



Assessment of Post-Traumatic Stress Disorder among Internally Displaced Persons in Ringim Town, Jigawa State-Nigeria

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ABSTRACT

Post-Traumatic Stress Disorder (PTSD) is a serious, potentially debilitating condition that can occur in people who have experienced or witnessed a life-threatening event, such as natural disaster, serious accident or any other violent personal assault. It is characterized by symptoms such as, re-experiencing a traumatic event through intrusive distressing recollections, flashbacks, and nightmares. It was estimated at the end of 2006 that Nigeria forms a third of the internally displaced persons in Africa and 10% of IDPs Worldwide, and Ringim town of Jigawa state was also inclusive. The major aim of this study was therefore to assess the prevalence of PTSD, among internally displaced persons in Ringim town. Using empirical method, a multistage sampling method was employed to gather among 238 internally displaced persons in Ringim town using pretested structured self-administered questionnaires. The data collected was analyzed using MINITAB version 12.1 statistical software. A total of 238 completed the questionnaires giving a response rate of 100%. The age range of the respondents was from 12 to 89 with a mean \pm SD of 30.2 ± 11.6 respectively. Out of the 238 respondents, about 95 (39.92%) of them falls within second to third decade of life which forms the major group, followed by 83 (34.87%) of them falls within third to fourth decade. The prevalence of PTSD among the respondents was found to be 59.66% (95% CI of 0.05 to 0.012). This work recommends among others that; Nigerian government and the international community need to strengthen comprehensive protection and social support for IDPs in the camps of northern Nigeria to help reduce mental distress and as a preventative measure to reduce further exposure to trauma.

Key words: PTSD, IDPs, SLU, Ringim

1.0 INTRODUCTION

Post-Traumatic Stress Disorder (PTSD) is a serious, potentially debilitating condition that can occur in people who have experienced or witnessed a life-threatening event, such as a natural disaster, serious accident, terrorist incident, sudden death of a loved one; war; rape or other violent personal assault. Bridge JA, et al. (2007) It is an anxiety disorder that some people get after seeing or living through a dangerous event, Joseph S. (1997). It is characterized by symptoms such as, re-experiencing a traumatic event through intrusive distressing recollections, flashbacks, and nightmares, emotional numbness and avoidance of places, people, and activities that are reminders of the trauma, feeling cut off from others and other negative alterations in cognitions (ways of thinking, understanding, learning, and remembering) and mood, marked changes in arousal and reactivity, including difficulty sleeping and concentrating, feeling jumpy, easily irritated, and angered, Albuja S, et al. (2008). These symptoms usually occur within a few weeks of a trauma, but they may not appear for several months or even years.

Internally displaced persons are people or groups of people who have been forced or obliged to flee or to leave their homes or places of residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence or violations of human rights Michael AO, et al. (2014) They are also often referred to as refugees, although they do not fall within the current legal definition of a refugee Hayson S. (2013). The term



"internally displaced person" is not specifically covered in the UN Convention; it is used to describe people who have fled their homes for reasons similar to refugees, but who remain within their own national territory and are subject to the laws of that state. Bhui K, et al (2006).

As of April 2015, IDMC estimated that 1,538,982 people forced to flee their homes in Nigeria were still living in internal displacement. This figure includes people displaced as a result of brutal attacks by the Islamist armed group Boko Haram in north-eastern Nigeria, the government-led counterinsurgency operations against the group, Nuhu A, (2014). The increase in the first half of 2015 of the number of internally displaced people (IDPs) in Nigeria was due to ongoing violence in the north-east as well as the return of refugees who have not been able to settle back in their places of origin and are therefore considered as IDPs. According to several organizations, the number of victims range between one and three million people In addition to social, economic, political, legal, psychological, and health problems related to internal displacement still exist. Roberts B, (2003) Conflicts and wars have ineradicable changes in societal dynamics. Therefore, this kind of societal traumas must be approached by taking these psycho social aspects into account. Data related to assessment of post-traumatic stress disorder among internally displaced persons in Ringim town are not available. Therefore this work is aimed to document the prevalence of post-traumatic stress disorder among IDPs, as they have important role in their mental health rehabilitation.

2.1 Related works

Several studies have shown a high prevalence of post-traumatic stress disorder among internally displaced persons. In developed countries the frequency of post-traumatic stress disorder among IDPs is low and is gradually decreasing. Similarly, the study made by United Nations High Commissioner for Refugees (UNHCR), (2013), and the sample of Afghan and Cambodian refugees who live in the USA, the reported PTSD prevalence ranges from 45% to 86%, Malekzai et al (1996). According to the results, accumulated traumas (especially death of close persons) and stressors, the adaptation on new social environment significantly increase vulnerability. Bridge (2007) emphasized that There is not much data on PTSD prevalence in adults within the territory of former Yugoslavia. However, reported PTSD prevalence among refugees in collective centers was ranging from 26% to 35%. Another study conducted in Diyarkabir Turkey by Essizoglu (2014) on Post-Traumatic Stress Disorder in Internally Displaced People Subjected to Displacement by Armed Forces and the most important finding of this study was that the PTSD rate was 21.40% among IDP who were subjected to internal displacement by armed forces. Previous studies had reported the prevalence of PTSD as 14%–37% .Among Turkish Cypriots who were internally displaced during both the 1963 ethnic conflict and the 1974 Cyprus war, 20% met criteria for PTSD nearly three decades after the event (Ergun et al., 2008)

David M, et al. (2015) emphasized on similar study conducted in Southern Thailand on Symptoms of Posttraumatic Stress Disorder and Depression, among Children in Tsunami-Affected Areas in Southern Thailand shows a total of 371 children (167 displaced and living in camps, 99 not displaced from villages affected by the tsunami, and 105 not displaced from unaffected villages) participated in the first survey. Thienkrua et al. (2006). The prevalence rates of PTSD symptoms were 13% among children living in camps, 11% among children from affected villages, and 6% among children from unaffected villages (camps vs unaffected villages, $P=.25$); In multivariate analysis of the first assessment, having had a delayed evacuation, having felt one's own or a family member's life to have been in danger, and having felt extreme panic or fear were significantly associated with PTSD symptoms, Haugaard J, et al.(2008). Older age and having felt that their own or a family member's life had been in danger were significantly associated with depression symptoms. In the follow-up survey, 72% (151/210) of children from Phang Nga participated. Prevalence rates of symptoms of PTSD and depression among these children did not decrease significantly over time, Albuja S, et al.(2008).

While researching risk factors and prevalence of PTSD among survivors in war situations and mass violence in Algeria, Cambodia, Ethiopia and Gaza, de Jong and torture in war: consequences and rehabilitation of victims 124 associates, Blanchard EB, et al. (1996) have established that the prevalence of PTSD amounts to 37.4% in Algeria, to 28.4% in Cambodia, 15.8% in Ethiopia and 17.8% in Gaza. Hayson S. (2013) in the same vein, the study conducted among the 300 participants interviewed in Kenya on Prevalence of post-traumatic stress disorder among the internally displaced persons aged 13-17 years involved in the 2007 Post Election Violence, the prevalence of PTSD was found to be 38%. This was statistically the same with that of other studies done in other countries (44%). The study variables that were significantly associated with PTSD were; age, gender, religious affiliation, level of education, family socio- economic level and number of traumatic events with $p < 0.05$ Kinyanjui JK, et al. (2007).. The participants found having PTSD was referred to the local biopsychosocial care givers within the local Primary Health Care Systems. Another study, conducted in northern Uganda and South Sudan, found the prevalence of PTSD was 46% among South Sudanese refugees and 48% among South Sudanese who stayed in the country, these studies indicate a high prevalence of mental illness in South Sudan as well as the potential for an increase in psychiatric disease as more refugees and internally displaced persons return home, Karunakara UK, et al. (2004) A study conducted in northern Nigeria on Correlates of depression among Internally displaced persons after post-election violence in Kaduna, North Western Nigeria, of the 258 IDPs, 154 (59.7%) had probable depression, and 42 (16.3%) had definite depression. Females were more likely to have probable depression (1.68, 95% CI 1.02–2.78; $p = 0.04$) a definite depression (2.69, 1.31–5.54; $p = 0.006$). IDPs with co-morbid PTSD were more likely to have probable depression (16.9, 8.15–35.13; $p = 0.000$) and definite depression (3.79, 1.86–7.71; $p = 0.000$). Taiwo LS, et al. (2015). A co- morbid CIDI diagnosis of PTSD (AOR 16.6, 7.2–38.6; $p = 0.000$) and psycho-trauma of getting beaten (AOR 2.7, 1.1– 6.7; $p = 0.004$) remained as independent predictors of probable depression among the IDPs. The male gender remained a protective factor against probable depression (AOR 0.3, 0.1–0.7; $p = 0.006$)

Many of the studies on PTSD among populations in different cultures have identified factors that related to the development of associated symptoms. First of all, many of the studies have found that the number of violent events experienced is an important risk factor in the development of PTSD Bridge JA, et al. (2007) Additionally some studies have found a relationship between particular types of war-related experiences and the presence of posttraumatic stress reactions. These factors include parental loss, direct life threat, and the deprivation of basic needs. In a year 2000 De Jong identified loss of loved ones, and especially witnessing the violent death of someone close, as serious risk factors for the development of PTSD and also the same year in Rwanda, Dyregrov (2000), found that posttraumatic stress reactions were associated with violence exposure, parental loss, and the feeling that one's life was perpetually in danger. In the year 2006 Schaal and Elbert (2006) found that number of PTSD symptoms endorsed was most strongly associated with a person believing that he/she was going to die and witnessing the murder of a parent. Similarly, the results of a study carried out by Popovski M, et al. (2008) among adolescents living under conditions of siege in Sarajevo showed that war atrocities and personal losses were highly correlated with the development of PTSD. He also found an association between deprivation of basic needs and increased posttraumatic stress reactions, 20 particularly of symptoms relating to avoidance and hypervigilance. Michael AO, et al. (2014)

Regarding the distribution of PTSD among the different places of residence there was a significant association between the other places and Caquetá as a reference: the degree of the relationship was in Barbacoas-Nariño 4.7 (CI 95% 2.6-8.3), Cauca-Putumayo 3.4 (CI 95% 2.1-5.8), and Bogotá-Soacha 2.9 (CI 95% 2.0-4.3). Besides, the population that was at higher risk to develop PTSD were IDPs (twice and six times greater comparing with vulnerable population without health insurance and insured population respectively). The violence related indicators were closely and positively related to PTSD as is the case with armed conflict's exposure (OR 4.3, CI 95% 3.0-6.1), sexual violence (OR 3.4, CI 95% 2.2-5.2) and other violence's exposure (OR 2.0, CI 95% 1.4-3.0). On the other hand, some socioeconomic indicators seem to have had an inverse association in the development of PTSD: family dysfunction 0.4 (CI 95% 0.2-0.57) and domestic violence 0.6 (CI 95% 0.37-0.96).

Also a study conducted at Macedonia on trauma and posttraumatic stress in war IDPs, more than half of the participants declared themselves as Macedonian by nationality (displaced from Skopje region), and the rest as Serbian (displaced from Kumanovo region) Bhui K, et al (2006). The average age of the participants is 41.3 years and the average years of education they have completed is 9.5 years. They have all been internally displaced for four years and it took them on average less than a month to acquire this status. Most of them are currently unemployed (69%), the participants are mainly married (78%), whereas a small proportion are single and widowed. Regarding living arrangements, most of the participants live with their partner (78%) and with child/children under 18 years (44%). Another study conducted at Diyarbakir Turkey PTSD and non-PTSD groups were compared in terms of social demographic characteristics, we found that PTSD was more prevalent among married subjects (30.5%) than single (20.0%) or divorced/separated (14.3%) subjects. This difference was statistically significant ($X^2=6.538$ and $p=0.038$) Ergun D, et al. (2008). However, when Bonferroni Correction Test was applied with One-Way ANOVA test, it was observed that none of the categories led any difference ($p>0.05$). In addition, the PTSD group showed a significantly higher mean age ($t=-2.033$ and $p=0.043$) The PTSD rate was higher in persons who were 15 years of age or older (30.3%) at the time of internal displacement than those in the 1-6 year-old age group (16.8%) and the 7-14 year-old age group (27.2%) ($X^2=6.962$ and $p=0.031$). When Bonferroni Correction Test was applied with One-Way ANOVA test, it was determined that the difference was created by 15 years of age or older group ($p=0.026$). PTSD was also more prevalent in IDP whose habitual residences were destroyed (28.5%) than those whose houses were left intact (18.3%) Cheung P. (1994). PTSD was higher among IDP who had less than 24 hours (30.5%) to leave their homes than IDP who had more than 24 hours (21.1%) ($X^2=3.955$ and $p=0.047$, $X^2=4.857$ and $p=0.028$, respectively). The PTSD rate was higher in groups that were injured during internal displacement (51.0%), with relatives that were injured (33.5%) or killed (35.6%), and that witnessed injury (36.8%) or death (44.3%) to others ($X^2=17.368$ and $p=0.000$; $X^2=8.137$ and $p=0.004$; $X^2=8.982$ and $p=0.003$; $X^2=9.798$ and $p=0.002$; $X^2=16.098$ and $p=0.000$, respectively). Furthermore, the PTSD rate was significantly higher among IDP who had an operation due to injury during internal displacement (53.3%) and among IDP who had a permanent physical disability due to injury during internal displacement (60.0%) ($p=0.022$ and $p=0.005$, respectively) Only injury during internal displacement was determined to be a risk factor for the development of possible PTSD (OR=0.438, $p=0.047$, Nagelkerke R Square=0.129, $X^2=10.179$)

An epidemiological survey among Tamil children Srilanka carried out by Vivo International in 2003 found that the prevalence of PTSD symptoms was related to distress and problems in functioning. Of their total sample, 57% reported that exposure to war violence and the resulting symptoms interfered with their life. Increased exposure to violence was related to greater difficulties in social and emotional functioning, including problems in school performance, social withdrawal, and difficulties leading a normal family life. These results were further validated through neuropsychological testing and school grades.

Another survey conducted on Somali urban refugee it was found that there were a total of 242 respondents aged between 18 and 73 years. Out of these, the majority was female respondents with 54.96% while the male respondents had a total of 45.04%. The respondents who were recruited had age ranging from 18-73 years, mean age 29.2 years, standard deviation of 10.55. The respondents were clustered into four age groups: those below 30 years categorized as young adults and consisting most of the respondents 70.2% , followed by those in ages 31-45 years (adults) making 21.1% and those between 41-63 years (late adult life) making 6.6% and the elderly who were above 63 years of age constituting 2.1%, Roberts (2003).

Theoretical review

Data used and the methods for Post-Traumatic Stress Disorder among Internally Displaced Persons testing are discussed in this section.



3.0 METHODOLOGY

A multistage sampling method was employed to gathered among 238 internally displaced persons in Ringim town using pretested structured self- administered questionnaires

3.1 STUDY AREA

This study was conducted at Ringim town, Ringim local government Jigawa state. It is part of the 27 local government of Jigawa state, curve out from Kano state, after creation of Jigawa state on Tuesday 27 august 1991 by the military administration of General Ibrahim Badamasi Babangida. Ringim town is located between 4⁰N and 14⁰N of the equator and between 3⁰E of the Greenwich meridian therefore the latitudinal extent or stretch in relation to Nigeria is about 10⁰ (14⁰N- 4⁰N) while the longitudinal extent or stretch is 12⁰ (15⁰E- 30⁰E).The town is characterized by two major ethnic groups, Hausa and Fulani. The commercial activity in the area has opened up opportunities for people from different ethnic groups in the country to come and invest in the area. The minor ethnic groups that are living in Ringim town include Yoruba, Igbo, Nupes, among others and majority of the populace are Muslims. The population of the area is presently 192,024 (census 2006) the population of the area rising as a result of polygamous marriage that is highly practiced in the area and migration of the people from different part of the country to come and do business.

Ringim town is bordered with Dutse local government by the south, Zakirai (Gabasawa local government Kano state) by the west then Garki local government by the north and Taura local government by the east.

3.2 STUDY POPULATION

This comprises of all internally displaced persons coming from different parts of the country and living in Ringim town.

3.3 Study Design and Sample Size Determination

The study is a cross- sectional descriptive study while the sample size of the study was determined using the formula for calculating minimum size:

$$n = \frac{Z^2 Pq}{d^2}$$

Where

n = minimal sample size

Z = The standard normal deviate corresponding to 95% confidence interval. The value obtained from normal distribution table is 1.96

P = Prevalence of PTSD among IDPS in a previous study, 16.9% (0.169) was obtained in a study conducted in northern Nigeria Kaduna.³³

q= complementary probability of P, q= 1-p = 1-0.169 = 0.831

d= degree of precision = 5%= 0.05



Therefore:

$$n = (1.96)^2 \times 0.169 \times 0.831 / (0.05)^2$$

$$n = 3.84 \times 0.1404 / 0.0025$$

$$= 0.54 / 0.0025$$

$$n = 216$$

But to allow for incomplete and non-response, we would add 10% of 216 = 22

Therefore $n = 216 + 22 = 238$

3.4 Sampling Technique

A multistage sampling method was employed. In the first stage, the sample size was allocated to the two camps proportionate to the population of internally displaced persons. In the second stage, a systematic sampling technique was used. The registers of the internally displaced persons maintain in the camps constituted the sampling frame. A sampling interval was derived from the reciprocal of the sampling fraction (Total population of internally displaced persons in the camp/allocated sample size). The first person was selected by choosing random number between one and the sampling interval. The person whose serial number in the camp register corresponds with the choosing number was the first respondent. Subsequent respondents were obtained by adding the sampling interval to the preceding person's serial number. This was continued until the allocated sample size was obtained.

3.5 Instruments For Data Collection

Pretested structured administered questionnaires adapted from M.I.N.I 2009 tools was used to collect the data.³⁷ The M.I.N.I is a diagnostic structured interview that was developed for DSM-IV Psychiatric disorders. It is organized in diagnostic sections. Using the branching tree logic, the M.I.N.I has two screening questions per disorder. Additional symptoms within each disorder section are asked only if the screening questions are positively endorsed.

There is good concordance with SCID-P with the exception of more severe psychopathology. Sensitivity average about 0.70, efficiency scores and specificity were above 0.85 (Sheehan 1997). The M.I.N.I has been validated and widely used in Nigeria for various studies (Adewuya et.al 2006, Adewuya and Makanjuola, 2009, Issah et.al 2010).

3.6 DATA COLLECTION

The research was conducted using structured self-administered questionnaires, after it was developed, adapted, read and translated in to Hausa Language. The discussion allowed a common understanding of the questions, interview methods and ways of obtaining assent and consent. Ambiguity was clarify following pre-test.

3.7 DATA ANALYSIS

The data collected was analyzed using MINITAB version 12.1 statistical software. The result obtained was presented in the form of frequencies, percentages, tables and charts using Microsoft word and Microsoft excel respectively. Categorical data were summarized using measures of central tendency and variation such as median and range or mean and standard deviation as appropriate. Statistical test of significance (X^2) was used to determined

significant associations between categorical variables. A p-value of 0.05 or less was considered as statistically significant.

3.8 Result

Of the 238 internally displaced people approached, all the 238 agreed and completed the questionnaire giving the response rate of 100%.

4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

4.2 AGE

Table 1: Age distribution of respondents

AGE	NUMBER	PERCENTAGE
12-25	95	39.92
26-38	83	34.87
39-51	52	21.85
52-64	4	1.68
65-77	3	1.26
78-90	1	0.42
TOTAL	238	100.0

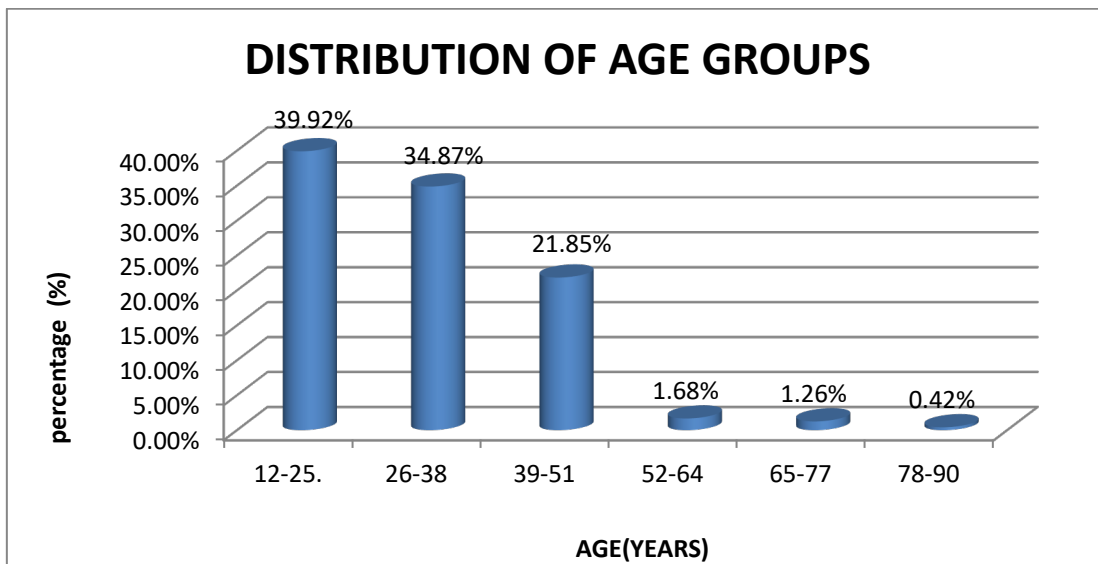


Fig 1: Distribution of the Respondents Based on their Age

The age range of the respondents was from 12 to 89 with a mean± SD of 30.2± 11.6 respectively. Of the 238 respondent, about 95 (39.92%) of them falls within second to third decade of life which forms the major group, followed by 83(34.87%) of them falls within third to fourth decade, with least group having 1 (0.42%) falls within eighth to ninth decade of life.

4.3 GENDER

FIG 2: FIGURE SHOWING DISTRUBUTION OF THE RESPONDENTS BASED ON THEIR GENDER

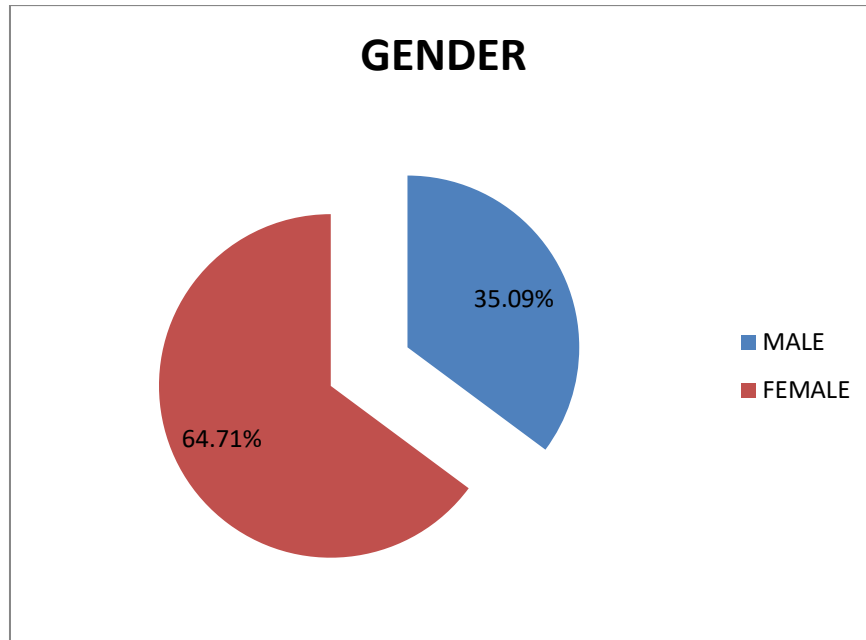


Figure 2 Shows that majority of internally displaced persons were females 64.71% (n=154) and nearly one third of the respondents were males 35.09% (n=84).

5.1 DISCUSSION

5.2 SOCIODEMOGRAPHIC CHARACTERISTICS AND ASSOCIATED RISK FACTORS FOR PTSD DEVELOPMENT

The results of the study had shown that the mean age of the respondents was 30.2 years. However this is relatively inconsistent with finding in the research conducted at Macedonia on trauma and posttraumatic stress in war IDPs, whereby more than half of the participants declared themselves as Macedonian by nationality (displaced from Skopje region), the rest as Serbian (displaced from Kumanovo region), and the average age of the participants is 41.3 years, the average years of education they have completed is 9.5 years, but nearly consistent with a study conducted on Somali urban refugees were the respondents who were recruited had: age ranging from 18-73 years, mean age 29.2 years. Majority of the respondents were females (64.71%) with males forms only 34.09% of the population, this is similar to the study conducted in Georgia whereby, a total of 3,600 respondents were interviewed, of these, 1,248 (34.7%) were men, which reflects findings of other studies of the general population in Georgia as many men have left to find employment elsewhere. The result is also consistent with another survey conducted on Somali urban refugees which was found that, there were a total of 242 respondents, out of these, the majority was female respondents with 54.96% while the male respondents had a total of 45.04% , in northern Nigeria the difference is mostly due to the culture of having multiple wives. Majority of the respondents (96.64%) were Muslims and more than two third (74.79%) of the respondents were Hausa, this is in agreement with what was documented about the town³⁶. Majority of the respondents were found to be petty traders (40.34%), with only 10.50% who works as civil servants and is typical of Hausa communities in Northern Nigeria where majority of women, even though they formed the majority of the population, are not allowed to go out to work., this is keeping

in line with a study conducted at Macedonia whereby most of the respondents were unemployed (69%) . About 43.70 % of the respondents had no formal education either primary or tertiary levels and is due to the fact that majority of the respondents were females and most women in the town were married between the ages of 15 to 20 and would not be allowed to go out to pursue western education due to cultural reasons.

About half of the respondents were single (48.74%), 41.60% were married, 1.68% separated, 5.88% were divorced and 2.10% were widowed, this shows that there were little family conflicts among the respondents which is against a study conducted at different municipalities of Columbia on PTSD, anxiety and depression in adolescents and adults exposed to armed conflict which revealed that, the most common risk factor identified in this population was family dysfunction, in fact, more than half of the people reported problems in the family network (55%)²⁷. Two studies conducted and both shows significant difference with the data obtained in the study, the first one is at Macedonia, where majority of the participants were mainly married (78%), a small proportion were single and widowed. Another one was conducted in Ethiopia, for the 1200 subjects living in the shelters of Addis Ababa, two-thirds of the respondents in our study were women, of these, 28.2% were separated from their spouses with unknown fate, and 25.5% were widowed. Thus, widowed women reported significantly more displacement related traumatic life events than married women and separated women reported significantly less perceived social support than married women.³¹

About 39.08% of the respondent were said to have good household economic status followed by those with very good, carrying a percentage of 31.01, the least class been very bad, taking a percentage of 0.8, this is inconsistent with study conducted at different municipalities of Columbia on PTSD, anxiety and depression in adolescents and adults exposed to armed conflict which revealed that, outpatients with PTSD came from low socioeconomic levels but only a third of the sample coped with economic problems (35.5%).²⁶

Some of the respondents did not fulfilled the criteria for PTSD but had one or more of the symptoms of individual criterion which include (re-experiencing the traumatic events in distressing way (such as in dreams ,intense recollection, flashbacks, or physical reactions), avoidance of traumatic events (avoiding thinking or talking about the events observed in about 50% of the respondent, or avoiding activities or places that remind an individual about the events which 81.93% experienced and is reasonably high, had trouble in recalling some important part of what happened seen in about 78.15% of the respondent and is significant or become less interested in hobbies or social activities 76.47% demonstrated that or felt detached or estranged from others seen in 77.31% of the respondents), emotional numbing (noticed feelings are numbed 76.89% of the respondents has and is quite significant, felt life will be shortened or die sooner than others observed in 81.93% of the respondents and is very high and is similar with what . Eisenman DP, Gelberg L, Shapiro LH. (2003) found, which was number of PTSD symptoms endorsed was most strongly associated with a person believing that he/she was going to die and witnessing the murder of a parent), hyper arousal (difficulty sleeping seen in 58.40% of the respondents, difficulty concentrating, 66.81% of the respondents had it and is significant, individual constantly on his guard, 61.76% of the respondents had that and is also significant, getting easily startled 77.73% demonstrated that and is important) all these within the span of a month which may later in life predispose them to developed PTSD, and the more of these symptoms the high tendency of developing PTSD. Other early predisposing factors to PTSD include experience of an individual to traumatic event (inform of serious accident, sexual or physical assault, a terrorist attack, being held hostage kidnapping, fire, a body war or natural disaster witnessing violent or sudden death of someone close to you or a life threatening event) and ability of an individual to respond with intense fear , helplessness or horror, whereby 83.19% of the respondents had , or the problem significantly interfered with work, school or social activities or caused significant distress which was seen in 90.34% of the respondents, and is significantly high. It was closely similar to an epidemiological survey among Tamil children Sri Lanka carried out by Vivo International in 2003, of their total sample, 57% reported that exposure to war violence interfered with their life and increased exposure to violence was related to greater difficulties in social and emotional functioning, including problems in school

performance, social withdrawal, and difficulties leading a normal family life. With regards to experience of traumatic events, more than half of the respondents (53.36%) had an experience to traumatic event in one way or the other, this is consistent with the study conducted at Macedonia Hosin AA, et al. (2001), of the respondents, 24% have experienced have one traumatic event, 22% two events and more than half (54%) have experienced three or more traumatic events. Also out of 238 of the respondents 73.95% of them had at least an episode of re-experiencing the traumatic event, another important contributory parameter which forms part of the criteria and could be used to diagnose or assess the risk of developing PTSD is avoidance, whereby about 84.87% of the respondents had symptoms for that, while the remaining 15.13% does not have, and the higher the number of avoidance symptoms the more likely to develop PTSD. Hussain et al. conducted research to found an association between deprivation of basic needs and increased posttraumatic stress reactions, 20 particularly of symptoms are relating to avoidance and hypervigilance About 92.02% of the respondents had symptoms of hyper arousal which is very high, which is consistent with a study conducted at Macedonia whereby PTSD criteria have a higher total score ($t(52) = -3.48$, $p < 0.01$), experience intrusion symptoms more often ($t(52) = -3.82$, $p < 0.01$) as well as hyper arousal symptoms ($t(52) = -3.97$, $p < 0.01$). Ergun D, Cakici M, et al. (2008) Another important criteria for PTSD diagnosis is feeling of numbness where by 76.89% of the respondents had it.

5.3 PREVALENCE OF PTSD AMONG INTERNALLY DISPLACED PERSONS OF RINGIM TOWN

The prevalence of PTSD among internally displaced persons of Ringim town was found to be 59.66% and this falls within the range of the result of a study conducted in a sample of Afghan and Cambodian refugees who live in the USA, the reported PTSD prevalence ranges from 45% to 86%¹⁹, but inconsistent with a study conducted in former Yugoslavia, even though there is not much data on PTSD prevalence in adults within the territory of former Yugoslavia, however, reported PTSD prevalence among refugees in collective centers was ranging from 26% to 35%.³⁴ which is lower than the prevalence obtained in the study. The result of the study have shown higher prevalence of PTSD compared to some other studies, these are conducted in Diyarbakir Turkey on Post-Traumatic Stress Disorder in Internally Displaced People Subjected to Displacement by Armed Forces and the most important finding of this study was that the PTSD rate was 21.40% among IDP who were subjected to internal displacement by armed forces. Previous studies had reported the prevalence of PTSD as 14%–37%⁹ and another one among Turkish Cypriots who were internally displaced during both the 1963 ethnic conflict and the 1974 Cyprus war, 20% met criteria for PTSD nearly three decades after the event²³ so also the one conducted at southern Thailand where the prevalence rates of PTSD symptoms were 13% among children living in camps, 11% among children from affected villages, and 6% among children from unaffected villages (camps vs unaffected villages, $P = .25$)²² and also seen in another study conducted in Kenya among the 300 study participants interviewed on Prevalence of post-traumatic stress disorder among the internally displaced persons aged 13-17 years involved in the 2007 Post Election Violence and the prevalence of PTSD was found to be 38%.²⁵ Another study, Roberts B, et al (2003) conducted in northern Uganda and South Sudan which also show lower prevalence of PTSD compared to the result obtained in this study, found the prevalence of PTSD to be 46%²⁴. A study conducted in northern Nigeria on Correlates of depression among Internally displaced persons after post-election violence in Kaduna, North Western Nigeria of the 258 IDPs, 154 (59.7%) A co morbid CIDI diagnosis of PTSD 16.6

The test of association between occupation and PTSD shows significant association as 45 of the respondents are farmers 17(37.78%) has no PTSD, 28(62.22%) has PTSD, 96 of the respondents are petty traders 36(37.50%) has no PTSD, 60(62.50%) has PTSD, 25 of the respondents are civil servants 5(20%) has no PTSD, 20(80%) has PTSD, others (students and house wives) are 72 38(52.78%) has no PTSD, 34(47.22%) has PTSD, overall 238 (100%), 96(40.34%) has no PTSD, 142(59.66%) has PTSD, chi-square= 9.370, df=3, p-value=0.025

Age and PTSD were correlated and shows that about 57 of the respondent are less than 20 years of age and 30 (52.63%) has PTSD while 27 (47.37%) has no PTSD. About 181 of the respondent are greater than 20 years of age, 112 (61.88%) has PTSD and 69 (38.12%) has no PTSD, Overall 238 (100%), 96 (40.34%) has no PTSD, 142

(59.66%) has PTSD, chi-Square =1.540, df=1 p-value=0.215 therefore there is no significant association between age and PTSD. This is variance with a study conducted among the 300 study participants interviewed in Kenya on Prevalence of post-traumatic stress disorder among the internally displaced persons where there was significant association between age and PTSD with p-value ≤ 0.05 ²⁵. Likewise in a study conducted in Macedonia, From the demographic variables only age and years of educations are correlated with posttraumatic stress disorder³⁰

Another study conducted at Diyarkabir Turkey PTSD and non-PTSD groups were compared the PTSD group showed a significantly higher mean age ($t=-2.033$ and $p=0.043$). The PTSD rate was higher in persons who were 15 years of age or older (30.3%) at the time of internal displacement than those in the 1-6 year-old age group (16.8%) and the 7-14 year-old age group (27.2%) ($X^2=6.962$ and $p=0.031$). Plasc ID, et al. (2011) When Bonferroni Correction Test was applied with One-Way ANOVA test, it was determined that the difference was created by 15 years of age or older group ($p=0.026$). A correlation between experience of traumatic event and PTSD Shows, 110 of the respondents have experienced traumatic events 45(40.91%) has no PTSD, 65(59.09%) has PTSD, 128 have not experienced traumatic events 51(39.84%) has no PTSD, 77(60.16%) has PTSD, chi-square=0.028, df=1, p-value=0.867. No significant association between experience of traumatic event and PTSD. This is inconsistent with a finding of a study of variables that were significantly associated with PTSD which were; age, gender, religious affiliation, level of education, family socio- economic level and number of traumatic events with $p < 0.05$. and consistent with the one conducted in Macedonia which shows No significant correlations were found between the number of experienced traumatic events and long-term posttraumatic stress disorder Hosin AA, et al. (2001)

An association between marital status and PTSD shows, 99 of the respondents are married 31(31.31%) has no PTSD, 68(68.69%) has PTSD, 116 are single 54(46.55%) has no PTSD, 62(53.45%) has PTSD, 14 are divorced 6(42.86%) has no PTSD, 8(57.14%) has PTSD, 4 are separated 1(25%) has no PTSD, 3(75%) has PTSD, 5 are widowed 4(80%) has no PTSD, 1(20%) has PTSD, overall 238 (100%), 96(40.34%) has no PTSD, 142(59.66%) has PTSD, chi-square=8.908, df=4, p-value=0.063, therefore, no Significant association between marital status and PTSD, Plasc ID, et al. (2011).

Level of education was correlated to PTSD and it shows that about 177 of the respondents has either primary, Qur'anic education only or some even none out of them 78(44.07%) has no PTSD, 99(55.93%) has PTSD while 61 of the respondents have post- primary education 18(29.51%) has no PTSD and 43(70.49%) has PTSD, overall 238 (100%), 96(40.34%) has no PTSD 142(59.66%) has PTSD, chi-square=3.996, df=1, p-value=0.046, therefore, there is significant association between level of education and PTSD this is consistent with findings of studies among the 300 study participants interviewed in Kenya on Prevalence of post-traumatic stress disorder among the internally displaced persons, the study variables that were significantly associated with PTSD were; age, gender, religious affiliation, level of education, family socio- economic level and number of traumatic events with $p < 0.05$ Araya M, Chotai J, Komproe IH. (2007). according to Popovski M, et al.(2008) the study conducted in Macedonia, from the demographic variables only age and years of educations are correlated with posttraumatic stress disorder, Cheung P. (1994). An association between gender and PTSD shows, 84 of the respondents are males, 33(39.29%) has no PTSD, 51(60.71%) has PTSD, while 154 are Females, 63(40.91%) has no PTSD, while 91(59.09%) has PTSD, then Overall 238 (100%), 96(40.34%), has no PTSD, 142(59.66%) has PTSD, chi-square=0.060, df=1, p-value= 0.807, therefore, there is no significant association between gender and PTSD this is against a study conducted Among the 300 study participants interviewed in Kenya on Prevalence of post-traumatic stress disorder among the internally displaced persons which shows significant correlation between gender and PTSD $p < 0.05$ Karunakara UK, et al. (2004).

6.1 CONCLUSION

The prevalence of post-traumatic stress disorder among internally displaced persons in Ringim town which is one of the twenty seven Local governments of Jigawa State-Nigeria was found to be higher 59.66% (95% CI of 0.05 to

0.012) compared with the prevalence in general population, it is also higher than the prevalence reported in many studies among internally displaced persons in both developed and developing countries. Majority of the respondents that does not fulfill the criteria for the diagnosis of PTSD have one or more symptoms of the disorder. Some of these symptoms includes re-experiencing traumatic events 176(73.95%), hyper arousal symptoms 219 (92.02%), Numbness 183(76.89%), avoidance 202 (84.87%) or interference with activities 215(90.34%).

7.1 RECOMMENDATIONS

1. The Federal government should provide humanitarian protection and assistance to IDPs
2. The international community should have to come and offer support to IDPs but this has not always been adequately done
3. The Nigerian government and the international community need to strengthen comprehensive protection and social support for IDPs in the camps of northern Nigeria to help reduce mental distress and as a preventative measure to reduce further exposure to trauma.
4. Some direct interventions should be employed to reduce mental distress which may show some impact in northern Nigeria, but further investigation on the effectiveness and feasibility of these interventions is required
5. Also given the size of the population affected a meaningful resolution to the conflict in northern Nigeria would facilitate a return by IDPs back to their homes, support a healing process, and help IDPs re-build their lives.
6. Those with established diagnosis of PTSD Should be referred to the biopsychosocial care givers within the appropriate Health Care Systems for intervention.

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