

# Experience of Terrorism and the Mental Health Status of Adolescents in North- Central of Nigeria

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## ABSTRACT

Terrorism, defined as the premeditated use or threat of violence to instil fear and compel authority compliance, poses a global security threat with profound psychological effects, particularly on vulnerable populations like adolescents. In regions like Northern Nigeria, where terrorist activities are prevalent, the mental health impact on adolescents is a critical concern. This study investigates the relationship between terrorism exposure and mental health among adolescents in Mangu Local Government Area (LGA), Plateau State, Nigeria.

This cross-sectional study was conducted in Mangu LGA, Plateau State, in 2024. Adolescents aged 10-19 years were surveyed, with a sample size of 200 determined using Leslie Fischer's formula. Data were collected through standardized questionnaires covering socio-demographic information, terrorism experiences, and mental health status. SPSS version 20.0 was used for statistical analysis, including regression to assess the relationship between terrorism and mental health.

92.5% of the adolescents experienced a terrorist attack, 57.9% reported deaths, and 42.1% reported injuries. Religion was the primary cause of attacks, with 88.6%. Many adolescents reported worsened mental health. Notably, 49% felt the same regarding thoughts of death, but 24% reported worsened feelings. Terrorism exposure significantly predicted mental health status, accounting for 25.5% of the variation in mental well-being ( $R^2 = -0.255$ ,  $p < 0.05$ ).

Terrorism significantly negatively impacts adolescent mental health in Mangu LGA. Targeted interventions, including psychosocial support and trauma-informed care, are crucial. Policymakers should address terrorism's root causes and promote peace-building initiatives. Further, longitudinal studies are needed to explore long-term effects and inform interventions.

**Keywords:** Terrorism, Adolescents, Mental Health, Mangu LGA, Nigeria.

## INTRODUCTION

Terrorism can be defined as the deliberate use or threat of violence by an individual or group to cause fear, destruction, or death, especially against unarmed targets, property, or infrastructure in a state, to generate a general climate of fear among the population and compel those in authority to respond to the demands and expectations of the perpetrators.<sup>1</sup>Terrorism, characterized by its indiscriminate violence and calculated fear-inducing tactics, has emerged as a pervasive threat to global security. Its impact transcends physical casualties, extending into the realm of mental health, particularly among vulnerable populations such as adolescents. In

regions marked by frequent terrorist activities, such as the Northern part of Nigeria, the psychological toll on adolescents is of paramount concern.

Mangu Local Government Area (LGA) in Plateau State of Nigeria has been plagued with a series of terrorist attacks due to intertribal, shepherds, and farmers conflict and inter-religious conflicts over the years. Within the span of a month from December 2023 to January 2024, 230 people were killed.

The scourge of terrorism inflicts profound psychological distress, trauma, and fear among adolescents, disrupting the delicate balance of their developmental trajectories.<sup>2</sup> Adolescence, a critical period characterized by identity formation, emotional regulation, and social integration, becomes significantly challenged in environments marred by terrorism. The constant threat of violence, loss, and instability disrupts the sense of safety and security that adolescents require for healthy psychological development. Continuous exposure to stress, particularly in adolescents, can induce structural changes in neural connectivity and have long-term consequences on brain functioning, affecting mental and social well-being.<sup>3</sup>

Moreover, the aftermath of terrorist attacks leaves lasting scars on the mental well-being of adolescents. Witnessing or experiencing violence, loss of loved ones, displacement, and the destruction of community infrastructure exacerbate the symptoms of posttraumatic stress disorder (PTSD), anxiety, depression, and other psychological disorders. These adverse mental health outcomes not only impair individual functioning but also hinder academic performance, social relationships, and prospects.<sup>4</sup>

Research has shown elevated rates of mental disorders among young individuals exposed to terrorist attacks, whether those incidents unfolded in nations not engaged in warfare, such as the September 11, 2001 attack, or in regions embroiled in ongoing political conflicts like Israel, Northern Ireland, and Guatemala.<sup>5</sup> Another study that focused on PTSD among Norwegian high school students following the Oslo terror attack in 2011 revealed that 0.8% of respondents experienced significant distress related to reexperiencing, 4.9% reported distress regarding avoidance, and 1.1% exhibited hyperarousal symptoms. Additionally, 4.9% reported substantial distress in at least one PTSD symptom category, while 0.4% experienced significant distress across all three categories.<sup>6</sup>

Despite the gravity of these mental health challenges, there remains a lack of empirical research addressing the specific impact of terrorism on adolescents in local contexts such as in Mangu Local Government, Plateau State. Consequently, understanding the unique psychological needs and vulnerabilities of adolescents in this region is essential for informing targeted interventions and support systems. Hence, the research aims to determine the relationship between experience of terrorism and mental health status among adolescents in Mangu Local Government, Plateau State.

## **MATERIALS AND METHODS**

### **Study area**

This community-based, descriptive cross-sectional study was conducted in Mangu LGA, Plateau State, Nigeria, between September and December 2024. Mangu LGA is one of the 17 LGAs of Plateau State, situated in the North Central region of Nigeria. It spans a land area of 1,653 km<sup>2</sup> and is predominantly inhabited by the Mwaghavul ethnic group. The LGA comprises 20 wards.

### **Study population**

All adolescents' resident in Mangu LGA of Plateau State. Residents aged below ten and above 19 were excluded from the study, as were adolescents who did not consent to participate.

### **Sample Size Calculation**

A sample size of 200 was calculated for the study using Leslie Fisher's formula for single proportions and adjusted for a population of less than 10,000.

## Sampling Technique

The study employed a multistage stratified random sampling technique. The first stage involved identifying communities that experienced terrorist attacks in Mangu LGA. In the second stage, adolescents aged 10-18 were randomly selected from households within the affected communities.

## Research Instrument

Data were collected using questionnaires covering sociodemographic information, experiences of terrorism, mental health status, and social well-being. A standard questionnaire was used.<sup>7</sup>

## Data Collection

The data collection was carried out by trained fieldworkers who administered the questionnaires in-person, following ethical guidelines. Informed consent was obtained from the participants and their guardians before data collection. The study took measures to minimize bias by ensuring that interviewers were neutral and trained to handle sensitive topics with empathy.

## Data Analysis

Data was analysed using descriptive and inferential statistical methods to address the study's objectives. This was performed using the SPSS statistical package (version 20.0). Descriptive statistics such as frequencies, percentages, and cross-tabulations were employed to summarize the sociodemographic characteristics of the participants, their experiences of terrorism, and their mental health status.

For the sociodemographic variables (age, gender, marital status, education, religion, custodianship, and occupation), frequency counts and percentages were computed to provide a profile of the respondents. Similarly, the frequency and nature of respondents' experiences with terrorism, including their emotional responses, means of escape, and the perceived causes of terrorist attacks, were analyzed using descriptive statistics.

To assess the relationship between exposure to terrorism and mental health outcomes, inferential statistics were employed. A regression analysis was performed to explore how exposure to terrorism (the independent variable) impacted the mental well-being of adolescents (the dependent variable). The strength and direction of this relationship were determined using the R-value, and the proportion of variance explained by the model was assessed using the R<sup>2</sup> and adjusted R<sup>2</sup> values.

## RESULTS

**Table 1: Sociodemographic characteristics of respondents**

VARIABLES	Variables	Frequency	Percentage
AGE	<11	8	4.0
	12-15	60	30.0
	>16	132	66.0
GENDER	Male	93	46.5
	Female	107	53.5
MARITAL STATUS	Single	115	57.5
	Married	55	27.5

	Divorced/Separated	30	15.0
<b>EDUCATIONAL STATUS</b>	No formal	129	64.5
	Primary	29	14.5
	Secondary	42	21.0
<b>RELIGION</b>	Christianity	115	57.5
	Islam	62	31.0
	Traditionalist	23	11.5
<b>CUSTODIAN</b>	Parents	112	56.0
	Friends	56	28
	Live alone	32	16.0
<b>OCCUPATION</b>	Trade	78	39.0
	Civil servant	54	27.0
	Farmer	39	19.5
	Unemployed	29	14.5

In this study, sixty individuals (30%) fell within the age range of 12-15 years, while one hundred and thirty-two participants (66.0%) were 16 or older. Of the sample, one hundred and seven individuals (53.5%) identified as female, while ninety-three (46.5%) identified as male. Regarding marital status, one hundred and fifteen participants (57.5%) reported being single, fifty-five (27.5%) were married, and thirty (15%) were divorced or separated.

In terms of living arrangements, one hundred and two respondents (56.0%) resided solely with their parents, fifty-six (28%) lived with friends, and thirty-two (16%) lived alone. Occupational distribution revealed that seventy-eight respondents (39%) were engaged in trading, fifty-four (27%) were civil servants, thirty-nine (19.5%) were farmers, and twenty-nine (14.5%) were unemployed.

Religious wise, one hundred and fifteen participants (57.5%) identified as Christians, sixty (31%) as Muslims, and twenty-three (11.5%) as adherents of traditional beliefs

**Table 2: Experience of terrorism.**

Variables	Frequency	Percentage
<b>History of previous terrorist attacks (n=200)</b>		
Yes	185	92.5
No	15	7.5
<b>Means of escape (n=185)</b>		
Called Security	90	48.6
Running inside bush	37	20.0

Hide	13	7.0
Remain calm inside	45	24.3
<b>Knowledge of someone attacked before (n=200)</b>		
Yes	190	95.0
No	10	5.0
<b>Consequences of the attack on the person (n=190)</b>		
Injury	80	42.1
Deaths	110	57.9
<b>Cause of the attack by the terrorist (n=185)</b>		
Religion	164	88.6
Unemployed	21	11.4
<b>Frequency of attack (n=185)</b>		
Frequent	140	75.7
Occasional	45	24.3
<b>Emotional Response during the attack. (n=185)</b>		
Happy	2	1.1
Stressed	45	24.3
feel up	31	16.8
sad	64	34.6
pained	43	23.2
<b>Duration of the Terrorist attack. (n=185)</b>		
<1month	98	53.0
1-2months	56	30.2
3months and above	31	16.8

Out of the total respondents, 185 individuals (92.5%) reported having experienced a terrorist attack, while 15 individuals (7.5%) had not. Among those who experienced attacks, 2 respondents (1.1%) reported feeling happy during the incidents, 45 (24.3%) felt stressed, 64 (34.6%) felt upbeat, 64 (34.6%) felt sad, and 43 (23.2%) felt pained.

Regarding the duration of the attacks, 98 respondents (53%) experienced attacks lasting less than 1 month, 56 (30.2%) endured attacks for 1-2 months, and 31 (16.8%) experienced attacks lasting 3 months or more. Most respondents, 140 (75.7%), described the attacks as frequent, while 45 (24.3%) reported them as occasional.

Participants attributed the attacks primarily to religion, with 164 individuals (88.6%) citing it as the cause, while 21 individuals (11.4%) attributed the attacks to unemployment.

**Table 3: Mental health status of adolescent. n=200**

SN	Variables	Better than usual	Same as usual	Worse than usual	Much worse than usual
1	Been feeling in need of a good tonic?	77 (38.5%)	61 (30.5%)	32 (16.0%)	30 (15.0%)
2	Been feeling perfectly well and in good health?	85 (42.5%)	60 (30.0%)	35 (17.0%)	20 (10.0%)
3	Felt that you are ill?	101 (50.5%)	60 (30.0%)	30 (15.0%)	9 (10.0%)
4	Been having hot or cold spells?	79 (39.5%)	48 (24.0%)	29 (14.5%)	44 (22.0%)
5	Been getting scared or panicky for no good reason	68 (34.0%)	90 (45.0%)	28 (14.0%)	14 (7.0%)
6	Been feeling nervous and strung-up all the time?	75 (37.5%)	50 (25.0%)	62 (31.0%)	13 (6.5%)
7	Been thinking of yourself as a worthless person?	85 (42.5%)	40 (20.0%)	65 (32.5%)	10 (5.0%)
8	Found at times you couldn't do anything because your nerves were too bad?	92 (46.0%)	37 (18.5%)	40 (20.0%)	31 (15.5%)
9	Found yourself wishing you were dead and away from it all?	48 (24.0%)	98 (49.0%)	36 (18.0%)	18 (9.0%)

A total of 77 respondents (38.5%) reported feeling much better and needing a good tonic, while 30 individuals (15%) reported feeling much worse than usual and needing a good tonic. Regarding wishing they were dead and away from it all, 98 respondents (49.0%) reported feeling the same as normal, while 18 individuals (9.0%) reported feeling much worse than usual.

Furthermore, 89 individuals (44.5%) who felt much worse than usual reported that they couldn't do anything because their nerves were too bad. Additionally, 31 respondents (15.5%) reported feeling better than normal but thinking of themselves as worthless, while 40 individuals (20%) reported feeling worse than usual with such thoughts.

Model	R	R2	Adj-R2	Std. Error of the estimate
1	- 0.313	- 0.255	- 0.1404	0.093

a. Predictors (Constant), terrorism

b. Dependent variable: mental well-being

Model	Sum of square	Df	Mean	F.	Sig.	Remark	
1	Regression	- 3.837	2	- 2.547	9.369	0.000b	Sig.
	Residual	- 1.792	228				
	Total	- 5.629	230				

a. Dependent variable: mental well-being

b. Predictors: (constant), terrorism

The linear regression results show an  $R^2$  value of 0.255, indicating that terrorism independently accounted for 25.5% of the variation in mental well-being among adolescents. The F-statistic of 9.369 is statistically significant at the 0.05 level, confirming that the model is a good fit. This implies that there is a significant negative relationship between exposure to terrorism and mental well-being. As exposure to terrorism increases, mental well-being tends to decrease. Therefore, the null hypothesis is rejected, supporting the conclusion that terrorism significantly impacts the mental well-being of adolescents in Mangu Local Government, Plateau State."

## DISCUSSION

The sociodemographic characteristics shed light on the profile of the respondents. Notably, the majority of respondents were aged 16 or older, with a nearly equal distribution between genders. Many of the respondents were single and had received at least secondary education, which could be indicative of a population still within their schooling years. Christianity was the dominant religion among the respondents, with most respondents living under the custody of their parents. These sociodemographic factors are consistent with similar studies on adolescent populations in conflict zones, such as those by Ager et al., who found that adolescents in conflict regions often continue to live in family structures but face disruptions due to the external violence surrounding them.<sup>8</sup>

The prevalence of terrorism in the region is striking, with the majority of respondents reporting direct or indirect exposure to terrorist attacks. This high exposure rate aligns with regional reports of the frequency of attacks in Northern Nigeria, as documented by Onuoha, which highlights the ongoing threat posed by Boko Haram and other extremist groups targeting adolescents and civilians.<sup>9</sup> The various means of escape during attacks, such as fleeing or hiding, underscore the chaos and fear associated with such violence and the consequences of these attacks, including injuries and deaths, highlight the severity of the situation. Additionally, the finding that most respondents knew someone who had been attacked before emphasizes the pervasive nature of terrorism in their environment. This corresponds with global data on terrorism-exposed youth, such as in Israel and Palestine, where adolescents frequently report knowing individuals who have been directly affected by violence.

Religion was a significant factor cited as a cause of terrorism, with most respondents attributing attacks to religious tensions. This finding is consistent with previous research by Adesoji and Oladimeji, who highlight how religious extremism has fueled terrorism in Nigeria, particularly in northern regions where religious divisions between Christianity and Islam are often exploited by violent groups.<sup>10-13</sup> Similar findings have been reported internationally, such as in the Middle East, where religious and ideological motivations frequently drive terrorism, as highlighted by Ganor in his study of terrorism in Israel.<sup>14</sup>

The emotional and psychological toll on adolescents is substantial, with a considerable number of respondents reporting adverse mental health outcomes. Many reported feeling worse than usual across various mental health indicators, including feeling of nervousness, panic, worthlessness and even suicidal ideation. These findings are consistent with international studies on the mental health impact of terrorism on youth. For instance, a study by Pat-Horenczyk et al. found similarly high levels of anxiety, depression, and PTSD symptoms among adolescents exposed to ongoing terrorist attacks in Israel.<sup>15</sup> Locally, Olufadewa (2020)

reported that Nigerians exposed to terrorism and violent conflict experienced heightened symptoms of mental health disorders, such as depression, anxiety, and post-traumatic stress disorder (PTSD), further corroborating the present findings.<sup>16</sup>

The regression analysis shows a significant negative relationship between exposure to terrorism and mental well-being among adolescents, indicating that the more an adolescent is exposed to terrorism, the worse their mental health becomes. This aligns with studies in other conflict regions. For example, Thabet and Vostanis demonstrated a similar relationship in their research on Palestinian children, where exposure to violent conflict was strongly associated with negative psychological outcomes.<sup>17</sup> Additionally, Shields et al. found that adolescents exposed to terrorist attacks in Northern Ireland exhibited higher rates of mental health issues, including PTSD, depression, and anxiety.<sup>18</sup>

In conclusion, the findings of this study are consistent with regional and interterature, reinforcing the understanding that terrorism has profound psychological impacts on adolescents. This underscores the urgent need for targeted interventions to address the mental health needs of adolescents living in terrorism-affected areas, not only in Mangu Local Government Area but in similar conflict zones globally.

## CONCLUSION

The findings of this study are consistent with regional and international, reinforcing the understanding that terrorism has profound psychological impacts on adolescents. This underscores the urgent need for targeted interventions to address the mental health needs of adolescents living in terrorism-affected areas, not only in Mangu Local Government Area but in similar conflict zones globally. Psychosocial support programs, trauma-informed care, and community-based interventions could play a crucial role in mitigating the adverse effects of terrorism on mental well-being. Additionally, policymakers should prioritize efforts to address the root causes of terrorism and promote peace-building initiatives to create safer environments for adolescents. Longitudinal studies are warranted to explore further the long-term effects of terrorism exposure on adolescent mental health and inform targeted interventions.

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## **Ethical Consideration**

### **Ethical Approval**

Ethical approval was obtained from the ethical review committee of LAUTECH, Ogbomoso. Respondents were informed of the voluntariness and benefits of participation and assured of anonymity and confidentiality of their responses.

### **Conflict of Interest**

The authors hereby declare no conflict of interest.

### **Data availability**

Data is available on request.