Impact of Insurgency on the Psycho-Social Adjustment of Upper Basic III Science and Mathematics Students in North-East, Nigeria

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ABSTRACT
This study investigated the impact of insurgency on the psycho-social adjustment of Upper Basic III Science and Mathematics students in North-East, Nigeria. The study employed descriptive survey research design. The population of the study consists of 3425 Upper Basic III Science and Mathematics students in North-East, Nigeria. Twelve schools were randomly selected for the study. The sample of this study comprise of 425 students. Two research questions and two research hypotheses guided the study. The instrument used for this study was a modified Likert-type questionnaire titled, "Students Psychosocial Adjustment Assessment Questionnaire" (SPAAQ). The reliability of the instrument was determined using Cronbach Alpha and index was found to be 0.82. Data were analysed using descriptive statistics of mean and standard deviation for research questions and Z-test was used to test the research hypothesis at $\alpha = 0.05$. The findings of this study revealed that insurgency had impact on the rural and urban as well as male and female upper basic III Science and Mathematics students' psycho-social adjustment. Based on the findings of this study, it was recommended that therapeutic programmes should be instituted by government with the involvement of trained clinical psychologists to address the psycho-social needs of traumatized students; individual and group psycho-social therapy should be applied along other support measures.
Keywords: Impact, Insurgency, Mathematics, Psycho-social adjustment and Science.

INTRODUCTION
The trend in the academic achievement of secondary school Science and Mathematics students in Nigeria in the past years has become a major source of concern to all stakeholders in the Science, Technology and Mathematics (STM) Educational sector (Nwadinigu & Azuka-Obieke, 2012). Science educators believe that any nation that hopes to develop must not neglect the teaching and learning of science in its schools (Fafunwa, 2004). Science education is a veritable instrument for social change which brings about socio-economic development and empowerment of the world. The application of scientific knowledge to real life problems is the most powerful instrument for enabling society to face global challenges and innovations in education.
Eze (2010) maintained that science education is at the centre of empowerment of students toward self-reliant and industrial skills that are needed for survival especially in this era of global economic crisis. Mathematics on the other hand is the chief corner stone of all sciences without which there will be no technology and without technology, there will be no modern society. This implies that a strong background in mathematics is critical for the nation's scientific and technological development. The vital role played by Science and Mathematics in contemporary society is indispensable to the healthy existence of any nation. In recognition of the important role of Science and Mathematics for national development, the Federal Government of Nigeria in the National Policy on Education (Federal Republic of Nigeria (FRN), 2014) gave a special place to Science and Mathematics education in a bid to promote scientific and technological literacy of her citizenry. This can only be achieved in a peaceful and secured polity.

Insurgency is the use of violence to seize, nullify and challenge political authority of a people (Amalu, 2015). The United States of America, Federal Bureau of Investigation (USFBI, 2015) defines insurgency as the organized use of subversion and violence to seize, nullify and challenge constituted authourities of a region. It is usually a struggle in which the use of armed force is applied for subversive activities to create space for political and economic destabilisation. Insurgency involves different actors with various aims, loosely connected in dynamic networks. To be successful, insurgency requires charismatic leadership, supporters, recruits, supplies and funding (usually from illegitimate sources) in order to operate successfully. One of the common features of insurgencies is armed confrontation and violence which often lead to loss of lives and property (Mizan, 2014).

 Depending on the situation, insurgent groups receive support from actors based on their interests. Insurgency shares commonalities with terrorism especially, in its tactical strategies where terrorist tactics constitute part of its strategies (Awortu, 2015). The operational tactics are essentially those of guerilla warfare. The objective is to intimidate, frustrate and raise the feeling of uncertainty, imminent danger and the loss of hope, so as to cripple or limit all aspects of human activity and normal livelihoods. National insurgencies in particular depend on ideology to unify, inspire and explain why the existing system is unjust or illegitimate, and rationalize the use of violence to alter or overthrow the existing system (Iyekekpolo, 2018). When insurgents overwhelm the society, the neutralization of the military becomes their objective with the aim of achieving national strategic stalemate (Sadau, 2015 and Sulleiman & Karim, 2015).

Insurgency constitutes one of the major recurring problems challenging psychosocial adjustment in complex societies with high ethnic nationalities and language groups like Nigeria (Ogunboyede, 2014). The first known insurgency attempt in Nigeria was the Movement to Liberate the Niger Delta People led by Major Isaac Jasper Adaka Boro. Pre-colonial and colonial Nigeria experienced inter-kingdom dynastic feuds, and insurgencies, some of which include Zango-Kataf (1999-2001), Tiv-Jukun Wukari (1999-2001), Itsekiri-Urhobo (1999-2000) and Ife-Modakeke (1999-2000).

Psychologically, effective insurgent leaders are so dedicated to their cause that they will persevere even though the odds are against them. Similarly, they tend to believe so strongly in their cause that they become completely ruthless, willing to do anything necessary to protect their movement and weaken national cohesion (Awortu, 2015). Funding, equipment, and supplies are the resources mostly seized, while in some insurgencies, like the ones in Nigeria, manpower is seized through violence as insurgents undertake forcible recruitment.

There are several reasons why insurgency prevails in Nigeria. A few of them would be addressed below.

Land Use Right- Claims to rights of any kind could generate conflict especially, where parties assert their rights in a competing way (Amalu, 2015). Similarly, conflicting property rights to land do generate into disputes. Critical examples in Nigeria prevail such as those between Fulanis and Tivs of Benue State, Fulanis and tribes of Jos and the Plateau State as well as Tivs and Jukuns of Taraba State. In all of these incidents, the Nigerian Land Use Act of 1978 and other statutes have not helped matters. In Plateau State, for instance, the problem of the 'indigene' and 'settler' dichotomy revolves around conflicting land-use rights and this dichotomy remains unresolved due to lack of judicial decisions and political will on the matter (Kwaja, 2018 and Adisa, 2012).

Religious Extremism-The Nigerian system of traditional religion beholds that ancestors are regarded extension of the world of the living where supernatural beings are revered (USFBI, 2016). This explains why the use of kola nuts, pouring of libation and animal blood as rites of land agreement, and settlement of dispute are regular features of Igbo society. Tradition and culture have been discovered as major conflict triggers, and transformers. Insurgencies are caused by structural vulnerabilities in certain kind of states based on fundamentalist identity especially, when unchecked in a democracy with political elites factionalized along religious hegemonies (Alasia, 2015). Therefore, the fear of domination or marginalisation by religious majorities and minorities in Nigeria is one of the factors that have led to the upsurge of violent religious movements or religious extremism that as gradually metamorphosed into a form of terrorism (Dauda, 2018).

Economic and Political Discrimination- Economic discrimination is the systematic marginalisation of a group from participating in positions or activities of higher economic value, such as employment, trade or profession, while political discrimination is a systematic or pattern of limitations in the form, process, practical outcome of the opportunities of groups to take part in political activities or to attain prestigious positions in governance (Mofoluwawo, 2014). Ethnic minorities   often fall prey to these

forms of discrimination, which often led to dissatisfaction and tendencies for movements towards insurgency (Chikodiri, Nwangwu & Edeh, 2017).

Poverty- Poverty is the cause of many of Nigeria's problems. Poverty is a lack of command over basic consumption needs, resulting in a situation where a person's basic needs far exceed the available means of meeting them (Gangas, 2017). The social response to poverty is motivated by psychological factors lead to feelings of frustration among the poor. It will also breed hatred, mistrust and anger. These psychological elements lead to loss of faith, impatience and hopelessness which invariably, lead to a point of indifference between life and death and invite insurgency to its midst (Raymond, 2014).

Unemployment- The vicious cycle of poverty includes the element of unemployment which encourages antisocial conducts (Adesina, 2013). This is why employment is a necessary component of a basic needs-strategy of development, both as a means and also as an end. The benefits of employment are hardly contestable. Employment yields an output and provides an income to the employed, and it gives the employed person the recognition of being engaged in some occupation worth his while and dignity. Unemployed persons are likely to gang up against constituted authorities with the ultimate aim to decent and insurgency (Iwu, 2015).

Insurgencies can be categorized in a number of ways; two of the most common ways are to distinguish insurgencies by the primary methods they employ (Amalu, 2017). These categories are archetypes, however, and many insurgencies exhibit characteristics combining multiple types, or their goals may evolve during the course of the conflict. In some conflicts, multiple insurgent groups may operate simultaneously, either competing with one another or setting aside the fact that they may have differing views on post conflict governance to form temporary alliances against the government. Revolutionary insurgencies seek to replace the existing political order with an entirely different system, often challenging the economic and social structures of government (Addaney, 2016). Different insurgent groups exist to serve different goals such as: reformist; separatist; resistance and commercialist.

Boko Haram Insurgency in Nigeria

The Boko Haram insurgency first appeared in Maiduguri in Borno State, northeast Nigeria around 2002 (Azama, 2015). The group's objective was to establish an Islamic state and institutionalize Sharia law in Nigeria, particularly the northeast region. Boko Haram activities in the northeast of Nigeria have created a serious security threat to Nigeria and its neighbors in the Lake Chad region. The group engaged in guerrilla warfare using indiscriminate attacks on civilians, and military forces. Despite efforts by the Nigerian government to combat the group, Boko Haram's activities continue to spread across the region. The Boko Haram insurgency in North-Eastern Nigeria has crippled social economic, activities as well as security (Suleiman, 2015).

To address the Boko Haram crisis in Nigeria, this study looked at Mao's Theory of Revolutionary War as a guide to understand the group. The research analysis revealed that the Boko Haram insurgency has closely adhered to Mao's theory of revolutionary war since its inception (Sadau, 2015). This means that Mao's theory of revolutionary war can be applied to the Boko Haram crisis in Nigeria in order to find more effective methods than have been used so far by the government of Nigeria to fight Boko Haram (Iyekekpolo, 2018).

Psycho-social refers to the social relations existing between persons and others based on mental factors and functions, stressing cultural and societal influences (Usman, 2015). Psycho-social is relating to the combination of psychological and social behavior. It is the relationship between a person's fears and how he/she relates to others in a social approach setting. It also relates to relationship existing between individual male or female with opposite sex and how their sexual behaviours are manifested (Carew, 2015). The composite term psychosocial denotes the inter-connection between psychological and social processes and the fact that each continually interacts with the other (WHO, 2010) while the effect of terrorism on one's customary sense of security can be devastating. the people most affected psychologically and for the greatest period of time were those closest in some way, to the actual event (proximity, personal involvement, extent of change in life circumstances)

Psycho-social variables of students affected by insurgencies range from traumatic experiences due to sexual abuse, family separation, depression (Lakhani & Hussain, 2015). Traumatic events caused by insurgencies, especially urban and rural violence can impact on persons' psychosocial status. Feelings

of shock and numbness, depression, anxiety, anger, and symptoms of or full-syndrome acute stress disorder (ASD) and post-traumatic stress disorder (PTSD) often are evident over an extended time period in adults and children who have experienced these traumatic events.

Research by Tousi (2013) suggests that pre-existing mood and anxiety disorders, but not psychotic disorders, are risk factors for the development of some type of post-disaster psychopathology. However, the findings from various studies (Dadarigasti, Amanpoor & Akbari, 2016 and Lakhani & Hussain, 2015) are inconsistent regarding the extent to which dissociative symptoms at the time of or shortly after the trauma (for example, feelings of numbness, perception that the events are happening to someone else, and/or amnesia) are predictive for the development of PTSD. The mid- and long-term effects of large-scale disasters include alcoholism, suicide, cardiovascular and other stress-related physical diseases, and family and vocational problems, emerging in some individuals who did not have problems in these areas prior to the disaster. Indeed, the aftermath of disasters that do not involve significant environmental damage or contamination is most likely psychosocial in nature (Amalu. 2017)

Objectives of the Study
The purpose of this study was to investigate the impact of insurgency on the psychosocial adjustment of Upper Basic III Science and Mathematics students in North-East, Nigeria. Specifically, the study was to answer the following research objectives:
1. Determine the impact of insurgency on the psychosocial adjustment of urban and rural upper basic III Science and Mathematics students.
2. Determine the impact of insurgency on the psychosocial adjustment of male and female upper basic III Science and Mathematics students.

Research Questions
The following research questions guided the study:
1. To what extent does insurgency impact on the psychosocial adjustment of urban and rural upper basic III Science and Mathematics students?
2. To what extent does insurgency impact on the psychosocial adjustment of male and female upper basic III Science and Mathematics students?

Research Hypotheses
The following research hypotheses were tested at 0.05 level of significance:
Ho$_1$: There is no significant impact of insurgency on the psychosocial adjustment of urban and rural upper basic III Science and Mathematics students.
Ho$_2$: There is no significant impact of insurgency on the psychosocial adjustment of male and female upper basic III Science and Mathematics students.

METHODOLOGY
The study adopted descriptive survey as a research design. The population of the study comprised 3425 Upper Basic III Science and Mathematics students in North-East, Nigeria. The Zone is made up of six states namely; Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. Twelve schools (two schools from each state) were randomly selected for the study. The sample of this study comprises 425 students (289 males and 136 females, 255 urban and 170).

The instrument used for this study was a modified Likert-type questionnaire titled, "Students Psychosocial Adjustment Assessment Questionnaire" (SPAAQ). The instrument was validated by three experts in the Faculty of Education, Nasarawa State University, Keffi, Nigeria. The reliability coefficient of the instrument was determined using Cronbach Alpha. The coefficient was found to be 0.82. Data were collected, collated and analysed using descriptive statistics of mean and standard deviation for research questions, while Z-test was used to test the hypotheses at 0.05 level of significance. The Z-test was employed because the sample was large (>30).

RESULTS
Research Question One: *To what extent does insurgency impact on the psychosocial adjustment of urban and rural upper basic III Science and Mathematics students?*

Table 1: Means, Standard Deviations for impact of insurgency on students' psychosocial adjustment

Location	No. of Stds	Mean	S.D
Urban	255	22.50	0.30
Rural	170	20.22	0.34

Table 1 shows that urban students have a mean score of 22.50 than rural students 20.22.
Hypothesis One
There is no significant impact of insurgency on the psychosocial adjustment of urban and rural upper basic III Science and Mathematics students.

Table 2: Z-test analysis for impact of insurgency on urban and rural students' psychosocial adjustment

Location	No. of Stds	Mean	S.D	Df	Z-cal	Z-crit.	Decision
Urban	255	22.50	0.30	423	22.30	1.96	Reject Ho
Rural	170	20.22	0.34				

Table 2 reveals Z-calculated = 22.30 and with df = 423 at α = 0.05, Z-critical = 1.96. Since Z-calculated > Z-critical, the null hypothesis is rejected implying that there is a significant impact of insurgency on urban and rural psychosocial adjustment of upper basic III Science and Mathematics students.
Research Question Two
To what extent does insurgency impact on the psychosocial adjustment of male and female Secondary School Science students?
Table 3: Mean, Standard Deviation for impact of Insurgency on Male and Female Students' Psychosocial Adjustment

Gender	No. of Stds	Mean	S.D
Male	289	19.77	0.26
Female	136	15.26	0.33

Table 3 reveals that male students have a mean score of 19.77 and the female students have mean score of 15.26.
Hypothesis Two
There is no significant impact of insurgency on the psychosocial adjustment of male and female upper basic III Science and Mathematics students.

Table 4: Z-test analysis for impact of Insurgency on Male and Female Students' Psychosocial Adjustment

Gender	No. of Stds	Mean	S.D	Df	Z-cal	Z-crit.	Decision
Male	289	19.77	0.26	423	27.22	1.96	Reject Ho
Female	136	15.26	0.33				

Table 4 shows that Z-calculated = 27.22 and with df = 423 at α = 0.05, Z-critical = 1.96. Since Z-calculated > Z-critical, the null hypothesis is rejected implying that there is a significant impact of insurgency on male and female upper basic III Science and Mathematics students.

DISCUSSION
The findings of this study reveal that there was a significant difference between urban and rural upper basic III Science and Mathematics students in terms of psychosocial adjustment in favour of the urban students. This is because rural areas are more prone to insurgent attacks or reoccurrences, as such, the

populace are in constant fear and anxiety. Also, most adequate security measures taken to curb the menace are skewed towards urban areas. This finding is in disagreement with the findings of (Umar, 2019; Ofongo, 2016; Patrick & Felix, 2013) who found out both urban and rural areas are exposed to insurgency and likelihood of reoccurrence.

The findings also showed that there was a significant difference between male and female upper basic III Science and Mathematics students psychosocial adjustment in favour of the male students. This is not line with the findings of (Umar, 2019; Ali, Atiya, Zakuan & bin Ahmad, 2018; Amusan & Ejoke, 2017) who found that male and female students experience similar traumas irrespective of their gender.

CONCLUSION
The findings of this study revealed that insurgency had impact on the rural and urban as well as male and female upper basic III Science and Mathematics students' psycho-social adjustment.

RECOMMENDATIONS
Based on the findings of this, it is recommended that:
i. therapeutic programmes should be instituted by government with the involvement of trained clinical psychologists to address the psycho-social needs of traumatized students;
ii. individual and group psycho-social therapy should be applied along other support measures;
iii. government should provide adequate funding through legislation directed towards the affected students;
iv. government should strengthen collaboration with global community in combating the menace of insurgency in North Eastern Nigeria.

REFERENCES
Addaney, M. (2016). Tackling the Boko Haram insurgency: Causes, challenges and responses. Retrieved from https://www.researchgate.net.

Adesina, O. S. (2013). Unemployment and security challenges in Nigeria. *International Journal of Humanities and Social Science, 3(7), 146-156.*

Adisa, R. S. (2012). Land use conflict between farmers and herdsmen: Implications for agricultural and rural development in Nigeria. *Contemporary Issues. Retrieved from* http://cdn.intechopen.com.

Alasia, I. J. (2015). Demystifying extremism in Nigeria: Understanding the dynamics of Boko Haram. *African Centre for the Constructive Resolution of Disputes.* Retrieved from://www.accord.org.za

Ali, M. A., Atiya, U. A., Zakuan, U. A. & Bin-Ahmad, M. Z. (2018). The negative impact of Boko Haram insurgency on women and children in Northern Nigeria: An assessment. *American Journal of Social Science Research,3(1), 27-33.*

Amalu, M. N. (2017). Impact of terrorism on the education of victims in Nigeria: Psychological interventions. *Education for Careers in the 21st Century (A Festschrift in Honour of Professor Daniel I. Denga),* 174-182.

Amalu, N. S. (2015). Impact of Boko Haram insurgency on human security in Nigeria. *Global Journal of Social Sciences, 14, 35-41.*

Amusan, L. & Ejoke, U. P. (2017). The psychological trauma inflicted by Boko Haram insurgency in the North Eastern Nigeria. *Journal of Aggression and Violent Behaviour, 36, 52-59.*

Awortu, B. E. (2015). Boko Haram Insurgency and understanding development in Nigeria. *Research on Humanities and Social Studies, 5(6), 3213-220.*

Carew, J. R. (2015). Socio-psychological concerns about premarital sex behavior among adolescents. *Journal of the Nigerian Society for Educational Psychologists, 1, 133-135.*

Chikodiri, P., Nwangwu, C. & Edeh, H. C. (2017). Elite politics and emergence of Boko Haram insurgency in Nigeria. Retrieved from: //www.kirj.ee.

Dadarigashti1, K., Amoopour, M. & Akbari, B. (2016). The relationship between psychological adjustment and social protection with academic self-concept and academic achievement among high school female students in Rasht. *International Journal of Medical Research & Health Sciences,* 5(7), 473-479.

Dauda, S. (2018). Ending religious extremism in Northern Nigeria. A study of Elnothan John's born on a Tuesday. *Nile Journal of English Studies,* 3. 16-20.

Eze, C. C. (2010). Repositioning chemistry in Nigerian colleges of education for economic

empowerment. Science Teachers Association of Nigeria Proceeding of 51st Annual Conference, 287-291.

Fafunwa, A. B. (2004). Keynote address at the school curriculum review conference, 2-6 September, Kaduna: National School Curriculum Review Proceedings, 94-105.

Federal Government of Nigeria (2014). National policy on education, NERDC, Press Lagos.

Gangas, S. (2017). Relationship between economic growth and poverty reduction in Nigeria. *Pyrex Journal of Business and Finance Management Research, 3(2),34-56*

Iwu, H. N. (2015). Re-contextualizing unemployment and national security in Nigeria. *Journal of Sustainable Development, 8(6), 231-242.*

Iyekekpolo, W. O. (2018). Political Elites and the Rise of the Boko Haram Insurgency in Nigeri Retrieved from https://www.tandfonline.com.

Kabutu, F.R., Oloyede, O.I. & Bandele, M.F. (2015). An investigation into the achievement of junior secondary school students taught integrate science using the cooperative learning strategy in Nigeria. *European Journal of Physics and Chemistry,* 7(2), 63-73.

Kwaja, C. M. A. & Ademola-Adelehim, B. I. (2018). Responses to conflicts between farmers and herders in the Middle Belt of Nigeria: Mapping past efforts and opportunities for violence prevention. Retrieved from http://www.stcg.org.

Lakhani, R. & Hussain, S. (2015). Psychological adjustment as predictor of students' academic achievement in Gilgit, Pakistan. *Bahria Journal of Professional Psychology,* 14(2), 55 – 69.

Mizan, A. S. (2014). Insurgency in Nigeria: Addressing the causes as part of the solution. *African Human Rights Law Journal,* 14, 217-243.

Mofoluwawo, E. O. (2011). Social, cultural and economic discrimination to women participation in African politics: The case of Nigeria. *International Journal of Learning & Development,4(1), 169-175.*

Nwadinigwe, I. P., & Azuka-Obieke, U. (2012). The impact of emotional intelligence on academic achievement of senior secondary school students in Lagos, Nigeria. *Journal of Emerging Trends in Educational Research and Policies Studies (JETERAPS),* 3(4), 395-401.

Ofongo, O. A. (2016). The Boko Haram Insurgency in Nigeria: What could have been the precursors? *Journal for Deradicalization, 7, 145-163.*

Ogunboyede, K. (2014). Terrorism and Democratic Governance in Nigeria. *International Journal of Innovation and Scientific Research,* 10(1), 35-39.

Patrick, O. & Felix, O. (2013). Effect of Boko Haram on school attendance in Northern Nigeria. *British Journal of Education*, 1(2), 1-9.

Raymond, A. R. (2014). Economic growth, poverty and inequality links: Nigerian experience. *Ago-Iwoye Journal of Social and Behaviour Sciences, 3(2), 147-170.*

Sadau, Z. A. (2015). A critical analysis of Boko Haram insurgency. *A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree of Master of Military Art and Science, University of Abuja, Abuja.* Retrieved from https: //www.apps.dtic.mil.

Suleiman, M.N. & Karim, M. N. (2015). Cycle of bad governance and corruption: The rise of Boko Haram in Nigeria. *SAGE. Open*.

Tousi, D. G. (2013). Examining the psychosocial adjustment of divorced women aged 50-25 years living in the Shiraz: Short communication. *Journal of Applied Science and Agriculture*, 8(7), 1517-1520.

United States of America Federal Bureau of Investigation (20/10/16). What We Investigate: Terrorism. Retrieved from *http: //www.fbi.gov/investigate/terrorism.*

Umar, U.S. (2019). Impact of Insurgency on the Psycho-Social Adjustment of Senior Secondary School Students in North-Eastern Nigeria. International Journal of Humanities and Social Science 7(7), 75-80.

Usman, I. G. (2015). Psycho-social concerns about women's premarital sexual behaviours: Need for counselling intervention. *Counselling Issues on Women's Health, Education/Empowerment and Sustainable Development in Nigeria, CASSON, 145-155.*

World Health Organisation: Inter-Agency Standing Committee (2010). Mental Health and Psychological Support in Humanitarian and Emergencies: What Should Humanitarian Health Actors Know? Geneva. Retrieved from http://www.who.int.