

Comparative Assessment of Psychological Outcomes between Students in Conflict-Affected and Secure Regions in Delta State, Nigeria

EKEDAMA, kate¹

kateekadama@gmail.edu.ng

07033061252

OBIUNU, Jude¹

Obiunu@delsu.edu.ng

08033112197

¹Department of Guidance and Counselling, Faculty of Education,
Delta State University, Abraka, Nigeria.

Abstract

This study carried out an Assessment of psychological outcomes between students in conflict-affected and secure regions in Delta State, Nigeria. The investigation was guided by two objectives with corresponding research questions and hypotheses. Correlational research design was adopted for the study, population of the study consists of 28,065 Secondary School Students in Delta State using a sample size of 394 students from conflict-affected and secure regions of Delta State, respectively. However, the sample size was arrived at using Taro Yamane formula for sample size calculation. The cluster sampling technique was used to select the students. A researcher-designed questionnaire "Psychological Outcome Questionnaire (POQ)" was used to elicit data for the study. The instrument was validated by experts in Measurement and Evaluation reviewed the questionnaire to ensure its validity. The questionnaires showed good internal consistency with a reliability coefficient of 0.835, determined by Cronbach's Alpha test. The regression analysis was used to answer and test the null hypotheses at 0.05 level of significance. The findings of the study revealed a significant relationship between the prevalence of anxiety and depression among students in conflict-affected regions and those in secured regions in Delta State, and there is a significant relationship between the severity of PTSD and emotional distress among students in conflict-affected and secured regions in Delta State. The two recommendations based on the above two findings are that the Delta State government should prioritize mental health support services in conflict-affected regions and implement targeted interventions to address the psychological issues faced by students in these areas. Also, to manage the severity of the psychological issues, the government should engage with local community leaders and organizations to provide holistic support to students in conflict-affected regions, including counselling, trauma-informed care, and psychosocial support.

Keywords: Psychological Outcome, Conflict-Affected Reion, Secure Region

Introduction

Conflict has long been recognized as a significant disruptor of human development (Adegbonmire, 2015), particularly in regions where communities grapple with prolonged violence, instability, and insecurity. Delta State, Nigeria, represents a microcosm of such realities, as it comprises both conflict-affected areas, primarily due to resource-driven disputes, and more secure regions where such tensions are relatively absent. These contrasting conditions provide a unique context to examine the psychological outcomes of students, a vulnerable population whose mental health and well-being are intricately tied to their immediate environment (Akar, 2019). The experiences of these students, whether shaped by exposure to violence or the relative calm of secure regions, demand focused attention to understand how conflict impacts their psychological resilience, academic performance, and overall mental health. To contextualize this study, it is essential to define key concepts. Psychological outcomes refer to the mental and emotional states that arise in response to an individual's experiences and environment, including indicators such as anxiety, depression, post-traumatic stress, and emotional resilience (Charlson et al., 2019). Conflict-affected regions, in this context, are areas characterized by intermittent or ongoing violence, often linked to political, economic, or resource-based disputes, such as the Niger Delta's resource control conflicts. Conversely, secure regions are those that enjoy relative peace and stability, with minimal exposure to conflict or violence (El-Khodary & Samara, 2020).

The prevalence of psychological issues among students in conflict-affected areas is alarmingly high. Studies have consistently demonstrated that exposure to violence, whether direct or indirect, correlates strongly with adverse mental health outcomes (Onyishi, 2022). In Delta State, students in conflict-affected regions often witness violence, experience displacement, or endure the loss of loved ones, all of which contribute to heightened levels of anxiety, depression, and trauma. By contrast, students in secure regions, while not entirely immune to stressors, are less likely to face these extreme challenges, enabling them to develop within a relatively stable psychosocial environment (Alotabi, 2021). The disparity in psychological outcomes between these two groups highlights the critical need for targeted interventions and underscores the urgency of addressing the mental health crisis among students in conflict-affected areas. The severity of psychological challenges faced by students in conflict zones often manifests in various ways, including impaired cognitive function, difficulty concentrating, and diminished academic performance. Beyond the academic sphere, such challenges can lead to long-term implications, including difficulty forming healthy relationships, reduced employability, and perpetuation of cycles of poverty and instability (Khamis, 2015). On the other hand, students in secure regions tend to exhibit better-coping mechanisms, higher academic achievement, and stronger social bonds, primarily due to their relatively stable environment (Iff & Jones, 2015). However, it is important to note that even in secure regions, students may face psychological issues stemming from other stressors, such as poverty, familial discord, or systemic educational challenges.

The theoretical framework anchoring this study is Bronfenbrenner's Ecological Systems Theory, which posits that human development is influenced by a series of nested environmental systems (Bronfenbrenner, 1979). These systems range from the immediate microsystem, which includes family, school, and peer relationships, to the broader macrosystem, encompassing societal norms, cultural values, and economic conditions. In the context of this study, the microsystem of students in conflict-affected regions is disrupted by violence, instability, and trauma, leading to adverse psychological outcomes (Langford et al., 2014). The mesosystem, which involves interactions between the student's immediate environments, is similarly strained in conflict zones, as schools, families, and communities struggle to provide the necessary support structures. By contrast, students in secure regions benefit from more stable microsystems and mesosystems, which foster positive psychological development. The macrosystem, particularly the sociopolitical and economic conditions of Delta State, further compounds the challenges faced by students in conflict-affected areas, as systemic inequalities and resource-driven disputes create a fertile ground for instability. Bronfenbrenner's theory provides a valuable lens through which to examine the interplay of these environmental factors and their impact on the psychological outcomes of students (Rosa, & Tudge, 2013). It underscores the importance of addressing not only individual-level interventions but also broader systemic changes to mitigate the adverse effects of conflict. This study seeks to bridge a critical gap in the literature by exploring the nuanced differences in psychological outcomes among students in conflict-affected and secure regions of Delta State, Nigeria. By applying the principles of Bronfenbrenner's Ecological Systems Theory, the research aims to unravel the complex interplay of environmental factors shaping students' mental health. Ultimately, the findings are expected to inform evidence-based interventions and policy recommendations that address the unique needs of students in both contexts, fostering resilience and promoting equitable development across the region.

Psychological issues among students have become a growing concern globally, as they can significantly hinder academic performance, social interactions, and overall development. In regions affected by conflict, these issues are often exacerbated by exposure to violence, displacement, and the disruption of social and familial structures. Students in such environments are at an increased risk of developing anxiety, depression, post-traumatic stress disorder (PTSD), and other mental health challenges (Forsberg & Schultz, 2023). These conditions not only impair their immediate academic progress but also have long-term implications for their psychological well-being and societal integration. In the Nigerian context, the situation is particularly dire in areas like Delta State, where conflict is fueled by resource control disputes and political instability. Students in these regions often face compounded challenges, including disrupted educational opportunities, inadequate mental health support, and exposure to traumatic events. For instance, many schools in conflict-affected areas lack the necessary infrastructure and resources to provide a safe and supportive learning environment. Additionally, the stigma surrounding mental health in Nigeria further prevents students from seeking help, leaving their psychological needs largely unaddressed. This creates a vicious cycle where unresolved mental health issues hinder academic success and perpetuate systemic inequalities.

Even in secure regions of Delta State, students are not entirely insulated from psychological challenges. Poverty, familial discord, and systemic educational deficiencies contribute to a range of mental health issues, albeit to a lesser degree than in conflict-affected areas. The lack of comprehensive mental health policies and interventions in Nigeria further exacerbates the problem, as students across both contexts struggle to access the support they need. This study, therefore, aims to address these gaps by examining the psychological outcomes of students in conflict-affected and secure regions.

Aim and Objectives of the Study

This study conducted a comparative analysis of the psychological outcomes between students in conflict-affected and secured regions in Delta State, Nigeria. The objectives of the study were to:

1. Compare the prevalence of anxiety and depression between students in conflict-affected regions and those in secured regions in Delta State.
2. Compare the severity of post-traumatic stress disorder and emotional distress between students in conflict-affected regions and those in secured regions in Delta State.

Research Question

1. To what extent is anxiety and depression prevalent among students in conflict-affected regions and those in secured regions in Delta State?
2. To what extent is the post-traumatic stress disorder and emotional distress severe among students in conflict-affected regions and those in secured regions in Delta State?

Hypotheses

H₀₁: There is no significant relationship between the prevalence of anxiety and depression among students in conflict-affected regions and those in secured regions in Delta State.

H₀₂: There is no significant relationship between the severity of post-traumatic stress disorder and emotional distress among students in conflict-affected regions and those in secured regions in Delta State.

Methodology

The study adopted a Correlational design. A population of 28,065 students was used for the study, which comprised 2,645 students from 8 secondary schools in conflict-affected LGAs in Warri South-West, and 25,423 students from 15 secondary schools in secured LGAs in Sapele. The sample size of 394 students was determined using the Taro Yamane formula for sample size calculation. The cluster sampling technique was employed to ensure representation from various schools in both conflict-affected and secured regions. The cluster sampling technique was considered appropriate due to logistical constraints and safety concerns in conflict-affected areas, allowing for a more feasible data collection process. A researcher-developed questionnaire titled Psychological Outcome Questionnaire (POQ) was used to collect data on psychological issues, such as anxiety, depression, and post-traumatic stress disorder. The foregoing psychological issues were chosen because they can significantly impact overall well-being both during and after exposure to conflict situations. The survey used a four-point scale to measure responses, with options ranging from Strongly Agree (4 points) to Strongly Disagree (1 point). An expert in Measurement and Evaluation evaluated the questionnaire to ensure its content validity. The questionnaire showed good internal consistency with a reliability coefficient of 0.831, determined through Cronbach's alpha analysis. The regression analysis was used to answer and test the null hypotheses at a 0.05 level of significance.

Presentation of Results

Research Question 1: To what extent is anxiety and depression prevalent among students in conflict-affected regions and those in secured regions in Delta State?

Table 1: Summary of regression coefficient of the extent to which anxiety and depression prevalent among students in conflict-affected regions and those in secured regions in Delta State

		Coefficients ^a			
		Unstandardized Coefficients		Standardized Coefficients	T
Elements of Psychological Outcomes		B	Std. Error	Beta	
*CAR (n=92)	(Constant)	3.050	.061		49.604
	Anxiety	.036	.003	.429	11.357
	Depression	.039	.003	.444	11.752

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**SR	(Constant)	2.018	.243		8.288
(n=302)	Anxiety	-.003	.011	-.018	-.306
	Depression	-.008	.012	-.041	-.711

*CAR – Conflict-Affected Region

**Secured Region

Table 1 shows the extent to which anxiety and depression are prevalent among students in CAR and secured regions SR in Delta State, Nigeria. The result indicated that for students in CAR, the constant value (3.050) indicates a high baseline level of psychological distress in this group. Anxiety has a positive relationship with psychological outcomes ($B = 0.036$, $\beta = 0.429$, $t = 11.357$). Depression also has a positive relationship with psychological outcomes ($B = 0.039$, $\beta = 0.444$, $t = 11.752$), implying that increased depression levels contribute significantly to psychological distress. The strong coefficients indicate that students in conflict-affected regions experience high levels of anxiety and depression, which are key predictors of their psychological outcomes. For students in SR, the constant value (2.018) is lower than in conflict-affected regions, suggesting that baseline psychological distress is lower among students in secured areas. Anxiety shows a negative relationship with psychological outcomes ($B = -0.003$, $\beta = -0.018$, $t = -0.306$). Depression also has a negative relationship ($B = -0.008$, $\beta = -0.041$, $t = -0.711$), meaning that depression does not impact psychological distress among students in secured regions.

Research Question 2: To what extent is the post-traumatic stress disorder and emotional distress severe among students in conflict-affected regions and those in secured regions in Delta State?

Table 2: Summary of regression coefficient of the extent to which the post-traumatic stress disorder and emotional distress severe among students in conflict-affected regions and those in secured regions in Delta State

		Coefficients ^a			
Elements of Psychological Outcomes		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
*CAR	(Constant)	3.060	.061		50.188
(n=92)	PTSD	-.040	.003	-.480	-13.430
	Emotional Distress	-.035	.003	-.434	-12.132
**SR	(Constant)	1.398	1.267		1.104
(n=302)	PTSD	.017	.039	.048	.447
	Emotional Distress	-.009	.046	-.021	-.193

*CAR – Conflict-Affected Region

**Secured Region

Table 2 show the extent to which PTSD and emotional distress are severe among students in CAR and those in SR in Delta State. The result indicated that; for students in CAR, the constant value of 3.060 suggests that, on average, psychological distress levels are high among students in conflict-affected regions. PTSD has a negative effect ($B = -0.040$, $\beta = -0.480$, $t = -13.430$), indicating that as PTSD symptoms increase, students experience a severe decline in psychological well-being. Emotional distress also has a negative impact ($B = -0.035$, $\beta = -0.434$, $t = -12.132$), suggesting that heightened emotional distress is associated with severe psychological struggles among students in conflict-affected regions. Findings for students in SR, the constant value (1.398) of the baseline psychological distress levels among students in secured regions are relatively low and not significantly different from zero. PTSD shows a weak relationship with psychological distress ($B = 0.017$, $\beta = 0.048$, $t = 0.447$), suggesting that PTSD symptoms do not affect students in secured regions. Emotional distress also has a low effect ($B = -0.009$, $\beta = -0.021$, $t = -0.193$), indicating that students in secured regions do not experience severe emotional distress.

Hypothesis 1: There is no significant relationship between the prevalence of anxiety and depression among students in conflict-affected regions and those in secured regions in Delta State.

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Table 3: Model summary of regression analysis on the relationship between the prevalence of anxiety and depression among students in conflict-affected regions and those in secured regions in Delta State

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.737 ^a	.543	.540	.287

a. Predictors: (Constant), Depression, Anxiety

Table 4: ANOVA summary of regression analysis

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	38.259	2	19.129	231.857	.000 ^b
	Residual	32.259	391	.083		
	Total	70.518	393			

a. Dependent Variable: Region

b. Predictors: (Constant), Depression, Anxiety

The model summary of Table 3 shows that the R value of 0.737 indicates a strong positive correlation between anxiety, depression, and the region where students reside. The R Square (0.543) suggests that 54.3% of the variance in students' region (conflict-affected or secured) is explained by the prevalence of anxiety and depression. The Adjusted R Square (0.540) confirms that after accounting for potential model overfitting, 54.0% of the variance is still explained by the predictors, making the model reliable. Also, the ANOVA summary of Table 3b shows that the F-value of 231.857 is significantly high, indicating that the model as a whole is a good fit. The p-value < 0.05, meaning the relationship between anxiety, depression, and students' regional classification is statistically significant. Thus, null hypothesis one is rejected.

Hypothesis 2: There is no significant relationship between the severity of post-traumatic stress disorder and emotional distress among students in conflict-affected regions and those in secured regions in Delta State.

Table 5: Model summary of regression analysis on the relationship between the severity of post-traumatic stress disorder and emotional distress among students in conflict-affected regions and those in secured regions in Delta State

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742 ^a	.550	.548	.285

a. Predictors: (Constant), Emotional Distress, PTSD

Table 6: ANOVA summary of regression analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.802	2	19.401	239.177	.000 ^b
	Residual	31.716	391	.081		
	Total	70.518	393			

a. Dependent Variable: Region

b. Predictors: (Constant), Emotional Distress, PTSD

The model summary of Table 4a shows that the R value of 0.742 indicates a strong positive correlation between PTSD severity, emotional distress, and the region where students reside. The R Square (0.550) suggests that 55.0% of the variance in students' region (conflict-affected or secured) is explained by the prevalence of PTSD severity and emotional distress. The Adjusted R

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Square (0.548) confirms that after accounting for potential model overfitting, 54.8% of the variance is still explained by the predictors, making the model reliable.

Also, the ANOVA summary of Table 4b shows that the F-value of 239.177 is significantly high, indicating that the model as a whole is a good fit. The p-value < 0.05, meaning the relationship between PTSD severity, emotional distress, and students' regional classification is statistically significant. Thus, null hypothesis two is rejected.

Discussion of Findings

The first research question found that students in conflict-affected regions experience high levels of anxiety and depression, which are key predictors of their psychological outcomes. On the other hand, anxiety and depression also has a negative relationship, meaning that anxiety and depression does not impact psychological distress among students in secured regions. Furthermore, hypothesis one showed that the relationship between anxiety, depression, and students' regional classification is statistically significant. This aligns with research conducted by Alotaibi (2021), which showed that there are statistically significant differences between those who lived at the time of war and those who did not live (in favor of those who lived at the time of war) in the level of future anxiety.

The result of research question two revealed that PTSD and emotional distress also has a negative impact, suggesting that heightened PTSD and emotional distress is associated with severe psychological struggles among students in conflict-affected regions. On the other hand, PTSD symptoms and emotional distress has a low effect among students in secured regions, indicating that students in secured regions do not experience severe emotional distress. Furthermore, hypothesis two showed that the relationship between PTSD severity, emotional distress, and students' regional classification is statistically significant. This aligns with research conducted by Alotaibi (2021), which showed that there are also statistically significant differences between those exposed to harm or their family because of the war and those who were not exposed (in favour of those who were exposed) in the level of future anxiety as a whole.

Conclusion

This study conducted a comparative analysis of psychological outcomes between students in conflict-affected and secure regions in Delta State. The findings revealed a significant relationship between the prevalence of anxiety and depression among students in conflict-affected regions and those in secured regions in Delta State. The findings suggest that students in conflict-affected areas experience significantly different levels of anxiety and depression compared to those in secured regions. Furthermore, there is a significant relationship between the severity of PTSD and emotional distress among students in conflict-affected and secured regions in Delta State. The findings suggest that students in conflict-affected regions are likely to experience higher levels of emotional distress due to increased PTSD severity. These disparities underscore the profound impact of environmental factors, such as exposure to violence, displacement, and instability, on the mental health of students in conflict-affected areas. The findings highlight the urgent need for targeted mental health interventions, psychosocial support programs, and policies aimed at mitigating the adverse effects of conflict on students' psychological well-being. Based on the findings, this study concludes that addressing the issues is critical not only for improving the mental health of students in conflict-affected regions but also for fostering their academic performance, social integration, and long-term personal development.

Recommendations

The study recommended as follows:

- i. Delta State government should prioritize mental health support services in conflict-affected regions and implement targeted interventions to address the psychological issues faced by students in these areas.
- ii. To manage the severity of the psychological issues, the government should engage with local community leaders and organizations to provide holistic support to students in conflict-affected regions, including counselling, trauma-informed care, and psychosocial support.

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