

**EFFECTS OF MINDFULNESS-BASED COUNSELLING ON EMOTIONAL REGULATION AND  
ACADEMIC ENGAGEMENT AMONG SECONDARY SCHOOL STUDENTS IN JOS  
METROPOLIS, PLATEAU STATE, NIGERIA**

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**Abstract**

Academic engagement and emotional regulation are critical for learning, yet many secondary school students in Jos metropolis, Plateau State, Nigeria, struggle due to chronic stress and limited coping resources. This study examined the effects of a school-based mindfulness-based counselling programme on emotional regulation and academic engagement among senior secondary school II students. The population consisted of all senior secondary school II students in public secondary schools in Jos metropolis. Using a quasi-experimental pre-test, post-test control group design. A purposive and simple random sampling technique was used to select participants from the population. The sample size was 120 students who were identified with low emotional regulation and low academic engagement. These students were randomly assigned to an experimental group (n = 60) and a control group (n = 60). The experimental group received an 8-week mindfulness-based counselling programme, while the control group continued with regular school activities. Data were collected using the Emotion Regulation Questionnaire for Adolescents and the School Engagement Scale. The instruments were validated by experts in Guidance and Counselling Unit, Educational Psychology Unit and Research, Measurement and Evaluation Unit, Department of Educational Foundations, University of Jos. Reliability of the instruments was done and gave 0.82 and 0.79 respectively. Data collected were analyzed using mean, standard deviation and Analysis of Covariance (ANCOVA). The findings revealed that mindfulness-based counselling significantly improved students' emotional regulation by enhancing self-awareness, emotional control, attention regulation and stress management. The treatment also significantly increased students' academic engagement in terms of classroom participation, concentration, motivation and commitment to learning activities. Furthermore, the study found significant differences between the experimental and control groups in favour of students exposed to mindfulness-based counselling. The study concluded that mindfulness-based counselling is an effective therapeutic intervention for improving emotional regulation and academic engagement among secondary school students in Jos metropolis. Based on the findings, it was recommended that school counsellors, educational psychologists and school administrators should integrate mindfulness-based counselling programmes into secondary school counselling services to promote students' emotional well-being and academic functioning.

**Keywords:** *Mindfulness-based counselling, emotional regulation, academic engagement, secondary school students, Jos metropolis.*

## **Background to the Study**

Education plays a vital role in the social, emotional, cognitive and economic development of adolescents. Secondary school students are expected to develop not only academic competence but also emotional stability that will enable them to cope effectively with economic demands, interpersonal relationships and future societal responsibilities. In recent years, however, many secondary school students in Nigeria have experienced increasing emotional difficulties such as anxiety, stress, frustration, poor self-control, emotional instability and inability to cope with academic pressure. These emotional challenges often interfere with students' concentration, classroom participation, motivation to learn and overall academic engagement (Alhie & Adeyemi, 2024; Atoum & Bani-Khaled, 2026).

Academic engagement refers to the level of students' psychological investment, active participation, commitment, attention and involvement in academic activities. It includes behavioural, emotional and cognitive dimensions of learning participation. Students who are academically engaged tend to attend classes regularly, participate actively in learning tasks, demonstrate persistence in difficult academic activities and maintain positive attitudes towards learning. Conversely, disengaged students often display poor concentration, low motivation, absenteeism, procrastination and declining academic performance. Research has shown that emotional instability and inability to regulate emotions negatively affect students' academic engagement and educational outcomes (Maynard, Solis, Miller & Brendel, 2017; Maris, 2025).

Emotional regulation is the ability of an individual to monitor, manage and appropriately express emotions in different situations. It involves controlling impulsive behaviours, managing stress, maintaining emotional balance and responding adaptively to challenging experiences. Adolescents who possess good emotional regulation skills are more likely to cope effectively with academic stress, peer pressure, examination anxiety and social challenges. In contrast, poor emotional regulation among students may result in aggression, anxiety, depression, lack of concentration, emotional outbursts and poor academic adjustment. Within the Nigerian secondary context, increasing cases of emotional distress among students have become a major concern to educators, parents and school counsellors (Angwaomaodoko, 2026; Lubis & Rahayu, 2026).

The school environment in Nigeria, including Jos metropolis of Plateau State presents numerous psychosocial and academic challenges that may contribute to emotional dysregulation among students. Factors such as examination pressure, family instability, peer influence, insecurity, economic hardship, poor teacher-student relationships and social expectations often expose adolescents to emotional strain. In Jos metropolis particularly, recurring social tensions and economic challenges may further increase stress levels among secondary school students. These challenges can weaken students' emotional resilience and reduce their level of participation and engagement in academic activities.

In response to these challenges, counselling psychologists and mental health professionals have increasingly emphasized the importance of mindfulness-based interventions in promoting emotional well-being and academic functioning among adolescents. Mindfulness refers to the practice of paying purposeful attention to present experiences in a non-judgmental and accepting manner. Mindfulness-based counselling helps individuals become more aware of their thoughts, feelings, bodily sensations and behaviours while learning to respond calmly and thoughtfully rather than reacting impulsively. Through mindfulness practices such as breathing exercises, meditation, relaxation and self-awareness activities, individuals develop improved emotional control, concentration and psychological balance (Beauchemin, Hutchins & Patterson, 2008; Berking & Wupperman, 2012).

Mindfulness-based counselling has gained global recognition as an effective therapeutic approach for reducing stress, anxiety, emotional instability and behavioural problems among adolescents and students. Studies have indicated that mindfulness interventions improve emotional regulation, enhance concentration, reduce anxiety and promote positive academic behaviours among learners. In Nigeria, emerging studies have also demonstrated the effectiveness of mindfulness-based cognitive therapy in improving emotional adjustment, reducing anxiety and

enhancing students' academic outcomes. For example, studies conducted among secondary school students in Edo State and other parts of Nigeria found that mindfulness-based interventions significantly improved emotional regulation and reduced anxiety-related problems among students (Nzeadibe, Egara, Eseadi & Chuwuerji, 2024; Angwaomaodoko, 2026; Lubis & Rahayu, 2026).

Furthermore, mindfulness practices have been associated with improved academic engagement because students who are emotionally balanced are more likely to focus attention, participate actively in classroom activities and sustain interest in learning tasks. Research has also shown that mindfulness contributes positively to students' self-awareness, self-regulation, academic motivation and classroom participation. A recent Nigerian study reported that mindfulness significantly predicted academic engagement among secondary school students, suggesting that mindfulness practices may enhance students' commitment to academic activities (Aihie & Adeyemi, 2024; Maris, 2025). However, there appears to be limited empirical evidence on the effectiveness of mindfulness-based counselling in improving emotional regulation and academic engagement among secondary school students in Jos metropolis, Plateau State, Nigeria. It is against this background that this study examines the effects of mindfulness-based counselling on emotional regulation and academic engagement among secondary school students in Jos metropolis, Plateau State, Nigeria.

### **Statement of the Problem**

In recent years, secondary school students in Jos metropolis, Plateau State, Nigeria, have increasingly exhibited emotional and academic adjustment problems that negatively affect their learning outcomes and psychosocial development. Many students experience difficulties such as anxiety, emotional instability, stress, poor anger control, low self-awareness, frustration, impulsive reactions and inability to cope effectively with academic and social pressures. These emotional challenges are often reflected in poor concentration during lessons, low motivation towards learning, weak classroom participation, absenteeism, declining commitment to academic activities and reduced academic engagement. School counsellors, teachers and parents have continued to express concern over the increasing rate of emotional disturbances and academic disengagement among adolescents in secondary schools. The situation appears to be worsened by examination pressure, peer influence, family instability, economic hardship, insecurity and other environmental stressors prevalent within the Nigerian society and Jos metropolis in particular.

The persistence of poor emotional regulation and low academic engagement among students has serious consequences for both the individual learner and the educational system. Students who are unable to regulate their emotions effectively may develop anxiety, aggression, depression, poor interpersonal relationships, low self-esteem and behavioural problems. Such students may also experience difficulty concentrating on academic tasks, reduced classroom participation, lack of persistence in learning activities, poor academic performance, truancy and school dropout tendencies. In the long run, these problems may hinder students' educational attachment, career development, psychological well-being and social adjustment. The school environment may equally suffer from increased disciplinary issues, poor academic standards and reduced educational effectiveness.

Ideally, secondary school students are expected to demonstrate healthy emotional regulation, emotional stability, self-control and positive coping strategies that will enable them to manage academic stress and interpersonal challenges effectively. Students are also expected to be actively engaged in academic activities through regular classroom participation, sustained attention, positive learning attitudes, motivation, commitment to school tasks and productive interaction with teachers and peers. Counselling interventions within schools are expected to promote students' emotional well-being, psychological adjustment and active involvement in learning activities in order to enhance overall educational outcomes.

However, despite the importance of emotional regulation and academic engagement in students' academic success and psychosocial adjustment, many secondary school students in Jos metropolis will struggle with emotional instability and low academic engagement. Although various

counselling approaches have been introduced in schools, emotional and academic adjustment problems among students continue to persist. Mindfulness-based counselling has been identified in literature as an effective intervention for improving emotional regulation, concentration, self-awareness and academic functioning among adolescents. Nevertheless, there appears to be limited empirical evidence on the effectiveness of mindfulness-based counselling in improving emotional regulation and academic engagement among secondary school students in Jos metropolis, Plateau State, Nigeria. Therefore, the present study seeks to investigate the effect of mindfulness-based counselling on emotional regulation and academic engagement among secondary school students in Jos metropolis, Plateau State, Nigeria.

### **Purpose of the Study**

The purpose of this study is to examine the effects of mindfulness-based counselling on emotional regulation and academic engagement among senior secondary school II students in Jos metropolis, Plateau State, Nigeria.

Specifically, the study seeks to:

1. Determine the effect of mindfulness-based counselling on students' emotional regulation.
2. Determine the effect of mindfulness-based counselling on students' academic engagement.
3. Examine whether gender moderates the effect of mindfulness-based counselling on emotional regulation.
4. Examine whether gender moderates the effect of mindfulness-based counselling on academic engagement.

### **Hypotheses**

The following null hypotheses were tested at the 0.05 level of significance:

1. There is no significant difference in the post-test emotional regulation scores of students exposed to mindfulness-based counselling and those in the control group, when pre-test scores are controlled for.
2. There is no significant difference in the post-test academic engagement scores of students exposed to mindfulness-based counselling and those in the control group, when pre-test scores are controlled for.
3. Gender does not significantly moderate the effect of mindfulness-based counselling on emotional regulation among secondary school students.
4. Gender does not significantly moderate the effect of mindfulness-based counselling on academic engagement among secondary school students.

### **Literature Review**

Academic engagement refers to the extent to which students invest time, effort and psychological energy in learning activities. Fredricks, Blumenfeld and Paris (2004) described it as a multidimensional construct comprising behavioural, emotional and cognitive dimensions. Behavioural engagement involves participation in academic and school-related activities. Emotional engagement reflects affective reactions to school, teachers and peers. Cognitive engagement involves investment in learning, self-regulation and the use of deep learning strategies. High engagement predicts better academic performance and retention, while disengagement is a primary predictor of dropout and low achievement.

Emotional regulation refers to processes that influence which emotions arise, when they occur and how they are experienced and expressed. Gross (2015) identified two widely studied strategies: cognitive reappraisal, which involves reframing a situation to change its emotional impact and expressive suppression, which involves inhibiting the outward expression of emotion. Adaptive regulation supports attention, working memory and problem-solving, whereas maladaptive regulation contributes to anxiety, avoidance and disengagement. Adolescence is a critical period for developing these skills due to ongoing maturation of prefrontal and limbic systems.

Mindfulness-based counselling integrated mindfulness practices with counselling techniques to cultivate present-moment awareness and non-judgmental acceptance. Adapted from Kabat-Zinn (1990)'s Mindfulness-Based Stress Reduction and Segal, Williams and Teasdale (2013)'s Mindfulness-Based Cognitive Therapy, school-based versions typically include mindful breathing, body scan, emotion awareness and cognitive defusion exercises. The aim is to change the relationship to thoughts and emotions, reducing avoidance and rumination and increasing adaptive coping. School-adapted programmes are usually delivered in 6-8 weekly sessions and have shown feasibility with adolescents.

This study is anchored on two theories of Social Cognitive Theory and Mindfulness-to-Meaning Theory. Bandura's Social Cognitive Theory (1986) explains behaviour as the result of reciprocal interactions among personal factors, behaviour and environment. A central construct is self-efficacy, defined as beliefs about one's capability to execute actions required to manage prospective situations. Improved emotional regulation through mindfulness-based counselling is expected to strengthen students' self-efficacy for managing academic stress, leading to greater persistence and engagement.

Garland, Farb, Goldin and Fredrickson (2015)'s Mindfulness-to-Meaning Theory posits that mindfulness training disrupts automatic, maladaptive reactions to stress by fostering metacognitive awareness. This creates space for reappraisal and savoring of positive events, building psychological resources and meaning. In academic settings, this process is expected to improve emotional regulation and reframe academic challenges as manageable, thereby fostering engagement.

Semple, Lee, Rosa and Miller (2010) conducted a randomized trial of mindfulness-based cognitive therapy for children and found significant improvements in attention regulation and reductions in anxiety compared to a waitlist control. Dunning et al. (2019), in a meta-analysis of 33 randomized controlled trials reported small to moderate effects of mindfulness-based interventions on emotion regulation and mental health outcomes in children and adolescents. Zenner, Herrnlebenkurz and Walach (2014)'s meta-analysis of 24 school-based studies also found significant improvements in emotional and behavioural regulation following mindfulness interventions. In sub-Saharan Africa, Chimani and Mamhute (2022)'s scoping review noted that mindfulness practices reduced perceived stress and increased emotional awareness among adolescents, though rigorous experimental studies remain scarce.

Zenner, Herrnleben-Kurz and Walach (2014) found that school-based mindfulness interventions yielded significant improvements in attention, social-emotional competence and classroom behaviour, with small to moderate effect sizes. Students reported greater willingness to participate and reduced disruptive behaviour. In the Nigerian context, Eze and Okoro (2021) demonstrated that cognitive-behavioural interventions reduced test anxiety and improved academic performance among secondary school students. Ogunleye and Ajibade (2021) found a significant positive relationship between academic engagement and academic performance in Nigerian secondary schools, but did not evaluate interventions targeting engagement directly. The absence of studies examining mindfulness-based counselling and academic engagement in Nigeria represents a notable gap.

Evidence on gender moderation is mixed. Zenner et al. (2014) reported no significant gender differences in outcomes across 24 school-based mindfulness studies. Dunning et al. (2019) also found comparable effects for males and females. However, baseline levels of emotional regulation often moderate outcomes, with students starting lower showing greater gains. This study tested whether gender moderates the effects of mindfulness-based counselling in the Nigerian context.

Research on emotional regulation and academic engagement in Nigeria has focused mainly on cognitive-behavioural therapy, peer counselling and study skills training. Eze and Okoro (2021)'s work on test anxiety provides evidence that structured psychological interventions can improve academic-related outcomes. Ogunleye and Ajibade (2021)'s correlational study confirmed the link between engagement and performance but did not test interventions. Plateau State Ministry of Education (2024) reports indicated declining engagement and performance in Jos metropolis due to insecurity and stress, yet few studies have evaluated interventions addressing these factors. The

lack of empirical studies on mindfulness-based counselling in this setting underscores the need for this research.

### **Methodology**

**Research Design:** This study adopted a quasi-experimental pre-test, post-test control group design. The design was chosen because it allows for the assessment of the causal effect of the intervention while working with intact school classes, where random assignment of individual students may disrupt normal school operations. The experimental group received the mindfulness-based counselling intervention, while the control group continued with regular school activities. Both groups completed pre-tests before the intervention and post-tests after the intervention. This design controls for initial differences by using pre-test scores of covariates in the analysis.

**Population of the Study:** The target population comprised all senior secondary school II (SS2) students in public secondary schools within Jos metropolis, Plateau State, Nigeria. According to the Plateau State Ministry of Education (2024), there were 32 public secondary schools in Jos metropolis with a total SS2 population of approximately 4,850 students during the 2024/2025 academic session.

**Sample:** Four public secondary schools with functional guidance and counselling units were selected for this study. The sample size was 120 students identified as having low emotional regulation and low academic engagement after the screening test.

**Sampling Technique:** Purposive sampling technique was used to select four public secondary schools with functional guidance and counselling units to ensure access to trained counsellors and administrative support. Within each school, students were screened using the Emotion Regulation Questionnaire for Adolescents and the School Engagement Scale. Students scoring below the 40<sup>th</sup> percentile on both instruments were identified as having low emotional regulation and low academic engagement. 120 students were randomly assigned to two groups: an experimental group (n = 60) and a control group (n = 60). Random assignment was done using a computer-generated random number table to minimize selection bias.

### **Instruments for Data Collection**

Two standardized instruments were used:

1. **Emotion Regulation Questionnaire for Adolescents (ERQ-A):** Developed by Gullone and Taffe, the ERQ-A is a 10-item self-report measure assessing two dimensions: Cognitive reappraisal and expressive suppression. Responses are given on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The instrument has demonstrated good internal consistency and construct validity in adolescent samples.
2. **School Engagement Scale (SES):** Adapted from Fredricks et al. (2004), the SES is a 19-item scale measuring behavioural, emotional and cognitive engagement. Items are rated on a 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree. The instrument has been validated for use with Nigerian adolescents.

### **Validity and Reliability of Instruments**

Content validity of both instruments was established by three experts in Guidance and Counselling, Educational Psychology and Research, Measurement and Evaluation from the University of Jos, who reviewed the items for relevance and clarity in the Nigerian context. Minor wording adjustments were made based on their recommendations.

Reliability was established through a pilot study conducted in a secondary school outside the study area. Cronbach's alpha coefficients indicated acceptable internal consistency, as reported above. Test – retest reliability over a two-week interval yielded coefficients of 0.82 for the ERQ-A and 0.79 for the SES.

### **Intervention Procedure**

The intervention was an 8-week mindfulness-based counselling programme adapted from Mindfulness-Based Stress Reduction for adolescents. Sessions were held once weekly for 60 minutes during regular counselling periods.

#### **Programme Content:**

- Weeks 1-2: Introduction to mindfulness and mindful breathing.
- Weeks 3-4: Body scan and awareness of bodily sensations and emotions.
- Weeks 5-6: Observing thoughts without judgment and cognitive defusion.
- Week 7: Mindful communication and interpersonal awareness.
- Week 8: Integration, maintenance planning and review.

Each session included psycho-education, guided practice, group discussion and assigned home practice. Sessions were facilitated by two qualified school counsellors who received a 2-day training on the manualized protocol. Treatment fidelity was monitored using a session checklist completed by an independent observer for 25% of sessions. The control group received no intervention during the study period but was offered the programme after data collection.

### **Procedure for Data Collection**

Ethical approval was obtained from the Plateau State Ministry of Education and the principals of the participating schools. Informed consent was secured from parents/guardians and assent was obtained from students. Pre-tests were administered to both groups one week before the intervention using the ERQ-A and SES. The experimental group then participated in the 8-week programme. Post-tests were administered one week after the final sessions to both groups under standardized conditions. Completed questionnaires were collected and coded for analysis. The entire data collection process lasted 10 weeks.

### **Method of Data Analysis**

Data were analyzed using SPSS version 26. Descriptive statistics summarized demographic characteristics and pre-post scores. Inferential statistics involved Analysis of Covariance (ANCOVA) to test the hypotheses, with pre-test scores used as covariates to control for initial differences between groups.

## **Results**

### **Demographic Characteristics of Respondents**

A total of 120 students participated in the study, with 60 assigned to the experimental group and 60 to the control group.

Table 1: Showing Distribution of Respondents by Gender and Group

<b>Group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Experimental	28	32	60
Control	30	30	60
<b>Total</b>	<b>58</b>	<b>62</b>	<b>120</b>

The mean age of participants was 16.4 years (SD = 0.9). There were no significant differences between groups on age or gender at baseline, confirming group equivalence.

### **Testing Hypotheses**

- 1. There is no significant difference in the post-test emotional regulation scores of students exposed to mindfulness-based counselling and those in the control group, when pre-test scores are controlled for.**

Table 2: ANCOVA Results showing a Significant Effect of the Interaction on Emotional Regulation

Source	SS	df	MS	F	P	n <sup>2</sup>
Pre-test	215.34	1	215.34	19.82	0.000	0.15
Group	312.18	1	312.18	28.74	0.000	0.20
Error	1271.45	117	10.87			
<b>Total</b>		<b>119</b>				

ANCOVA results in Table 2 showed a significant effect of the intervention on emotional regulation,  $F(1, 117) = 28.74, P < 0.001$ , partial  $n^2 = 0.20$ . The experimental group had a higher adjusted mean post-test score ( $M = 38.42, SE = 0.61$ ) than the control group ( $M = 32.15, SE = 0.61$ ). The effect size indicates a large effect. Therefore, hypothesis one was rejected.

**2. There is no significant difference in the post-test academic engagement scores of students exposed to mindfulness-based counselling and those in the control group, when pre-test scores are controlled for.**

Table 3: ANCOVA Results for Academic Engagement

Source	SS	df	MS	F	P	n <sup>2</sup>
Pre-test	398.62	1	398.62	24.33	0.000	0.17
Group	375.44	1	375.44	22.91	0.000	0.16
Error	1917.89	117	16.39			
<b>Total</b>		<b>119</b>				

ANCOVA results in Table 3 revealing a significant effect of the intervention on academic engagement,  $F(1, 117) = 22.91, P < 0.001$ , partial  $n^2 = 0.16$ . The experimental group had a higher adjusted mean post-test score ( $M = 71.56, SE = 0.89$ ) than the control group ( $M = 64.23, SE = 0.89$ ). Therefore, hypothesis two was rejected.

**3. Gender does not significant moderate the effect of mindfulness-based counselling on emotional regulation.**

A  $2 \times 2$  ANCOVA indicated no significant interaction between group and gender,  $F(1, 115) = 1.12, P = 0.292$ , partial  $n^2 = 0.01$ . Therefore, hypothesis three was not rejected. Both male and female students benefitted equally from the intervention.

**4. Gender does not significantly moderate the effect of mindfulness-based counselling on academic engagement.**

The interaction effect was also non-significant,  $F(1, 115) = 0.87, P = 0.353$ , partial  $n^2 = 0.01$ . Therefore, hypothesis four was not rejected.

**Discussion**

The significant improvement in emotional regulation aligns with Semple et al. (2010) and Dunning et al. (2019), who found that mindfulness-based programmes enhance cognitive reappraisal and reduce maladaptive suppression in adolescents. The intervention likely worked by training students to observe emotions without immediate reaction, increasing their capacity to reframe stressful academic situations.

The improvement in academic engagement is consistent with Zenner et al. (2014)'s meta-analysis, which reported moderate effects of school-based mindfulness on behavioural and emotional engagement. As students gained better control over anxiety and frustration, they reported increased participation, persistence and positive attitudes towards school.

The absence of gender moderation supports findings by Zenner et al. (2014) and suggests that mindfulness targets transdiagnostic processes relevant to both males and females. This implies the intervention can be implemented universally without gender-specific adaptation.

In the Nigerian context, these results are particularly relevant. Students in Jos metropolis face chronic stressors that undermine self-regulation. The feasibility and effectiveness of an 8-week, counsellor-led programme suggest that mindfulness can be integrated into existing guidance services with minimal resources.

### **Conclusion**

Based on the findings, it is concluded that mindfulness-based counselling is an effective intervention for improving emotional regulation and academic engagement among secondary school students in Jos metropolis. The programme strengthened students' ability to manage emotions and increased their behavioural and emotional investment in learning. The results support the integration of mindfulness practices into school guidance and counselling programmes in Nigeria, particularly in contexts affected by chronic stress.

### **Recommendations**

The following recommendations are made based on the findings of the study:

1. School guidance and counselling units in Jos metropolis should implement mindfulness-based counselling as part of routine student support services.
2. The Ministry of Education should organize training workshops for school counsellors on delivering manualized mindfulness programmes.
3. Teachers should be trained to incorporate 3-5 minute mindfulness practices into classroom routines to support student focus and regulation.
4. Schools should establish peer support groups where students can practice mindfulness skills together, reinforcing maintenance beyond the 5-week programme.

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