ASSESSMENT OF POSTTRAUMATIC STRESS DISORDER: THE NIGERIAN ADAPTATION OF UCLA PTSD REACTION INDEX

By

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Abstract

Exposure to conflict is associated with a wide range of negative mental health conditionsuch posttraumatic stress disorder (PTSD). A number of scales measuringPTSD have been developed, including the University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (UCLA PTSD). The purpose of this study was to establish the psychometric properties of an adapted version of the UCLA PTSD in a sample of conflict-affected adolescents in Kano metropolis, Nigeria. 40 adolescents affected by conflict were selected and completed three self-report instruments, namely, the UCLA PTSD, Posttraumatic stress disorder symptom scale interview (PSSI) and the Experience of students affected by armed conflict (ESAAC), on a single occasion. A convergent validity of the UCLA PTSD was very good at .418 when correlated with the scores of PSSI and a very good divergent validity of -.075 when correlated with the scores of ESAAC. The internal consistency of the UCLA PTSD was also very good at .0886. Findings from the study provide evidence to support the UCLA PTSD Reaction Index as an adequate instrument for assessing PTSD symptoms among conflict-affected adolescents in Nigeria.

Keywords: Posttraumatic Stress Disorder, University of California at Los Angeles, Reaction Index, Adolescents, Kano metropolis.

Introduction

In Nigeria, especially Kano metropolis has been a flashpoint for episodic violence that often followed religious lines. Examples are the Maitatsine sect attack on people living in Kano in 1983, religious riot in 1991 triggered by a preaching event by a German evangelist, reprisal attack for the killings of some northern Muslims in the south in 1999 and 2004, post-election violence in 2011, 'Boko haram' attack on Police headquarters in 2012, 'Boko haram' attack on staff and students of Federal College of Education in 2014 and most recently the killing of a woman in 'Kofar Wambe' market in 2016. This conflict situation in Kano metropolis has led to the death of many people and the disruption of academic activities, school dropout, low enrolment and migration of students from Kano to other parts of the country.

Research conducted on the extent and effects of conflict on adolescents has predominantly been based on studies conducted outside Nigeria. Though, more recently few studies have begin to consistently documenting the effects of conflict on adolescent's mental health and general well-being. For example, it is well documented that Nigeria youth have experienced and will continue to witness trauma in their lifetime, with the most common one being posttraumatic stress disorder (PTSD). Such trauma has been shown to be associated with negative cognitive, emotional, and behavioural outcomes which can adversely affect the psychological functioning of the adolescent.

PTSD is an anxiety disorder that people develops after experiencing or witnessing a terrifying event such as conflict, disaster, and any other violent activities. This disorder is marked by reliving the traumatic experience in nightmares, flashback, or intrusive thoughts, avoidance of stimuli associated with the trauma and emotional numbing, symptoms of increased arousal such as; irritability and difficulty in concentrating, apathy and occupational and social impairment (Beisler, Wiwa, &Adebajo, 2010). Students who are exposed to traumatic or terrifying events such as conflict will experience posttraumatic stress and also exhibits posttraumatic stress disorder symptoms (Korb, 2013). Similarly, Bahago, Ozoji, Onyejekwe andAttah (2014) reported that conflict affected children exhibits PTSD symptoms of re-experiencing, hyper-arousal and avoidance which are the three major characteristics of PTSD symptoms.

Secondary school students in Kano metropolis who have witnessed incessant conflicts are likely to develop PTSD especially after experiencing a very frightening situation like seeing another person being tortured or killed, bombing and shooting of innocent people. Although there are other risk factors for developing PTSD and these are gender, family history of psychiatric disorders, life stress, low socio-economic status, living condition and low educational level (American Academy of Child &Adolescent Psychiatry (AACAP), 2011; Copeland, Keeler, Angold& Costello, 2007). However, there are three major characteristics of PTSD and these are re-experiencing, hyper-arousal and avoidance symptoms.

Re-experiencing symptoms involves reliving the traumatic event such as intensive memories, nightmares, dissociation, anxiety and physiological reactivity caused by triggers reminding one of the traumatic events. Re-experiencing symptoms may result when components of the fear network are activated by some stimulus which are external and which may include stimuli not directly associated with the trauma (Foa&Kozak, 1986). Secondary school students exposed to conflict in Kano metropolis may exhibit re-experiencing through nightmares about threats to self, through disorganized and agitated behaviours that are symbolic of the trauma, or through anguish when presented with reminders of the traumatic event.

Furthermore, hyper-arousal symptoms among secondary school students may take the form of night terrors, sleeping and concentration difficulties, irritability, hyper vigilance, night waking, and an increase in exaggerated startle responses (Yule, 2001). Traumatic events like conflict may have many stimulus-danger associations or generalized danger perception. Secondary school students who are exposed to conflict in Kano metropolis are likely to develop unrelated fears such as separation anxiety, adjustment problems in schools, hypervigilance and fear of the dark after a traumatic event.

Avoidance symptoms are characterized by avoidance of trauma reminders, loss of interest in previously enjoyable activity and withdrawal from social situations. Secondary school students exposed to conflict in Kano metropolis are likely to show more avoidance to minimize the occurrence of re-experiencing the traumatic event. Avoidance has the ability to help traumatized secondary school students to lessened activation of their fear network by withdrawing from places that had once been attacked or places that are prone to conflict. Avoidance among individuals who experience post traumatic stress disorder symptoms can be observed in constrained affect, regression of social and developmental skills, and constraints in play (Scheeringa, Zeanah, Drell, &Larrieu, 1995).

However, exposure to various forms of conflict among adolescents is associated with different negative outcomes such as: depression, anxiety and posttraumatic stress disorder (PTSD). Researchers have

developed a number of scales capable of measuring PTSD symptoms exhibited by children, adolescents and adults affected by conflict, for example, the University of California at Los Angeles Reaction Index for children and adolescents developed by Steinberg, Brymer, Decker, and Pynoos (2004), the PTSD Symptoms Scale Interview (PSSI) developed by Foa, Riggs, Dancu and Rothbaum (1993), the Screen for Posttraumatic Stress Disorder (SPTSS) developed by Caspi, Carlson, and Klein (2007), and host of other measures of PTSD symptoms.

The UCLA PTSD Reaction Index was developed by Steinberg, Brymer, Decker, andPynoos (2004) in the University of California at Los Angeles, United States. The UCLA PTSD Reaction Index was adapted for this study. The UCLA PTSD Reaction Index questionnaire is a screening tool designed to assess post-traumatic stress symptoms amongst children and adolescents. The UCLA PTSD Reaction Index has two sections, A and B. Section A contains personal data of the research participants such as gender while section B is divided into five parts. The first two parts of this research instrument will not be used in this study, because it is designed to diagnose PTSD which is not the focus of this current study.

The focus of this study will therefore be on the three remaining parts of the instrument (Criterion B, Criterion C, and Criterion D) which measures PTSD symptoms that met DSM-IV criteria. The part three of the UCLA PTSD Index has 20 items that measure re-experiencing, avoidance, and hyper-arousal symptoms. The first part of this sub-scale (Criterion B on the UCLA PTSD Reaction Index) has 5 items that measures re-experiencing symptoms which includes upsetting thoughts, bad dreams, and flashback. An example of such item is "I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I do not want them to." The second part of this sub-scale (Criterion C on the UCLA PTSD Reaction Index) consists of 9 items that measure avoidance symptoms which include whether participants avoided thoughts/feelings related to the trauma, avoided activities/people, experienced forgetting, diminished interest, detachment, and restricted affect. An example of this item is, "I have trouble feeling sadness or anger". The third part of this sub-scale (Criterion D on the UCLA PTSD Reaction Index) consists of 6 items that measure arousal symptoms which include whether participants have sleep problems, irritability/anger, concentration problems, hyper-vigilance, or exaggerated startle. An example of this item is, "I feel jumpy or startle easily, like when I hear a loud noise or something surprises me". The direction of this scale indicates that the scale is coded in a 5-point scale in which research participants have an option of five frequencies, ranging from O ("none of the time") to 4 ("most of the time).

Statement of the problem

Exposure to violent conflicts has been shown to be associated with negative consequences such as adverse cognitive, emotional and behavioural outcomes including mental health problems particularly posttraumatic stress symptoms. Given the effects of some of these negative consequences on secondary school student's mental health, the importance of assessing PTSD symptoms with a valid and reliable instrument becomes imperative.

A number of scales measuring PTSD symptoms have been developed by researchers but very little data are available with regard to the psychometric properties of the UCLA PTSD Reaction Index in the Nigerian context. As such, the present study aimed at establishing the validity and reliability index of the UCLA PTSD Reaction Index for its usage in among Nigerian populace.

Significance of the Study

The outcome of this study would be beneficial to the following stakeholders in education: Secondary schools teachers, educational and psychologists. The findings of this study would also explore a new assessment approach to PTSD symptoms and provide far reaching implications for theory and research in Nigeria. The outcome of this study would therefore provide secondary school teachers with information about the occurrence and prevalence of PTSD symptoms among students affected by conflict and how such symptoms can be assessed. In addition, it will help Educational psychologists to be conversant with the UCLA PTSD

Reaction Index as a valid and reliable measure that can be used in assessing PTSD symptoms in the Nigerian context. Findings of the study would enable school counsellors to use and recommend the UCLA PTSD Reaction Index in assessing PTSD symptoms exhibited by secondary school students exposed to conflict in Nigeria.

Objectives of the Study

The objectives of the study are:

i. To establish the construct validity of the UCLA PTSD Reaction Index.
ii. To establish the reliability of the UCLA PTSD Reaction Index.

Research Questions

i. What is the validity of the UCLA PTSD Reaction Index?
ii. What is the reliability of the UCLA PTSD Reaction Index?

Method

Study's Participants

Participants comprised 40 secondary school students in Kano metropolis aged 14-17 years (19 (48%) males and 21 (52%) females). Participants were screened and found to meet the criteria for DSM-IV PTSD symptoms which made them eligible for the study. Eligibility criteria for the study were as follows: participants had to have been exposed to traumatic event such as conflict; participants had to be resident in Kano metropolis, and must score 38 points and above in the UCLA PTSD Reaction Index.

Measures

The University of California at Los Angeles Post-Traumatic Stress Disorders Reaction Index (UCLA PTSD) for DSM-IV

The UCLA PTSD Reaction Index used for this study is the adapted version by Steinberg, Brymer, Decker, and Pynoos, 2004. The UCLA PTSD Reaction Index questionnaire is a screening tool designed to assess exposure to traumatic events and post-traumatic stress symptoms amongst children and adolescents. For the purpose of this study, the UCLA PTSD Reaction Index is the measure used in screening and assessing PTSD symptoms exhibited by secondary school students affected by conflict.

The scale consists of 20 items but has been adapted and modified to contain items they are generally common and used in the Nigerian context. For example, item four which read thus; 'I feel grouchy, angry or mad', this item was replaced with 'I feel easily upset, angry or mad'. Therefore, items like this were included in the final adapted form of the instrument.The UCLA PTSD Reaction Index also contains items that probe PTSD symptoms which is characterised with re-experiencing (5 items), hyper-arousal (6 items), and avoidance symptoms (9 items). For example, an assessment of re-experiencing symptoms is; 'I have upsetting thoughts, pictures, or sounds of what happened come into my mind when I do not want them to', an assessment of the hyper-arousal symptoms is 'I feel jumpy or startle easily, like when I hear a loud noise or something surprises me', and assessment of the avoidance symptoms is 'I try to stay away from people, places or things that make me remember the crises experience'. The direction of this scale indicates that the scale is coded in a 5-point scale in which research participants have an option of five frequencies, ranging from O ("none of the time") to 4 ("most of the time).

Psychometrically, the UCLA PTSD Index has been demonstrated to have good internal consistency with coefficient alphas ranging from .89 (Korb, 2013) to .90 (Roussos, Goenjian, Steinberg, Sotipopulou, Kakai, Kabakos, &Manouras, 2005). Adapted versions of the UCLA PTSD Index have been used in Nigeria on various samples of youth, for example, among undergraduates and secondary school students. The

internal consistency (Cronbach alpha) was reported as very good (.88 and .89 on two samples) in one of these studies (Korb, 2013). The measure is also reported to have good convergent validity (.82) with the Child and Adolescent Version of the Clinician-administered PTSD Scale (Roussos et al., 2005).

The authors of the UCLA PTSD Reaction Index allude that researchers using this measure calculate the overall PTSD symptoms by summing the scores for each question that relates to a DSM-IV symptom or by summing the scores for all symptoms. They also suggested that scores of 38 or above indicate the presence of PTSD. However, for the purpose of this study, the cut score of 38 will be used to indicate the presence of PTSD symptoms among secondary school students affected by conflict and will be used to determine the student's eligibility to participate in the study.

Results

Research Question One: What is the validity of the UCLA PTSD Reaction Index?

Validity Results

Table 1: PTSD Divergent Vaility with ESAAC and Convergent Validity with PSSI as Shown by Pearson Correlation Coefficients

Variables	*PTSD*	*ESAAC*	*PSSI*
PTSD	1	-.075	.418[**]

** P =.007

Table 1 shows that the UCLA PTSD Reaction Index has a convergent validity (.418) with the Posttraumatic Stress Symptoms Index (PSSI) which is a similar instrument that measures PTSD symptoms and a divergent validity (-.075) with the Experience of Students Affected by Armed Conflict (ESAAC) which is another instrument that measures student's traumatic experiences and not PTSD symptoms. This validity coefficient is significant which provides strong construct validity and evidence that the UCLA PTSD Reaction Index is measuring what it purports to measure.

Research Question Two: What is the reliability of the UCLA PTSD Reaction Index?

Reliability Result

Table 2: PTSD Item Analysis with Reliability of Cronbach Alpha α .886

Items	*Mean*	*Standard Deviation*	*Scale Mean If Item Deleted*	*Scale Variance If Item Deleted*	*Corrected Item-Total Correlation*	*Cronbach Alpha A If Item Deleted*
PTSD 1	2.0500	1.21845	28.6000	168.605	.526	.880
PTSD 2	1.9750	1.09749	28.6750	176.430	.313	.886
PTSD 3	1.3250	.91672	29.3250	175.815	.415	.883
PTSD 4	1.4750	1.01242	29.1750	168.610	.651	.877
PTSD 5	1.3750	1.21291	29.2750	166.358	.605	.877
PTSD 6	1.1750	1.05945	29.4750	167.743	.652	.877
PTSD 7	1.7250	1.28078	28.9250	169.866	.456	.882
PTSD 8	1.7750	1.07387	28.8750	170.471	.539	.880
PTSD 9	1.8750	1.32409	28.7750	167.563	.508	.880
PTSD 10	1.5250	1.17642	29.1250	168.984	.535	.880
PTSD 11	1.4000	1.12774	29.2500	167.321	.622	.877
PTSD 12	1.6750	1.40306	28.9750	170.692	.384	.885
PTSD 13	1.4750	1.30064	29.1750	169.071	.473	.882
PTSD 14	1.0250	1.38652	29.6250	175.676	.249	.890
PTSD 15	1.6500	1.25167	29.0000	166.000	.595	.878
PTSD 16	1.4500	1.33877	29.2000	176.626	.234	.890
PTSD 17	1.8000	1.30482	28.8500	170.233	.435	.883
PTSD 18	1.3750	1.21291	29.2750	166.820	.589	.878
PTSD 19	1.1500	1.25167	29.5000	166.000	.595	.878
PTSD 20	1.3750	1.23387	29.2750	162.102	.736	.873

Table 3: PTSD Scale Statistics

Mean	Variance	Std. Deviation	Cronbach's'alpha A	Number Of Items
30.6500	186.746	13.66551	.886	20

Tables 2 and 3 revealed that the reliability coefficient for the UCLA PTSD Reaction Index was .886. The internal consistency of the UCLA PTSD Reaction Index was assessed using Cronbach Alpha method of estimating reliability. On the whole, the instrument was revealed to have high reliability as indicated from the coefficients index which also indicates that the items have relatively high internal consistency and adequate to be used in the Nigerian context.

Discussion

Theobjective of the study was to establish the psychometric properties of the UCLA PTSD Reaction Index in the Nigerian context. The convergent validity of the instrument was established by the researchers by correlating the scores of the UCLA PTSD Reaction Index with the scores of the Posttraumatic Stress Disorder Scale Interview (PSSI) which is similar scale that measures posttraumatic stress symptoms and the divergent validity was established by correlating the scores of the UCLA PTSD Reaction Index with the scores of the Experience of Students Affected by Armed Conflict (ESAAC) which is another instrument measuring student's traumatic experiences.

The UCLA PTSD Reaction Index has a good convergent validity (.418) with the PSSI and a good divergent validity (-.075) with ESAAC. This findings is in line with the work of Roussos, Goenjian, Steinberg, Sotipopulou, Kakai, Kabakos, &Manouras (2005) where they reported that the UCLA PTSD Reaction Index have a good convergent validity (.82) with the Child and Adolescent Version of the Clinician-administered PTSD Scale. This provides strong construct validity evidence that the UCLA PTSD Reaction Index can be used in the Nigerian setting.

The internal consistency of the UCLA PTSD Reaction Index was also established using CronbachApha method and it was found to have a reliability coefficient of 0.886 which means that the instrument is reliable. This is also in line with the study of Korb (2013) where she reported the internal consistency of the UCLA PTSD Reaction Index of 0.88 and 0.89 from two samples of students in tertiary institutions. Overall, the reliabilityof UCLA PTSD Reaction Index is considered to be good and useful in the Nigerian context.

Conclusion

Exposure to trauma has been shown to be associated with mental health problems, for example, posttraumatic stress disorder symptoms. A number of scales assessing posttraumatic stress symptoms have been developed including the UCLA PTSD Reaction Index. Findings from this study indicated that the UCLA PTSD Reaction Index is a reliable and valid instrument for the assessment of posttraumatic stress disorder amongst conflict-affected adolescents in Nigeria and this is evidently supported by data in this study. Thus, the UCLA PTSD Reaction Index is a psychometrically adequate measure for PTSD symptoms among conflict-affected students. It is equally worthy of mention here that the limitations of this study were identified to include the sample size of the study which is small and as such, findings may not generalize to other sample of adolescents in other conflict-affected areas. Second, the sample consisted of adolescents from the metropolis as this can also affect the generalizability of the findings of this study to sample of adolescents residing in the rural areas.

Recommendations

Despite the limitations of the study, the following recommendations are proffered:

i. A large sample size of conflict-affected adolescents should be selected and confirmatory factor analysis can be used to further validate the items of the instrument.

ii. Future research can be extended to conflict-affected adolescents in rural areas and this will enhance the generalizabilty of findings of this study.

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