# Personality Traits as Predictors of Posttraumatic Stress Disorder among Nigerian Soldiers

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Abstract: The study investigated personality traits as predictors of posttraumatic stress disorder among Nigeria soldiers. The study was carried out among Nigerian military personnel deployed in the North-eastern part of Nigeria fighting insurgency. Purposive sampling technique was employed to select 242 participants under the Headquarter Theatre Command Operation LAFIA DOLE with combat experience. Demographic information revealed that 231 (95.5%) are males, 11(4.5%) are females. Analysis of participants' rank revealed that 215(88.8%) were private and 27 (11.2%) were commissioned, officers. The participants were administered two sets of instruments based on survey design; namely, a 17-item Posttraumatic Stress Disorder Checklist-Military (PCL-M) (Weathers, Huska, & Keane, 1991); and 44-item Big Five Inventory (John et al. 1991; Umeh, 2004). Descriptive statistics were used to present the socio-demographic factors of participants while hierarchical multiple regression analysis was used to test the hypothesis in relation to personality as predictors of Posttraumatic Stress Disorder among Nigeria soldiers. The results showed that only conscientiousness predicted PTSD. Extraversion, agreeableness, neuroticism, and openness were not significant predictors of *PTSD* ( $\beta = 2.312$ , P < .05). Finally, the results analyzed showed that the linear combination effect of personality factors (Extraversion, Conscientiousness, Neuroticism, Agreeableness and Openness to Experience) on development of PTSD among Nigeria soldiers was significant (F(10, 231) = 84.398; R = .520a, R2 = .270, Adj. R2 = .238; P < .05). The findings were discussed in relation to literature reviewed and it was suggested that the military authorities should effectively engage the services of mental health professionals such as the Psychologist to help in ensuring the mental state of soldiers fighting the insurgency. The researcher concluded that individuals who manifested neuroticism are more likely to experience PTSD.

Key words: Personality traits, Posttraumatic stress disorder, Nigerian Soldiers

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# I. Introduction

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The aftermaths of traumatic events are often accompanied by psychological symptoms that may persist in some people long after the stressful events are over. These events may vary from wars, natural disasters, assaults, injuries, and even domestic accidents. However, many of these within the past decade in Nigeria can be attributed to various crises across the country stemming from religious and political violence as well as an increase in regional conflicts. Most prominent among them is the plague of trauma inflicted by the Boko Haram Terrorists (BHT) in the northeastern part of the country. These conflicts have led to frequent deployment and redeployment of military personnel in the region to restore calm. Though trained and professional, the military is not immune to trauma as they are constantly faced with life-threatening situations that suffered serious injuries, enemy brutality or death (Keane, Niles, Otis & Quinn, 2012). All these predispose them to Posttraumatic Stress Disorder (PTSD).

Post-traumatic stress disorder (PTSD) is a disorder that develops in some people who have experienced a shocking, scary, or dangerous event. It is natural to feel afraid during and after a traumatic situation. Fear triggers many split-second changes in the body to help defend against danger or to avoid it. This "fight-or-flight" response is a typical reaction meant to protect a person from harm. Nearly everyone will experience a range of reactions after trauma, yet most people recover from initial symptoms naturally. Those who continue to experience problems may be diagnosed with PTSD. People who have PTSD may feel stressed or frightened, even when they are not in danger.

While most but not all traumatized people experience short term symptoms, the majority do not develop ongoing (chronic) PTSD. Not everyone with PTSD has been through a dangerous event. Some experiences, like the sudden, unexpected death of a loved one, can also cause PTSD. Symptoms usually begin early, within 3 months of the traumatic incident, but sometimes they begin years afterward. Symptoms must last more than a month and be severe enough to interfere with relationships or work to be considered PTSD. The

course of the illness varies. Some people recover within 6 months, while others have symptoms that last much longer. In some people, the condition becomes chronic.

To be diagnosed with PTSD, an adult must have all of the following for at least 1 month:

- At least one re-experiencing symptom
- At least one avoidance symptom
- At least two arousal and reactivity symptoms
- At least two cognition and mood symptoms
- Re-experiencing symptoms include:

• Flashbacks—reliving the trauma over and over, including physical symptoms like a racing heart or sweating

- Bad dreams
- Frightening thoughts

Re-experiencing symptoms may cause problems in a person's everyday routine. The symptoms can start from the person's own thoughts and feelings. Words, objects, or situations that are reminders of the event can also trigger re-experiencing symptoms.

Although PTSD has most likely existed as long as human beings have endured trauma, it was not recognized as a formal diagnostic entity until 1980 when it was first added to the Diagnostics and Statistical Manual (DSM-III). Prior to that, it was called by different names by combat veterans who had symptoms similar to those of current PTSD such as soldier's heart, combat fatigue after the World War I and gross stress reaction after World War II. In addition, many American troops returning from the Vietnam War who displayed symptoms of what is now called PTSD were said to have Post-Vietnam syndrome. Prominently also, PTSD has also been referred to as shell shock among soldiers (Sebit, 2013).

The DSM-5 (2013) is the most recent diagnostics and statistical manual categorized PTSD under trauma and stressor-related disorders; in contrast to earlier versions categorizing PTSD as an anxiety disorder. The *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*–5) is the product of more than 10 years of effort by hundreds of international experts in all aspects of mental health. Their dedication and hard work have yielded an authoritative volume that defines and classifies mental disorders in order to improve diagnoses, treatment, and research. Other changes in the DSM-5 in relation to PTSD proposes four distinct diagnostic clusters instead of three described as re-experiencing, avoidance, negative cognitions and mood, and arousal.

Unlike most other psychiatric diagnoses, PTSD requires a specific type of event to occur from which the affected person does not recover, adding that the individual must have experienced, witnessed, or otherwise been confronted with an event that involved actual or threatened death, serious injury, or threat to physical integrity and the individual's response to the event. Psychologically, the suffering caused by PTSD can be so severe that it can trigger anxiety, depression, and even suicide, (King, Vogt & King, 2004). The impact of a traumatic experience physically can result in increased use of health care services and medication while the effect of PTSD can have far-reaching consequences with regards to aspects of reduced performance at work as the case of soldiers fighting insurgency in the northeast of Nigeria.

However, a number of studies have shown that although exposure to potentially traumatic events is common, development of PTSD is relatively rare due to the presence of certain dynamic risk and protective factors that can determine an individual's unique adjustment to his environment, making PTSD a controversial psychiatric entity, (Nenad, Lovorka, Ena, Redmila & Miro, 2012).

Most of the reviewed studies on risk and protective factors for PTSD examined the relationship between basic personality dimensions and severity of symptoms of PTSD (King, Vogt & King, 2004). Finding that appears relatively consistent is a positive relationship between PTSD and negative emotionality, neuroticism, harm avoidance, novelty-seeking, and self-transcendence, as well as trait hostility and anxiety. On the other hand, Nenad, Lovorka, Ena, Redmila and Miro, (2012), identified PTSD symptoms to be negatively associated with extraversion, conscientiousness, high positive and low negative emotionality, as well as optimism. This shows the role of personality as a risk and protective factor in predicting PTSD.

The exposure of the Nigerian military personnel to series of warfare and battlefield hazards in various operations especially in the ongoing counter-insurgency in North-Eastern Nigeria with little or no much attention given to their relevant areas of need to meet up with the challenges facing them has rendered most of them helpless and highly susceptible to Post Traumatic Stress Disorder (PTSD). In most instances, some of them are away from home for months or even years, while others are gone not to be seen again. This scenario is likely to create constant anxiety among personnel. Furthermore, personnel on deployment are likely to be in separation anxiety or death anxiety whenever the thoughts of impending danger or their family members flash through their minds and may developmental and emotional tension or injuries, and these could also be enough reasons that could trigger PTSD among the personnel.

In addition, the reality of experiencing PTSD among soldiers has become an issue of great concern. In the years passed a lot of extensive studies dwelled so much on soldiers returning from Vietnam, Iraq, Iran, and Afghanistan. Though armed conflicts are commonly observed in Africa, far fewer studies have considered the nature of trauma and PTSD symptoms among combatants in the region. It will be very unfair for us to claim that the tectonic warfare in the Northeastern part of the country was mediocre, hence no need to attend to it and those involved in it. More so, studies are springing up on PTSD of late in the Northeast especially among the civilian groups and in fewer instances the military; however, only a few military personnel were identified and attended to based on need, (Ameh, et al., 2014). Could it be that African/Nigerian soldiers present less with PTSD compared to other members of the public? Or are there internal mechanisms that protect soldiers from PTSD? This study aims to investigate the rate of/prevalence of PTSD as well as consider the influence of neurotic personality type and coping styles as predictors of PTSD among soldiers serving in the Northeastern part of Nigeria.

This study, therefore, aims to identify relevant resilient factors in the nature of personality patterns and coping styles that could enable soldiers to overcome the distress coming from PTSD. Furthermore, in the identification, prevention, and management of PTSD in the army, there is no extensive research on the prevalence of PTSD among soldiers serving in northeastern Nigeria with peculiar predictors and risk factors. Thus, the investigation will focus on psychological factors that predict PTSD occurrence among soldiers deployed for combat operation in Maiduguri of Northeast Nigeria.

#### **Theoretical framework**

There are various theories on PTSD. However, for the purpose of this study, the following theoretical perspectives will be reviewed;

#### **Psychodynamic Theory**

For decades there has been a link between trauma and mental illness (Chu, 1991). Most notably, Freud hypothesized that trauma particularly sexual trauma led to hysterical illness. He later adjusted his theory to suggest that intrapsychic conflicts, not external trauma causes mental illness. This theory has thus been applied to PTSD.

Though not all people that experience trauma develops PTSD, Verhaeghe &Venhuele (2005) explain that a traumatic event leads to the development of PTSD in victims who have a preexisting psychological structure that can be understood as Freud's actual psychosis arguing that these structures prevent individuals from processing traumatic incidents in normal ways which are believed to be the main problem of PTSD.

When individuals are faced with a traumatic ordeal, they may react with disbelief and shock. Over time, they may re-experience symptoms in form of nightmares, intrusive thoughts, and hyperarousal. With further passage of time, they may also incorporate such experiences into their life views of the world and carry on with life or have different coping mechanisms with such traumatic experiences thereby integrating them into their psyche. Thus, these traumatic experiences are repressed and dissociated from consciousness to reemerge later in the context of disorder such as PTSD (Jaycox & Foa, 1998).

In Freud's view, not only does repressed trauma reemerges later in life, but it also reactivates precisely repressed but unresolved conflicts from childhood. It is this anxiety trauma reawakening that results in other defense mechanisms such as denial which are responsible for some form of PTSD (Sadock & Sadock, 2004), most especially avoidance behavior and regression from an early stage of development such as oral stage characterized by ego disorganization resulting in some form of numbing as a characteristic of PTSD.

In explaining the re-experiencing of the trauma, however, a helpful concept from Freud is that of repetitive compulsion. Repetitive compulsion however occurs when an individual repeats traumatic events over and over again including reenacting the event or putting oneself in situations such events are most likely to reoccur. From the psychodynamic perspective, dreams and flashbacks as well are results of repetitive compulsion. Patients feel as if they are reliving the traumatic experience in the present to the extent that they may lose awareness of their present surroundings and reality.

# PTSD Theories

# Socio-cultural Theory

Socio-cultural factors are also important determining factors of PTSD. Cultural factors here provide different meanings towards experiences and the way they are analyzed and interpreted, (Kom, 2015). Such cultural factors may modify our responses to trauma. Most cultures and religions believe in fate or accept the role of divine intervention. These beliefs will lead to acceptance of trauma for example, people may believe a traumatic event to have a divine cause and as such, they accept it as fate. This can also be referred to as moral escapism thereby reducing the effect of the trauma.

On the other hand, Marsella, Friedman, and Gerrity (1996) suggested that in as much as reexperiencing and hyperarousal symptoms of PTSD are universal, individuals from a particular ethnic setting may experience more avoidance and numbing as a result of such behavior being a common expression of distress. In essence, culture and social factors may be important determinants of vulnerability to PTSD by shaping those concepts of what constitutes PTSD. Given that PTSD involves the self and identity, understanding these socio-cultural variations and backgrounds of individuals is very important. This is because these factors if readily in place will provide for effective and efficient coping mechanisms and support to the individual. These as well will allow for appropriate individual and community interventions that promote symptomatic improvement as well as broader healing (Stein & Williams, 2002).

Studies have identified some pre-trauma and post-trauma variables of great importance in addition to the traumatic event itself in explaining PTSD etiology, such as genetic factors, perceived lack of parental care, past history of trauma and psychological problems, unhealthy lifestyles, personality traits, intelligence, poor coping styles as well as post-trauma (and post-war) support, beliefs, expectations, attributions, and the trauma setting, (Nenad, Lovorka, Ena, Redmila& Miro, 2012).

Previous works on clinical populations have indicated that trauma experienced in military settings is characterized by a higher prevalence of PTSD, intensity of post-traumatic symptoms, and psychological distress than trauma experienced in a civilian setting, (Yorom, Marianne, Ronit, & Mushe, 2005). In their study Yorom et al. (2005) designed to compare these reactions to military and civilian trauma in a non-clinical population in Israel, the results showed that responses following exposure to civilian traumas were characterized by higher levels compared with responses to military trauma exposure.

Many combat experiences may be traumatic (DVA, 2002). The military-related traumatic event that may trigger PTSD includes exposure to war, experienced torture and starvation during captivity, incarceration as Prisoner of War, threatened or actual physical and sexual assaults, and motor vehicle accidents. Casualties of these traumatic events are overwhelmed with fear while others may have a feeling of disconnection and numbness (APA, 2013). DSM – 5 also considers certain indirect exposure through professional activities such as clearing body parts, first responder activities, and accidental or violent death of a colleague. These continuous problems and later development of PTSD will depend on key factors such as type and means of coping.

Towards the later 18th century, Joseph Leopold an Australian physician wrote about nostalgia among soldiers exposed to military trauma having self-reported anxiety, feeling sad, and homesickness. Those physiological symptoms displayed alongside the soldiers, which included rapid pulse, anxiety, and trouble sleeping as a result of physical injury led to such symptoms to be later referred to as soldiers hear. By the end of World War I, presenting symptoms of PTSD was referred to as shell shock seen as a result of the explosion of artillery shells. Though initially assumed that presenting symptoms of panic and sleep disorders were as a result of brain injuries, soldiers that were not near such explosions presented similar symptoms leading such symptoms to be referred to as war neurosis. During World War II, presenting symptoms of PTSD were referred to as Combat Stress Reaction (CSR). After the war, the American Psychological Association (APA) produced its first Diagnostic Statistical Manual of Mental Disorders (DSM I) which classified such symptoms as Gross Stress Reaction. In spite of growing shreds of evidence that traumatic experiences were associated with psychological problems, DSM II (1968) eliminated the diagnosis. In 1980 subsequently, APA added PTSD to DSM III which stemmed from further research on soldiers returning from the Vietnam war and people who have experienced some form of trauma.

# Personality and PTSD

It has been shown that one of the factors that might help explain why only some traumatized people develop the psychiatric illness may include individual differences in personality traits playing an important role in the development, outcome, and formation of specific symptoms of PTSD (Kom, 2015).

Morena & Lauth, (2018) utilized a synthesis of the Health Belief Model, Theory of Learned behaviour, Social Cognitive Theory, and Trait theories of Personality to explain the intricate processes fundamental to psychological traits as predictors of adolescents' psychological health. The study further displayed that all dimensions of personality traits (extroversion, agreeableness, conscientiousness, neuroticism, and openness) jointly predict the psychological health of secondary school adolescents in Ede (F(5, 579)=5.532, p<0.05,  $R^2$ =.046). However, only neuroticism independently significantly predicts the psychological health of secondary school adolescents in Ede.

Zhou, Kang, Song and Moa (2017) in investigating the relationships of personality and social support with posttraumatic stress disorder (PTSD) after traffic accidents used the Symptom Checklist 90 (SCL-90) and Eysenck Personality Questionnaire (EPQ) completed 1 week after trauma and the Posttraumatic Stress Disorder Checklist-Civilian Version (PCL-C) 3 months after discharge. SCL-90 score was positively correlated with PTSD symptom scores. Similarly, psychoticism (P) (0.230) and neuroticism (N) (0.302) were positively correlated with PTSD symptom scores in a linear relationship.

In a study "The Role of Personality and Subjective Exposure Experiences in Posttraumatic Stress Disorder and Depression Symptoms among Children Following Wenchuan Earthquake" Zhou, Kang, Song and Moa (2017) investigated the role of personality traits and subjective exposure experiences in posttraumatic stress disorder and depression symptoms. 21,652 children aged 7 to 15 years were assess during the Eysenck Personality Questionnaire (EPQ) junior, a modified earthquake exposure scale, the UCLA Posttraumatic Stress Disorder Reaction Index (adolescent), and the Adolescent Depression Inventory to assess personality characteristics, trauma experiences, posttraumatic stress disorder and depression symptoms, respectively. Neuroticism was a key risk factor of posttraumatic stress disorder and depression symptoms.

Similarly, Eriega, Isukwem, Ojo & Williams (2014) investigated the influence of personality and demographic factors on post-traumatic stress disorder (PTSD) among flood victims. The study employed an Expost facto research design. Four hypotheses were formulated and tested using a sample of 300 participants drawn from among flood victims. Two instruments (NEO-personality inventory and demographic inventory were used to collect data for the study. Findings showed that neuroticism and extraversion personality influenced post-traumatic stress disorder while openness to experience did not.

In a studying "The Effects of Extraversion, Social Support on the Posttraumatic Stress Disorder and Posttraumatic Growth of Adolescent Survivors of the Wenchuan Earthquake" Zhou, Kang, Song & Moa(2013) examined the relationships between extraversion, social support, posttraumatic stress disorder and posttraumatic growth among Six hundred and thirty-eight adolescent survivors of the Wenchuan earthquake. Participants completed four main questionnaires, including the Extraversion Subscale, the Social Support Scale, the Child PTSD Symptom Scale, and the Posttraumatic Growth Inventory. Results revealed significant correlations among extraversion, social support, PTSD, and posttraumatic growth. The results indicated that extraversion had a significant direct effect on posttraumatic growth and a non-significant direct effect on posttraumatic stress disorder.

Also, Ebert, Tucker, and Roth (2002), discovered that extraversion is said to be highly correlated with higher life satisfaction and neuroticism is said to be correlated with lower life satisfaction. Another study carried out by Sebit (2013) shows that there is a negative correlation between neuroticism and subjective well-being. A report conducted by DeNeve (1999) shows that neuroticism is negatively correlated with subjective wellbeing. Similarly, Haslam, Whelan, and Bastian (2009) researched among 180 undergraduates that the personality traits were significantly linked with mental health and were of the view that all the personality traits were positively correlated with mental wellbeing except the personality traits neuroticism. Nakaya, Oshio& Kaneko (2006) discovered that there was a negative correlation between resilience and neuroticism, but positively correlated with extraversion, openness, and conscientiousness dimensions to resilience.

Knezević, Opacić, Savić, & Priebe, (2005) in a study "Personality Characteristics, Trauma and Symptoms of PTSD: A Population Study in Iraq" sought to address this issue by assessing personality traits, sense of coherence, coping strategies and aggressive behaviours. The results showed that a high proportion (94%) of participants reported at least one traumatic event. Thirty percent of 359 traumatized participants met the full DSM-IV criteria for PTSD association by low levels of sense of coherence, and high level of depression, neuroticism, and aggression. Social relationships and family support as well as religion played a vital role in shaping and dealing with trauma and PTSD symptoms. Bogg & Roberts, (2004) discovered that respondents who scored high on conscientiousness are less likely to partake in risky behaviours, such as smoking cigarettes, consuming alcohol, and binge drinking, unlike respondents who scored low on conscientiousness and neuroticism.

In a study of 70 civilians after exposure to air attacks on Knezević, Opacić, Savić, & Priebe, (2005) found that only the personality trait of Openness predicted PTSD. They stated that a higher degree of Openness may increase susceptibility to develop post-traumatic stress after being exposed to traumatic events. However, there was no significant association between personality traits before air attacks and PTSD after exposure.

On the other hand, Nakaya. Oshio, & Kaneko, (2006), argued that neuroticism is the only personality trait that predicts all PTSD symptoms and general health problems whereas antagonism predicts only hyperarousal symptoms. This study was conducted on 96 older MI patients (78 males and 18females) with ages ranging from 60 to 91 years (average age, 70 years). In examining these relationships using regression analyses showed that higher neuroticism predicted re-experiencing and avoidance symptoms, while higher neuroticism and less agreeableness predicted hyperarousal symptoms of PTSD.

In the same direction, Chung, Berger, and Rudd, (2007) further compared a no PTSD group, a partial PTSD group, and a full-PTSD group of patients after cardiac arrests. Patients with full PTSD were significantly more neurotic than those with no or partial PTSD. Patients with full-PTSD were less agreeable than patients with no-PTSD. There were no significant differences in extraversion, openness to experience, and conscientiousness. Chung, Berger, and Rudd (2007) also found that a group of patients with full PTSD had more personality traits associated with neuroticism and fewer traits associated with Agreeableness than the groups

with partial and no PTSD. To conclude, the overall findings from these studies suggest that neuroticism accounts for the risk of developing PTSD symptoms Chung, Berger, and Rudd (2007).

Paris (2000) described neuroticism as a tendency to react with strong emotion to adverse events, explaining Individuals high on this dimension being more sensitive to stress due to their rapid and intense responses with a slower to return to baseline while those who are low on trait neuroticism find it easier to shake off stressful events. Similarly, Talbert, Braswell, Albrecht, Hyer, and Boudewyns (1993) sorted Vietnam veterans into groups based on trauma exposure level and found no significant difference among personality profiles between them. However, a normative profile was presented amongst them and was characterized by extremely high neuroticism and extremely low agreeableness score.

Other studies examined dimensions derived from Eysenck's model of personality where he characterized personality into Extraversion/ Introversion, Neuroticism, and Psychoticism. Brodaty, Joffe, Luscombe & Thompson (2004), found that individuals' higher neuroticism was associated with significant PTSD. On the other hand, both neuroticism and psychoticism were linked to PTSD in one cross-sectional study conducted on war veterans (Casella & Motta, 1990).

Several other studies have been on the three-factor models of Positive emotionality/Extraversion (PEM), Negative emotionality/Neuroticism (NEM), and Constraint/Inhibition (CON) derived from Tellegen (1985), the conceptualization of personality. PEM corresponds to the dimension of Extraversion in Eysenck and Costa & McCrae models of personality. NEM on the other hand refers to dispositions toward negative mood and emotion and a tendency towards adversarial interactions with others corresponding with Neuroticism in the abovementioned models. And CON also being referred to as Social inhibition (SI), explains tendencies anchored by restraint vs. recklessness, and harm-avoidance vs. risk-taking referred to by other theorists as psychoticism in Eysenck's model of personality (Nenad et al, 2012). High NEM is assumed to be the primary personality risk factor for the development of PTSD whereas low CON and PEM serve as moderating factors that influence the form and expression of the disorder through their interaction with NEM (Nenad et al, 2012).

In studying the contribution of pre-deployment personality traits to the development of symptoms of PTSD in individuals involved in military peacekeeping activities Bramsen, Dirkzwager, and Van Der Ploeg, (2000), identified that only NEM contributed to the prediction of PTSD symptom severity. Similarly, in their cross-sectional study on active duty officers, Maia, Marmar, Henn-Haase, and Nóbrega, (2011), found NEM to be related to an impaired capacity to regulate negative emotions and to be associated with increases in the duration of distressing emotional and physical responses to traumatic situations. Kunst (2011) explored the differential association between affective personality type and PTSD symptom severity in victims of violence. Results indicated that the self-destructive and high affective personality styles were strongly associated with increased PTSD symptoms severity.

Low CON was implicated as a possible risk factor for the development of PTSD in two longitudinal studies. O'Toole, Marshall, Schureck, and Dobson (1999), reported that veterans with a diagnosis of combatrelated PTSD were more likely to have had pre-military criminal records and symptoms of antisocial personality disorder at the time of military enlistment. Schnurr, Friedman, and Rosenberg (1993), also reported that, compared to those with no PTSD symptoms, Vietnam veterans who endorsed any lifetime PTSD symptoms produced higher scores on the MMPI Psychopathic Deviate scale (associated with low CON) before enlistment. Based on these findings, it is concluded that NEM is associated with PTSD symptoms, while the role of PEM and CON is yet to be clearly defined by future research.

This study drew relevant theories to the study variables such as the leaning theory, psychodynamic, and socio-cultural were reviewed. The psychodynamic theory was adopted as the theoretical framework based on the fact that the psychodynamic governs all human actions and behaviours including the processes and reactions and the various contexts individuals interact within expression and experience of behaviour. The review on available literature considered the overview and etiology PTSD, predictors/ risk factors (Pretrauma/ Peritrauma/ Posttrauma), and in relation to personality, and coping.

The literature reviewed showed varying findings as regards the influences of personality types on PTSD among different populations. It has been shown that personality traits play an important role in the development, outcome, and formation of specific symptoms of PTSD (Nenad et al, 2012). Others that found personality as significant predictors of mental related illness are Nenad et al, 2012) who sees the trait theories of personality to explain the intricate processes of psychological traits as predictors of adolescents' psychological health. To him, personality traits (extroversion, agreeableness, conscientiousness, neuroticism, and openness) jointly predict psychological health. However, only neuroticism independently significantly predicts psychological health.

Haslam, et al, (2009) found psychoticism (P) (0.230) and neuroticism (N) (0.302) to be positively correlated with PTSD symptom score in a linear relationship. Bramsen, et al, (2000) found neuroticism as a key risk factor of posttraumatic stress disorder and depression symptoms. Eriega, et al., (2014) showed that neuroticism and extraversion personality influenced post-traumatic stress disorder while openness to experience

did not. Zhou, et al (2013) indicated that extraversion had a significant direct effect on posttraumatic growth and a non-significant direct effect on posttraumatic stress disorder. Ebert, et al., (2002), discovered that extraversion is highly correlated with higher life satisfaction and neuroticism is said to be correlated with lower life satisfaction. Another study carried out by Paris, (2000) shows that there is a negative correlation between neuroticism and subjective well-being. A report conducted by DeNeve (1999) shows that neuroticism is negatively correlated with subjective wellbeing. Similarly, Haslam, et al., (2009) showed that all the personality traits were positively correlated with mental wellbeing except the personality traits neuroticism.

Knežević, et al., (2005) found that only the personality trait of Openness predicted PTSD. They stated that a higher degree of Openness may increase susceptibility to develop post-traumatic stress after being exposed to traumatic events. On the other hand, Paris, (2000) argued that neuroticism is the only personality trait that predicts all PTSD symptoms and general health problems whereas antagonism predicts only hyperarousal symptoms. In the same direction, Chung, et al.,(2007) found that patients with full PTSD were significantly more neurotic than those with no or partial PTSD. Patients with full-PTSD were less agreeable than patients with no-PTSD. There were no significant differences in extraversion, openness to experience, and conscientiousness. Chung, et al., (2007) also found that a group of patients with full PTSD had more personality traits associated with neuroticism and fewer traits associated with Agreeableness than the groups with partial and no PTSD.

#### Statement of the Problem

A prominent study conducted on the Nigerian military as it relates to Post Traumatic Stress Disorder (PTSD) by Okulate and Jones (2006), found a 22% prevalence rate revealing PTSD was common to Nigerian Army soldiers exposed to combat in Liberia and Sierra-Leone with a higher percentage for those physically wounded. The study further revealed factors more closely associated with PTSD, which included having adequate mechanisms towards dealing with long exposure to battle, and cannabis use. These points to the role of coping in dealing with battle exposure through cannabis use pointing towards one of the mechanisms soldiers use in dealing with battle stressors. Also, in a post-deployment survey of Nigerian military personnel by Ameh, Kazeem, Abdulkarim, and Olasupo, (2014), it was shown that younger male noncommissioned soldiers were most likely to experience PTSD than older noncommissioned soldiers. A probable reason for this was attributed to experience on the job over time which led the older soldiers to individually seek adequate coping mechanisms, and the role they might play in the frontline. Ameh, et al., (2014), also identified the role of general involvement in life-threatening and or life-altering decisions involved in the development of PTSD points towards personality variables in handling trauma.

Durand & Barlow (2000) opined that determining the prevalence of PTSD seems relatively straightforward judging through simple observation of trauma victims and seeing how many meet the criteria for diagnosing PTSD. This might be quite contrary to the Nigerian military personnel deployed in the Northeast as there have been relatively few studies bothering on the prevalence rate of PTSD among its personnel in the region. This does not mean some studies have not been carried out on certain military personnel with regard to PTSD. For instance, in terms of armed forces, The National Center for PTSD proposes that the lifetime prevalence of PTSD among male combat veterans is very high at approximately 39 % (Engerlbrecht, 2013).

Furthermore, the Nigerian Army is yet to proffer adequate solution to such soldiers which according to Ameh, et al., (2014), also identified as life-threatening with direct links to PTSD and other mental illnesses and may lead them to pose a threat to themselves, their families, colleagues and other citizens with the recorded high prevalence rate of substance abuse, somatization, and even murder/suicide cases.

In line with the above evidence and assertions, a proper understanding of trauma, symptoms, and predictors of posttraumatic stress disorder will help in the prevention and management of the development of this disorder among military personnel fighting the Boko Haram Terrorists in Northeastern Nigeria. This will also provide for further research in the area of posttraumatic stress disorder and trauma management among men of the Nigerian armed forces. Therefore, this study will investigate personality traits as predictors of Posttraumatic Stress Disorder among the soldiers fighting insurgency in North-East Nigeria.

The following are the research questions for the study; Will personality traits significantly predict Posttraumatic Stress Disorder among Nigeria Soldiers?

The purpose of this study was to investigate to examine whether personality traits will significantly predict Posttraumatic Stress Disorder among Nigerian Soldiers fighting insurgency in North-East. It was hypothesized as follows:

1. Personality traits would significantly predict Posttraumatic Stress Disorder among Nigeria Soldiers.

# II. Methods

### **Participants:**

A total of 242 military personnel comprising 231(95.5%) male and 11(4.5%) female officers were used for the study. The participants were sampled from active duty military service personnel serving in Northeast Nigeria. Demographic information revealed that. Analysis of participants' rank revealed that 215(88.8%) were private and 27(11.2%) were commissioned, officers. The participants are within the ages of 20-58 years, with a mean age of 39.3 and a standard deviation of 2.1. They were further categorized based on age, namely, 127(52.2%) participants are within 20 – 30 years, 81(33.5%) within 31 - 40, 24(9.9%) within 41 – 50, and 10(4.1%) were above 50 years of age. Participants religion revealed that 161(66.5%) are Christians while 81(33.5%) are Muslims. 110 (45.5%) are single while 132 (54.5%) are married. Furthermore, the majority of the soldiers and officers were newly deployed and their duration of deployment was below 1 year with 128 (52.8%) followed by those with a duration of 1-2 years, 57 (23.6%) and 3 years and above had 58 (23.6%). Most of the soldiers have 0-5 years of service, 111 (45.9%) followed by 6-10 years with 49 (20.2%), 11-15 years with 39 (16.1%), 16-20 years with 18 (7.4%), 21-25 years with 9 (3.7%) and finally, 26 years and above in service with 16 (6.6%) available sampling technique was adopted to obtain the participants for the study.

#### Instrument:

Two sets of instruments were used for the study. They are the Posttraumatic Stress Disorder Checklist (Military version), Big Five Inventory (BFI).

#### Posttraumatic Stress Disorder Checklist (Military Version)

Posttraumatic Stress Disorder Checklist-Military (PCL-M) (Weathers, Huska, & Keane, 1991) is a selfreport rating scale that measures PTSD symptom severity in military veterans. This score is derived by adding the responses to all scale items. The total score may range from 17 to 85, where elevated scores suggest greater severity. Ratings are chosen according to how much the veteran has been disturbed by a particular traumatic military-related incident. The scale has proven useful with both male and female veteran populations (Weathers, et al 1991). This scale has been shown to be both valid and reliable ( $\alpha = .96$ ) in previous research (Pietrzak, Johnson, Goldstein, Malley, & Rivers, 2010). A total score of 50 was considered to be PTSD positive in military populations (Weathers et al., 1991). Blanchard, Jones-Alexander, Buckley, and Forneris, (1996) found that overall diagnostic efficiency was improved to 0.900 when the cutoff score was lowered to 44, yielding a sensitivity of 0.944 and specificity of 0.864 and correctly identifying 17 of 18 participants with PTSD.

#### **Big Five Inventory**

The 44-item Big five Inventory (BFI) is one of the several other psychological instruments which assess personality from a 5-dimensional perspective (Omoluabi, 2004). The essence of this perspective is that personality can be resolved into 5 broad dimensions or subscales, each distinct from each other which are extroversion, agreeableness, conscientiousness, neuroticism, and openness. The BFI was originally designed by John, Donahue, and Kentle, (1991), providing the original psychometric property for American samples with a Cronbach Alpha reliability coefficient of .80, and .85 in a 3-month test-retest. Umeh (2004) obtained a divergent validity coefficient of agreeableness .13, conscientiousness .11, neuroticism .39, and openness .24 with Kleinmuntz (1961) maladjustment scale. The instrument can be administered individually or in a group where direct scoring is used for all the items. Scores equal to or higher than the norms on each subscale are indicative that the client manifests the specific personality type.

**Pilot study:** The researcher conducted a pilot study using 50 mobile police personnel serving in Borno State. The PCL M yielded a Cronbach coefficient of .91. Alpha while the PFI yielded a Cronbach coefficient alpha of. 89. Also BFI yielded a Cronbach's alpha of .61 (openness), .86(conscientiousness), .84(extroversion), .89(agreeableness), and .96 (neuroticism) subscales respectively.

#### Procedure

The researcher officially sought the authorization of the Headquarters Theater Command Operation LAFIYA DOLE to carry out the study. Participants were given full information on the nature and purpose of the psychological screening and evaluation during periodic briefing tours of military formations. Thereafter, voluntary participation was solicited with the assurance of confidentiality and assurances that data was to be used to plan psychological care and support and for research purposes only. Volunteers filled a consent form indicating their willingness to be part of the study. It took an average of 25 minutes to fill one questionnaire after which they were retrieved and subjected to analyses. Data was obtained within a period of 4 months with the help of 4 military personnel as research assistance.

#### **Design/statistics**

The design of the study was a survey design. Descriptive statistics were used to present the socio-demographic factors of participants while hierarchical multiple regression analysis was used to test the hypotheses in relation to personality as predictors of PTSD.

#### **III. Results**

This chapter presents the results obtained from analyzing the data collected in the study. Both the descriptive and inferential aspects of the analyses were done using the Statistical Packages for Social Sciences (SPSS 23). The descriptive and inferential results are presented below.

Table 1: Summary table of Socio-demog	raphic Characteristics of Participants on personality traits and
coping styles as predictors of <b>j</b>	posttraumatic stress disorder among Nigeria soldiers

VARIABLE (S)		FREQUENCY PEI	RCENT %
GENDER			
Male	23	1	95.5
Female	11		4.5
Total	24	2	100.0
RANK			
Other Rank	s 21	5	88.8
Officers	27		11.2
Total	24	2	100.0
AGE			
20-30 yrs	12	7	52.5
31-40 yrs	81		33.5
42-50 yrs	24		9.9
51 yrs>	10	)	4.1
Total	12	7	52.5
RELIGION			
Christianity	16	1	66.5
Islam	81		33.5
Total	24	2	100.0
MARITALSTATUS			
Single	11	0	45.5
Married	13	2	54.5
Total	24	1	100.0
DURATION			
Below 1 Yr	12	8	52.9
1-2 Yrs	57		23.6
3 Yrs&>	57		23.6
Total	24	2	100.0
YEARSOFSERVICE			
0-5 Yrs	11	1	45.9
6-10 Yrs	49	1	20.2
11-15 Yrs	39		16.1
16 - 20 Yrs	18		7.4
21-25 Yrs	9		3.7
26 Yrs&>	16	i i i i i i i i i i i i i i i i i i i	6.6
Total	24		100.0

242 soldiers participated in this study, 231 (95.5%) were males and only 11 (4.5%) are females. Majority are other ranks from private to Master Warrant Officers, 215 (88.8%) and 27 (11.2%) are senior officers from Lieutenants to Major. Majority of the soldiers fall within the age range of 20-25 years with 128 (51.2%) followed by 31-40 years with 86 (34.4%), 42-50 years with 86 (10.4%) and 51 years and above with 10 (4.0%). Most of them are Christians with 161 (66.5%) with Muslims having only 81 (33.5%). 110 (45.5%) were singles while 132 (54.5%) were married. Furthermore, majority of the soldiers and officers were newly deployed and their duration of deployment was below 1 year with 128(52.9%) followed by those with duration of 1-2 years, 57 (23.6%) and 3 years and above had 57(23.6%). Most of the soldiers have 0-5 years of service, 111 (45.9%) followed by 6-10 years with 49 (20.2%), 11-15 years with 39 (16.1%), 16-20 years with 18 (7.4%), 21-25 years with 9 (3.7%) and finally, 26 years and above in service with 16 (6.6%).

### **Test of Hypotheses**

Hierarchical Degression Coefficients

# Table 4: Summary table of Hierarchical Regression Coefficients on personality traits as predictors of posttraumatic stress disorder among Nigeria soldiers

Model		Unstandardized Coefficients		Standardized Coefficients	Т	Sig.
		В	Std. Error	Beta		
1	(Constant)	93.634	5.345		17.518	.000
	Rank	7.378	2.309	.200	3.196	.002
	Age	1.282	.889	.091	1.443	.150
	Gender	-5.201	3.499	093	-1.486	.139
	Religion	-3.042	1.542	124	-1.972	.050
2	(Constant)	90.615	5.875		15.424	.000
	Rank	6.037	2.136	.164	2.827	.005
	Age	1.788	.820	.126	2.180	.030
	Gender	-1.780	3.228	032	551	.582
	Religion	-2.467	1.420	100	-1.738	.084
	Extraversion	.342	.191	.180	1.794	.074
	Agreeableness	301	.154	195	-1.961	.051
	Conscientiousness	.428	.185	.256	2.312	.022
	Neuroticism	056	.217	028	260	.795
	Openness	.002	.183	.001	.009	.993

a. Dependent Variable: PTSD

#### **Hypothesis One**

Personality traits would significantly predict Posttraumatic Stress Disorder among Nigeria Soldiers. The result showed the various relative contributions and levels of significance of the independent variables: Extraversion ( $\beta = .180$ , P >.05), Conscientiousness ( $\beta = 2.312$ , P <.05), Neuroticism ( $\beta = -.260$ , P >.05), Agreeableness ( $\beta = -.195$ , P >.05) and Openness to Experience ( $\beta = .001$ , P >.05). From the analyzed data, the results showed that only conscientiousness predicted PTSD. Extraversion, agreeableness, neuroticism, and openness were not significant predictors of PTSD.

#### **IV. Discussion**

The study investigated the influence of personality traits on PTSD among soldiers in North-East Nigeria. The hypothesis showed that some personality traits independently predicted PTSD while controlling for demographic variables. From the analyzed data, the results showed that conscientiousness was a significant predictor of PTSD while extraversion, agreeableness, and openness to experience on the other hand were not significant predictors of PTSD. Conscientiousness based on the findings predicted positively posttraumatic stress disorder. These findings are consistent with other studies for example, extraversion was found to have no significant effect on PTSD (Knežević, et al., 2005). The finding is not consistent with the findings of other scholars as reviewed in this study which could be attributed to other **factors** (Knežević, et al., 2005; Chung, et al., 2007). Larsen and Buss's (2002) point of view personality trait of conscientiousness describes socially prescribed impulse control that facilitates task and goal-directed behaviours. It refers to one's tendency toward self-discipline, hard work, and a drive towards a high level of achievement. People high on conscientiousness are usually organized and dependable. In assessing the significance of conscientiousness in predicting PTSD, in can be opined that certain environmental and logistic constraints limiting troop's ability in the military operation in the Northeast may surmount to frustration in as much as they continually want to put in their best.

The personality dimension of extraversion implies an energetic approach towards the social and material world. It is characterized by being outgoing, energetic, talkative, sociable, and assertive. An individual that scores high on extraversion trait tends to be a sensation seeker and hence engages in activities that will increase the level of arousal. Costa and McCrea (1992) identified seven major divisions of extraversion: adventure, affiliation, positive affectivity, energy, ascendance, and ambition. Such individuals are more likely to build a high level of resilience around their lives and on the other end are vulnerable since their activities may lead to an increased level of arousal. In this study, extraversion did not predict PTSD. Morena et al (2016) observed trait theories of personality to explain the intricate processes of psychological traits as predictors of psychological health. To him, personality traits (extroversion, agreeableness, conscientiousness, neuroticism, and openness) jointly predicted psychological health and apart from neuroticism which predicted PTSD independently, others such as extraversion did not predict PTSD.

Furthermore, neuroticism was not found to predict PTSD. It can therefore be said that Neuroticism has no significant effect on PTSD. This was not supported by other findings as reviewed in the study (Knežević, et

al., 2005; Chung, et al., 2007), found neuroticism as key risk factors of posttraumatic stress disorder and depression symptoms. While Eriega, et al., (2014) showed that, neuroticism personality influenced posttraumatic stress disorder, Ebert, et al., (2002), discovered that neuroticism is said to be correlated with lower life satisfaction which could lead to a mental disorder such as PTSD. The study carried out by Steel and Kunst, (2011) shows that there is a negative correlation between neuroticism and subjective well-being, that is, higher neuroticism predicts lower subjective wellbeing and lower neuroticism predicts higher subjective wellbeing. Similarly, Haslam, et al., (2009) showed that all the personality traits were positively correlated with mental wellbeing except the personality traits neuroticism. Paris, (2000) further argued that neuroticism is the only personality trait that predicts all PTSD symptoms and general health problems. Chung, et al., (2007) further found that patients with full PTSD were significantly more neurotic than those with no or partial PTSD. Patients with full-PTSD and generally more personality traits associated with neuroticism and fewer traits associated with Agreeableness than the groups with partial and no PTSD.

Openness to experience did not predict PTSD among the participants in this study. It was not supported by the findings of Knežević, et al., (2005) who found in his study that only personality trait of Openness predicted PTSD. They stated that a higher degree of Openness may increase susceptibility to develop posttraumatic stress after being exposed to traumatic events. Similarly, agreeableness did not also predict PTSD. It can therefore be said that the agreeableness had no significant effect on PTSD. The result is consistent with other researchers' findings (Knežević, et al., 2005; Chung, et al., 2007). The reason for this result could be attributed to the trait of the agreeableness of being highly altruistic, nurturance, caring, and engaging in social support (Digman, 1990).

# Implications of the findings

The study investigated the roles of personality traits such as extraversion, conscientiousness, agreeableness, neuroticism, openness, and coping style as predictors of Post Traumatic Stress Disorders. The results obtained showed varying implications of each factor on PTSD among the Nigerian Soldiers fighting insurgency in North-East Nigeria. The following are highlights of the implications:

Personality traits were found to significantly predict PTSD in relation to conscientious while extraversion, agreeableness, neuroticism, and openness had little or no significant relationship with PTSD. Though the result is not consistent with other studies especially as regards the role of neuroticism as a predictor of PTSD, the findings of this study could be attributed to other factors since most of the research was carried among the civilian population. The military participants might have overtime developed other factors such as Post Traumatic Growth which is an implication for further studies.

Though the study showed that the personality factors of extraversion, agreeableness, neuroticism, and openness to experience do not necessarily predict PTSD. This, therefore, means that personality applied could significantly predict the manifestation of PTSD symptoms.

Finally, the study has implications for researchers, clinical practice, and different agencies especially the military. For researchers, it shows that different personality traits may have varying effects on the person depending on the nature of the distressing events and as such spur further investigation. For clinicians, it helps in understanding better the need to investigate personality traits. Finally, for the military and other relevant agencies, it will help in policy formulation and implementation towards a mentally balanced force for greater output in the fight against insurgency.

# Limitations of the study

The following limitations were observed in the course of carrying out this study;

Some of the soldiers were reluctant to participate and the few that accepted to participate spent much time towards responding to the copies of the research instrument. Some of the participants left some questions unanswered. Since the soldiers were gotten from the battlefield, most of them might be highly vigilant in the course of filling the questionnaire.

# Suggestions for further study

Stemming from the findings of this study, the following suggestions were made:

There is a need for certain things to be in place. Since the war and armed conflicts can hardly be averted but alleviated rather, these military combatants should be properly taken care of on deployment irrespective of their personality.

There is a need for these military personnel to be provided with trauma debriefing and counseling before, during, and after deployment.

There should also be periodic mental health assessment and evaluation for troops on deployment. Submissions should be forwarded to appropriate superior authority for necessary action.

Other factors such as duration of deployment may also contribute as a predictor of PTSD and as such, it is suggested that in the course of duty and long deployment, troops should be granted short breaks to go home, refresh, and gather some social support from family members at regular intervals.

This study used the military population and as such, it is encouraged that the findings can only be generalized among the population from which the sample is gotten from, that is, the Nigeria Army personnel serving in North-East Nigeria. It is on this note that the researcher suggested that the mental health of Nigerian soldiers should be taken care of, hence, the need for mental health practitioners to be highly engaged in the affairs of the military. This will go a long way to provide an envious military that the world will reckon with.

#### V. Conclusion

The role of personality traits as predictors of PTSD among soldiers fighting insurgency in North-East Nigeria has been brought to limelight by the findings of this study. The study showed that the significant influence of personality traits over PTSD among soldiers, for example, it validates many findings done outside this country regarding the influence of personality on PTSD. The researcher concluded that individuals' who manifest conscientiousness are more likely to experience PTSD.

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