

EFFECTS OF POST-TRAUMATIC STRESS DISORDER ON STUDENTS' RETENTION AMONG SECONDARY SCHOOL STUDENTS IN BANDITRY-AFFECTED AREAS OF KATSINA STATE, NIGERIA

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Abstract

This study examined the effects of post-traumatic stress disorder (PTSD) on students' retention among SS II students in banditry-affected areas of Katsina State, Nigeria. A descriptive survey design was adopted. The population comprised 21,576 Senior Secondary School II Physics students, with a sample size of 378 determined using Research Advisor (2006). Data were collected using the PTSD and Retention Questionnaire (PTRQ). Reliability coefficients of 0.82 and 0.79 were obtained for PTSD and retention scales, respectively, using Cronbach's alpha. Data were analyzed using mean, standard deviation, Pearson correlation, and independent t-test. Findings revealed a significant negative relationship between PTSD and students' retention ($r = -.541, p < .05$). PTSD was also found a Post-Traumatic Stress Disorder (PTSD) higher in students with high retention than those with low retention. It was also revealed that, a retention in students with weak PTSD is high than students with strong PTSD. The study concludes that PTSD significantly affects students' retention in banditry-affected areas of katsina state. Recommendations include the implementation of trauma-informed teaching practices and school-based psychological support services.

Keywords: Post-Traumatic Stress Disorder (PTRQ), Retention, Banditry

Introduction

Education is widely recognized as a fundamental instrument for national development, as it equips individuals with the knowledge and skills necessary for economic productivity and social progress. However, its effectiveness depends not only on access to schooling but also on students' ability to retain and apply learned information. Retention, defined as the ability to store, recall, and use knowledge, is essential for academic success, and when it is compromised, educational goals are undermined (Schacter et al., 2020).

In conflict-prone regions of Katsina State, Nigeria, the growing incidence of banditry has created instability that disrupts education. Armed attacks, kidnapping, displacement, and destruction of school infrastructure expose students to traumatic experiences that result in psychological distress and interfere with learning processes (UNESCO, 2022; Betancourt et al., 2013). Within this context, post-traumatic stress disorder (PTSD) emerges as a key psychological factor influencing students' academic functioning. PTSD, as defined by the American Psychiatric Association (2022), develops after exposure to traumatic events such as violence or displacement and is characterized by symptoms including flashbacks, avoidance, emotional distress, and heightened anxiety. It affects emotional, cognitive, and behavioral functioning, particularly disrupting attention, working memory, and executive processes required for learning. Neuropsychological research indicates that trauma impairs brain regions responsible for memory formation and retention, making it difficult for students to concentrate, process new information, and recall previously learned material (McEwen & Morrison,

2013).

Students' retention depends on cognitive processes such as encoding, storage, and retrieval of information, which require attention, emotional stability, and a conducive learning environment. However, exposure to chronic stress and trauma disrupts these processes, leading to poor academic outcomes (Ormrod, 2020). Empirical evidence supports the relationship between PTSD and academic functioning. Studies have shown that PTSD symptoms are associated with difficulties in concentration, memory, and academic engagement (Morissette et al., 2021), as well as decreased motivation and increased dropout tendencies (Boyras et al., 2016). Trauma exposure has also been linked to deficits in attention and executive functioning, directly affecting retention (Perfect et al., 2016). Furthermore, chronic exposure to adversity disrupts learning and memory processes (Masten & Narayan, 2012), while students in conflict zones often experience learning loss due to psychological distress and instability (UNESCO, 2022).

In banditry-affected areas of Katsina State, students are frequently exposed to traumatic events that may trigger PTSD symptoms, thereby reducing their capacity for retention. Persistent insecurity further hinders academic engagement and performance. Therefore, understanding the relationship between PTSD and students' retention is essential for developing effective educational and psychological interventions. This study focuses on SS II students in these areas and aims to provide insights for improving academic outcomes.

Statement of the Problem

Students in banditry-affected areas of Katsina State show low retention in physics, undermining learning despite available teaching and resources. Frequent exposure to traumatic events such as attacks, displacement, and fear of abduction is strongly linked to the development of PTSD among students. PTSD impairs attention, working memory, and information processing, which are essential for retention. Chronic stress affects brain structures like the hippocampus responsible for memory formation and retrieval (McEwen & Morrison, 2013). As a result, affected students struggle to encode and recall information. In addition, symptoms such as intrusive thoughts, hyper arousal, and emotional distress disrupt concentration and classroom engagement, further weakening retention (Zhao et al., 2024).

The central problem, therefore, is the limited understanding of how PTSD affects students' retention in these areas. Without addressing these psychological factors, efforts to improve academic outcomes may remain ineffective. This study examines the impact of PTSD on students' retention in physics to provide evidence-based solutions for conflict-affected environments.

Objectives of the Study

The following are the objectives of the study.

1. To determine the relationship between Post-traumatic stress disorder (PTRQ) and students' retention among senior secondary school students in banditry-affected areas of Katsina State.
2. To examine students' retention levels among senior secondary school students in banditry-affected areas of Katsina State.
3. To assess the predictive level of Post-Traumatic Stress Disorder (PTRQ) among senior secondary school students in banditry affected areas of Katsina State.

Hypotheses

H01: There is no significant relationship between Post-Traumatic Stress Disorder (PTRQ) and students' retention in banditry-affected areas of Katsina State

H02: there is no significant difference in Post-Traumatic Stress Disorder (PTRQ) between students with high and low retention in banditry-affected areas of Katsina State

H03: There is no significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTRQ) in banditry-affected areas of Katsina State.

Theoretical Framework

Cognitive Theory of PTSD: The cognitive theory of PTSD explains that the disorder develops when traumatic experiences are processed in a way that creates a persistent sense of threat (Ehlers & Clark, 2000). Trauma disrupts normal memory encoding and storage, resulting in fragmented and poorly integrated memories that intrude on consciousness and interfere with concentration. In this study, the theory shows how PTSD affects students' retention by impairing attention, working memory, and information processing. Since retention depends on these processes, students exposed to trauma in banditry-affected areas may struggle to encode and retrieve academic content due to disrupted cognitive functioning and intrusive thoughts.

Behaviourist Theory: Behaviourist theory views behaviour as shaped by environmental conditioning through stimulus-response associations (Skinner, 1953). Repeated exposure to traumatic events can condition individuals to develop fear responses to related stimuli. In this context, students exposed to banditry may associate school environments or learning activities with fear and insecurity. This can lead to avoidance behaviours such as absenteeism, low participation, and disengagement from learning. Over time, these behaviours reduce learning opportunities and negatively affect students' ability to retain academic information, explaining the behavioural pathway through which PTSD impacts retention.

Control-Value Theory of Achievement Emotions: The control-value theory states that students' emotions are influenced by their perceived control over tasks and the value they attach to them (Pekrun, 2006). These emotions affect motivation, engagement, and academic outcomes. In this study, PTSD reduces students' sense of control and increases negative emotions such as anxiety, fear, and helplessness. These emotional states weaken motivation and limit cognitive engagement, making it difficult for students to concentrate, process information, and retain learned material. Thus, the theory explains the emotional pathway through which PTSD negatively affects retention.

Methodology

This study adopted a descriptive survey research design. A descriptive survey design is appropriate when a researcher intends to collect data from a large population in order to describe existing conditions, opinions, behaviors, or relationships between variables without manipulating them (Creswell & Creswell, 2018). The population of this study consisted of 21,576 Senior Secondary School II (SS II) students in banditry-affected areas of Katsina State, Nigeria. This group was selected because SS II students are at a critical academic stage where cognitive retention is essential for progression to senior academic examinations. Moreover, students in these areas are more likely to have been exposed to insecurity-related trauma, making them appropriate for examining the effects of PTSD on academic retention.

Sample and Sampling Technique

A sample size of 378 students was determined using the Research Advisor (2006) table for determining sample size from a population of 21,576 students at a 95% confidence level. Two sampling techniques were employed in this study to ensure fairness.

Firstly, the cluster sampling technique was used to divide the population into three senatorial zones

within the banditry-affected areas. This was to ensure that each group is adequately represented in the sample. Secondly, after clustering the population, one local government was selected from each zone in which two schools were systematically selected from each sampled local government area. A simple random sampling was used to select individual students from each school.

Table 1: Sample Size

Local Government	Name of Schools	No. of Students	Sample Size
Kurfi	Government Science Secondary School Kurfi	421	96
	Government Girls Secondary School Kurfi	211	48
Kankia	Government Senior Secondary School Kanti Kankiya	264	60
	Government Girls Senior Secondary School Kankiya	215	49
Malumfashi	Unity Secondary School Malumfashi	312	71
	Government Senior Secondary School Kanti Kankiya	233	54
Total		1656	378

Source: Researcher Designed

Instrumentation

Two structured questionnaires were used in this study. Post-Traumatic Stress Disorder Questionnaire (PTSDQ) and retention scale. Each instrument was divided into two sections. Section A consists of students' bio data. Section B of the first instrument measured students' level of exposure to and symptoms of post-traumatic stress disorder such as intrusive memories, avoidance behavior, emotional numbness, sleep disturbance, and difficulty concentrating. Section B of the second instrument measured students' retention in physics. Each consists of structured items designed on a 5-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1).

Validity and Reliability of the instrument

The instrument was subjected to both face validity and content validity. The instrument was reviewed by experts in educational psychology and measurement and evaluation and ensure alignment with the research objectives. The reliability of the instrument was established using Cronbach's Alpha, which measures internal consistency of the questionnaire items. A pilot test was conducted, and the following reliability coefficients were obtained: Post-Traumatic Stress Disorder Scale: $\alpha = 0.82$ and Retention Scale: $\alpha = 0.79$. These values indicate acceptable levels of reliability, as coefficients above 0.70 are generally considered adequate for social science research (Nunnally & Bernstein, 1994).

Result of the Findings

H01: There is no significant relationship between Post-Traumatic Stress Disorder (PTSD) and students' retention in banditry-affected areas of Katsina State.

Table 2: PPMC showing the Relationship between Post-Traumatic Stress Disorder (PTSD) and

students' retention in Physics.

Variables	N	Mean	SD	r-value	p-value	Decision
Post-Traumatic Stress Disorder	378	44.4515	10.212			
Retention		51.3185	12.4111	-.541	.001	Significant

PPMC at .05 alpha level of Significance

Table 1 reveals significant negative relationship (r -value = $-.541$) which is significant at .05 alpha levels of significance ($p = .001$, $\alpha < .05$). Therefore, since the p -value of .001 is less than the alpha-value .05 the stated null hypothesis is rejected. This implies that, there is significant relationship between Post-Traumatic Stress Disorder (PTSD) and students' retention in Physics in Katsina State.

H02: there is no significant difference in Post-Traumatic Stress Disorder (PTSD) between students with high and low retention in banditry-affected areas of Katsina State.

Table 3: t-test showing the difference in Post-Traumatic Stress Disorder (PTSD) between students with high and low retention in Physics

Variable	Retention	N	Mean	SD	df	t-value	p-value
PTSD	High	141	46.6126	10.8568	376	4.111	.002
	Low	237	42.2905	9.6074			

t-test at .05 alpha level of significance

Table 2 reveals that there is significant difference in Post-Traumatic Stress Disorder (PTSD) between students with high and low retention in physics. Reason being the fact that the calculated; P-value (.002) is less than α -value (.05). Therefore, the hypothesis is rejected. This implies that, there is significant difference in Post-Traumatic Stress Disorder (PTSD) between students with high and low retention in physics of Katsina state, Nigeria. It is also shows that PTSD with high retention had a mean of 46.6126 greater than that of low retention of 42.2905. This implies that, a Post-Traumatic Stress Disorder (PTSD) higher in students with high retention than in those in low retention.

H03: There is no significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD) in banditry-affected areas of Katsina State.

Table 4: T-test showing the gender difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD)

Variable	PTSD	N	Mean	SD	df	t-value	p-value
Retention	Strong	141	50.3807	10.4568	376	4.109	.002
	Weak	237	52.2563	13.3654			

t-test at .05 alpha level of significance

Table 3 reveals that there is significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD). P-value (.002) is less than α -value (.05). This means, the null hypothesis is rejected. Therefore, there is no significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD) of Katsina State, Nigeria, it is also retention with strong PTSD found to have lower mean score of 50.3807 than the retention with weak PTSD of 52.2563. This implies that, a retention in students with weak PTSD is high than students with strong PTSD.

Discussions of the Findings

Hypothesis one stated that there is no significant relationship between PTSD and students' retention in banditry-affected areas of Katsina State. However, the findings revealed a strong negative relationship, indicating that increased PTSD symptoms reduce students' ability to retain academic information. This aligns with studies showing that trauma impairs attention and memory processes essential for learning (Zhao et al., 2024; Morissette et al., 2021). Chronic stress also disrupts hippocampal functioning, affecting memory formation and retention (McEwen & Morrison, 2013). Further evidence from conflict settings confirms that PTSD is associated with reduced academic performance and cognitive control (Sarpdağı et al., 2025; Betancourt et al., 2013), while students in such environments experience learning disruptions due to trauma and insecurity (UNESCO, 2022). These findings support the conclusion that PTSD significantly undermines students' retention and educational outcomes in banditry-affected areas.

Hypothesis two which stated that there is no significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD) in banditry-affected areas of Katsina State. This finding is consistent with Masten and Narayan (2012), who explained that trauma exposure disrupts cognitive development and learning processes. UNESCO (2022) also reported that students in conflict-affected regions experience learning loss due to psychological distress and instability. Furthermore, recent evidence suggests that PTSD increases anxiety and reduces academic control, which negatively affects learning outcomes and memory retention (Zhao et al., 2024; Sarpdağı et al., 2025).

Hypothesis three which stated that there is no significant difference in retention between students with strong and weak Post-Traumatic Stress Disorder (PTSD) in banditry-affected areas of Katsina State. This finding implies that students with higher PTSD symptoms are more likely to experience lower academic retention. This aligns with Boyraz et al. (2016), who found that PTSD negatively predicts academic persistence and performance. Similarly, Morissette et al. (2021) reported that PTSD significantly impairs educational functioning, including memory, concentration, and academic engagement. Recent studies further confirm that psychological distress strongly predicts academic outcomes among students, especially in stressful or crisis environments (Lakhan et al., 2025; Zhao et al., 2024). A meta-analytic review also supports a consistent negative relationship between stress-related disorders and academic performance among students (Zhai & Du, 2022).

Conclusion

The study concludes that PTSD has a significant negative effect on students' retention in banditry-affected areas of Katsina State. Exposure to traumatic events leads to psychological distress, which impairs cognitive functioning, emotional stability, and academic engagement. As a result, students struggle to concentrate, process, and retain information. Consistent with recent studies (Zhao et al., 2024; Morissette et al., 2021; Sarpdağı et al., 2025), the findings highlight mental health as a key factor in academic success. Without proper psychological support, affected students are likely to continue experiencing poor retention and performance.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Schools should establish functional guidance and counseling units staffed with trained mental health professionals to provide psychological support for students exposed to trauma. This will help reduce PTSD symptoms and improve academic engagement.
2. Teachers should be trained on trauma-informed instructional approaches that recognize and

respond to students' psychological needs. This includes creating safe learning environments, using supportive communication, and avoiding triggers that may worsen trauma responses.

3. Government and security agencies should strengthen security measures in banditry-affected areas to ensure that schools are safe learning environments. Reduced exposure to violence will help minimize the development of PTSD among students.

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