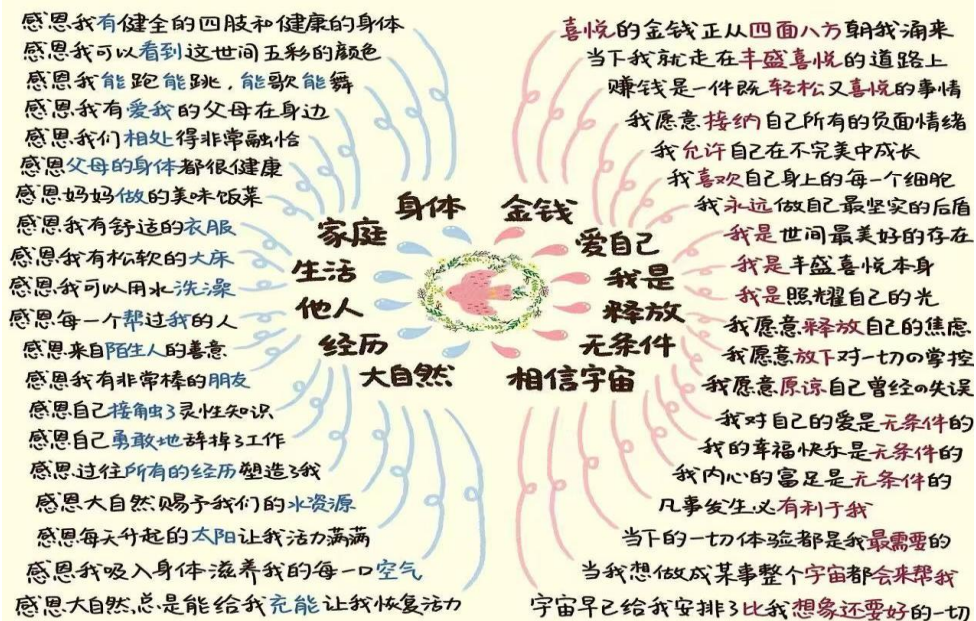
③积极自我对话：每天对自己说三句积极的自我肯定语，如“我很棒”、“我能行”，自信满满！

⑤身体活动：每天进行至少30分钟的身体活动，如散步、跑步、瑜伽等。

④微笑练习：每天对着镜子微笑，或者对他人微笑。

## 感恩正念日志

Gratitude & mindfulness





Appendix K Classroom Teaching Images

