Journal of Affective Disorders 170 (2015) 46–51

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Correlates of depression among internally displaced persons after post-election violence in Kaduna, North Western Nigeria

Taiwo Lateef Sheikh [a,*], Mohammed Abdulaziz [a], Samuel Agunbiade [a], Ike Joseph [a], Bill Ebiti [a], Oluwatosin Adekeye [b]

[a] Department of clinical services, Federal Neuro-psychiatric Hospital, Kaduna, Nigeria
[b] Department of Psychiatry, Ahmadu Bello University, Zaria, Nigeria

ARTICLE INFO

Article history:
Received 7 July 2014
Received in revised form
1 August 2014
Accepted 12 August 2014
Available online 4 September 2014

Keywords:
PTSD
Psycho-trauma
IDP
Depression

ABSTRACT

Background: In April 2011, a post-election violent conflict in northern Nigeria led to resettlement of internally displaced persons (IDPs) in a camp in Kaduna, the worst affected state. We set out to determine the prevalence of depression among the IDPs. We also determined socio-demographic and other correlates of depression among the IDPs.

Methods: Cross-sectional systematic random sampling was used to select 258 adults IDPs. We used the Hopkins symptom checklist to diagnose probable depression, composite international diagnostic interview for diagnosis of definite depression and communal trauma event inventory to determine exposure to psycho-trauma. We assessed social adjustment using social provision scale and Harvard trauma questionnaire to diagnose "symptomatic PTSD". Multiple logistic regression was used to determine independent predictors of depression.

Results: 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; $p=0.04$) and 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; $p<0.000$). A comorbid 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; $p=0.006$).

Limitations: This study was conducted 2 years post-conflict and only IDPs living in the camps were studied.

Conclusion: IDPs living in Hajj camp in Kaduna, northern Nigeria developed post-conflict probable depression and definite depression. Female gender, experienced beating and comorbid diagnosis of PTSD were independent predictors of probable depression among the IDPs, while IDPs that were unemployed or retired had more of definitive depression.

1. Introduction

Communal conflicts has been a recurrent event in northern Nigeria since independence in 1960 (Salawu, 2010) especially in Kaduna which has repeatedly experienced ethno-religious crisis for decades with an upsurge in frequency since the return to democratic rule in 1999 (The Nordic African Institute: Ethno-religious conflicts in Northern Nigeria, 2012). The April 2011 post-election violent conflict in northern Nigeria killed 800 people and displaced 65,000 over a period of 3 days (United States Institute of Peace (USIP): Nigeria's, 2011). A camp for the Internally Displaced Persons (IDPs) was set up at the Hajj camp in Kaduna city, the capital of the State to cater for the medical and social needs of the IDPs. Studies have shown a relationship between trauma and depressive illness (Shalev a et al., 1998; Blanchard et al., 1998; Silove, 2007). These studies found that extreme events can be associated with early and simultaneous development of both PTSD and major depression or a combination thereof.

Despite the increase in communal conflicts in northern Nigeria and especially Kaduna, few studies have tried to assess the mental health consequence of these traumatic experiences on the survivors.

* Corresponding author. Tel.: +234 803704611.
E-mail addresses: latshe@yahoo.com (T.L. Sheikh), zizo922000@yahoo.com (M. Abdulaziz), sammag22@gmail.com (S. Agunbiade), ikejoseph@gmail.com (I. Joseph), bill_ebiti@yahoo.com (B. Ebiti), tosinadetunde2000@yahoo.co.uk (O. Adekeye).

http://dx.doi.org/10.1016/j.jad.2014.08.050

We set out to determine the prevalence of depression among the IDPs. We also determined socio-demographic and other correlates of depression among the IDPs.

2. Methods

2.1. Study setting

The study was conducted in Kaduna city, the capital of Kaduna state located in the Northwestern zone of Nigeria in March 2013. The IDP camp is located on the outskirt of the city in a transit camp originally built for hajj pilgrims. Over 2500 IDPs were settled in the camp

2.2. Study design

We conducted a cross sectional study. The study population included males and females IDPs aged $\geq$ 18 years. We defined IDPs as people living within the Hajj camp and displaced as a result of the violent conflict following the April 2011 elections in Nigeria. We excluded persons already diagnosed with a mental disorder prior to the post-election conflict and those who refused consent.

2.3. Sample size determination

A minimum sample size of 230 was calculated using Kish (1965) formula for estimating sample size for cross-sectional study.

$$n = \frac{(Z\alpha^2 pq)}{d^2}$$

Where n= Minimum sample size
Z_α set at 5% significant level = 1.96
p = estimate of prevalence of arousal symptoms of PTSD among the internally displaced persons in a similar study in Nigeria = 84% = 0.84 (Obilom and Thacher, 2008).
d = level of precision (5%)
$q = 1 - p$

$$n = \frac{\left(1.96^2 \times 0.84 \times 0.16\right)}{0.05^2}$$

$$n = 206$$

$$\text{Adjusting for non} - \text{response rate of } 10 = \frac{nr}{(r-1)}$$

$$\text{Where} n = \text{calculated sample size and} r = 10$$

$$= \frac{206 \times 10}{(10-1)}$$

$$= 228$$

Thus, minimum sample size = 228. For the study we sampled 258 IDPs

2.4. Sampling technique

We used a systematic sampling technique to select the respondents for the study. To create the sampling frame we obtained the line list of all the IDPs from the welfare committee of the camp. Using that list we created the sampling frame by excluding IDPs < 18 years of age. Of the 2500 IDPs, 1502 were included in the final sampling frame for the study. We divided the sampling frame (1502) with the study sample size (260) to determine the sampling interval. The first IDP was selected from the sampling frame using a table of random numbers then using the sampling interval we selected subsequent respondents until the required sample size was reached.

2.5. Study instruments

We designed a socio-demographic questionnaire that was used to get socio-demographic information from study participants. Conflict-related trauma was assessed with a shortened version of the communal traumatic events inventory used for studying Bosnian refugees (Weine et al., 1995). We included only trauma events that were likely to have happened and respondents were to indicate "Yes" or "No" answer depending on experience during the conflict. To measure the IDP psychosocial adjustment we adapted the social provision scale originally developed by Cutrona and Russell (Moti et al., 2004). We adapted 12 of the 24 questions that capture the components of reassurance of worth, reliable alliance, and guidance. We defined good psychosocial adjustment as answering 'strongly agree' or 'agree' to 8 of the 12 questions.

Participants were screened for probable depression using the 15 items depression subsection of Hopkins symptom checklist-25 (HSCL-D). The questions were rated on a likert scale of 1 (not at all) to 4 (extremely). Scores for each respondent were summed up and divided by the number of items (15) to derive the score for each individual. Individuals with total score > 1.75 were considered to have probable depression. The HSCL-25 has widely been used in studies among refugees in many countries including Nigeria (Gupta et al., 2010; Aniebue and Onyema, 2008; Kleijn et al., 2001).

Subsequently, we used the Composite International Diagnostic Interview (CIDI) to generate definite diagnosis of depression among the respondents that screened positive for the depression subscale of HSCL (respondents with probable depression). CIDI is a highly structured clinical interview instrument derived from the National Institute of Mental Health (NIMH) Diagnostic Interview Schedule (DIS) and the Present State Examination (PSE). The instrument has been proven to have cross-cultural validity (Pez et al., 2010) and the Hausa version was used in a community survey in Nigeria (Gureje et al., 2006).

Finally we used the Harvard Trauma Questionnaire (HTQ) (Mollica et al., 1992) designed by Harvard Program in Refugee Trauma, Massachusetts General Hospital for the diagnosis of symptomatic PTSD. The PTSD section consists of 16 questions based on the diagnostic criteria of the Diagnostic and Statistical Manual for Mental Disorders Fourth Edition (DSM IV) (American Psychiatric Association, 1994). The questions were measured on a 5-point severity scale of 1–5. Scores for each respondent were summed up and divided by the number of items (16) to derive the score for each individual. Individuals with total score > 2.5 were considered symptomatic for PTSD (Mollica et al., 1992). The cut off score of 2.5 has been standardized for several version of HTQ (Choi et al., 2006; Ichikawa et al., 2006; Silove et al., Tor) and the HTQ had been validated for use in displaced persons in several cross cultural studies (Kleijn et al., 2001; Fawzi et al., 1997; Roberts et al., 2008). The questionnaire was translated to Hausa the main language spoken in northern Nigeria and back translated to English. The translation underwent detailed review by the study team and followed recommended guidelines (Mollica et al., 1992; Mollica et al., 2004).

2.6. Data collection and procedure

We recruited 6 data collectors who could speak both English and Hausa language fluently and had experience with data collection from prior activities. They were trained for a period of five days on the use of the study questionnaire and interview techniques prior to the onset of the study. Data collection took