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PREVALENCE OF DEPRESSION AMONG INTERNALLY DISPLACED PERSONS IN ABUJA, NIGERIA

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ABSTRACT
Disasters displace millions of people globally, forcing many into internal displacement. Nigeria is not an exception, with the challenges of banditry, kidnapping, terrorism, and natural disasters, among others. Internal displacement has many negative consequences, such as mental disorders and psychological distress, among others. This study assessed the prevalence and associated factors of depression among internally displaced persons (IDPs) in Abuja, Nigeria. A cross-sectional study was conducted in two internally displaced persons' camps in Abuja in October 2023 using mixed methods. 382 respondents for the quantitative study were selected using systematic sampling, and those for the focus group discussion (FGD) were purposively selected. The data collection tools were interviewer-administered questionnaires and an FGD guide. Psychological distress and coping mechanisms were assessed using validated tools such as the Kessler Psychological Distress Scale (K10) and the Brief COPE-28. Data were analyzed using SPSS version 26, with multivariate analyses exploring associations between trauma and mental health outcomes. Approximately 42% of the respondents experienced moderate distress, while 30.9% experienced severe depression. Traumatic experiences, including lack of food, witnessing violence, and separation from family, were prevalent. A significant correlation between psychological distress and trauma was identified ($\beta = 0.45$, $p < 0.001$), while adaptive coping strategies were inversely related to distress ($\beta = -0.20$, $p = 0.022$). Unemployment and self-employment were also positively associated with psychological discomfort. Qualitative findings highlighted severe emotional distress and trauma among participants, including recurring disturbing memories and detachment from others. The study showed the prevalence of extremely severe depression and emotional distress among the IDPs. There is an urgent need for targeted mental health interventions in the IDP settings through coordinated efforts from governments, humanitarian agencies, and mental health practitioners, among others.

Keywords: Depression, Prevalence, Internally Displaced Persons, Abuja, Nigeria

INTRODUCTION

Natural and man-made disasters cause millions of people to be displaced each year around the world. Most people are crammed into temporary, typically uncomfortable camps where they become victims of additional violence, mental stress and disease among others; a select few lucky ones end up within the comfortable residence of their families and friends (GRID, 2017). Violence and conflict are responsible for the displacement of around 33.3 million individuals (globally) who account for the entire population when compared with an overall estimate of internally displaced persons (IDP) populations worldwide (Faronbi et al., 2020).

As of the end of 2023, there were approximately 75.9 million people living in internal displacement globally (UNHCR, 2023). A report documented a total of 1,190,293 internally displaced people in 191,688 households across 8 states in the north-central and northwest regions in Nigeria due to violence (IOM, 2023). More than 1.5 million displaced people are accommodated in congested camps throughout the unrest-stricken northern regions, most of which were empty government buildings and school buildings with few basic utilities and typical appalling living conditions (UNHCR MARCH Factsheet, 2021). Similarly, they are vulnerable to sexual and sex-based violence (Owoaje et al., 2016; Akuto, 2017).

The absence of a legally recognized status contained in the IDP definition contributes to the impasse about the conditions that terminate the status of internally displaced persons (Mooney, 2013). Because there is no workable political solution, no initiative from stakeholders and insufficient focus or capacity on the part of those in charge of helping internally displaced people (like governments and international organizations), a protracted post-flight phase or prolonged period of displacement can have a negative impact on one's physical and mental health; and may even contribute to the continuation of the event that caused the displacement such as an ongoing conflict (Porter & Haslam, 2019). It is believed that a combination of genetic, physiological, environmental and psychological factors cause depression. According to Morton and Burnham (2018), internal relocation poses intricate and critical public mental health challenges. The global impact of internal displacement extends to social, economic and physical domains necessitating urgent attention. Depression affects people worldwide in all societies and contributes significantly to the global burden of disease (WFMH, 2012). The prolonged post-displacement phase coupled with on-going adversity increases the risk of mental disorders among IDPs. Factors such as stigma associated with the 'IDP label', inadequate healthcare, financial constraints, lack of education, disrupted social networks, co-existing physical health issues, pre-existing psychopathology, displacement trauma and a diminished sense of hope for the future contribute to this heightened risk.

Depression has become a major public health problem, demonstrating a constant increase in prevalence (Milanovic et al., 2015). According to WHO, the total number of people living with depression in the world is 322 million (WHO, 2017). It is more common among females (5.1%) than males (3.6%). Prevalence varies by WHO region, from a low of 2.6% among males in the Western Pacific region to 5.9% among females in the African region (WHO Africa 2023).

This study will help us gain a better understanding of the unique challenges and experiences that displaced persons face. This knowledge can inform strategies for building resilience and promoting mental health in other vulnerable populations facing

similar challenges. Generally, it could serve as a resource for those working in mental health, media, institutions and aspiring researchers. This study assessed the prevalence and determinants of depression among IDPs in Abuja, Nigeria.

MATERIALS AND METHODS

Abuja, the capital city of Nigeria, is located in the center of the country within the Federal Capital Territory (FCT). Geographically, it is situated at approximately 9.0765° N latitude and 7.3986° E longitude. As of 2023, the projected population of Abuja is estimated to be 3.8 million people (National Population Agency 2023). The city has experienced rapid growth due to urbanization, infrastructural development and its status as the political and administrative center of Nigeria**.**

The study was cross-sectional and descriptive in nature; conducted in October 2023 and the study population was the internally displaced adults currently residing in camps in the FCT-Abuja. There are 4 IDP camps situated in Abuja, Nigeria's capital – located in Lugbe, Area 1 (Durumi), New Kuchingoro and Kuje. Data obtained from the Office for Humanitarian Affairs in the FCT-Abuja indicated that there were 9,232 adults residing in different IDP camps and in-community hosts.

All consenting adults in the IDP camps who are 18 years and above and have lived in the camp for at least 6 months were included in the study while those who have lived in the camp for less than 6 months and adults with emotional disorders were excluded.

The sample size was estimated using Yamane's formula (1976) as follows:

$n= N/(1+N(e)^2$

Where: n= minimal sample size, N= Population size (9,232) and e= Margin of error (0.05).

Therefore, the minimal sample size was approximately 382.

Simple random sampling method using balloting was used to select 2 camps out of 4. The full list of people living in the 2 camps was collected from the camp director, from which the sampling frame was created. The total number of adults in the 2 camps was divided by 382 to obtain the sampling interval of 2.0 (780/382) that was used to select the eligible study participants.

Data collection and tools

Mixed methods were used in the data collection which include questionnaires, focus group discussion guide and participants' observations in order to assess contextual challenges.

The questionnaire was pre-tested and validated using 10% of the sample size from the community before administering it to the study population. The semi-structured questionnaire was interviewer-administered. It's main sections captured the respondents' socio-demographic characteristics, awareness of the impact of armed conflicts on mental health and the availability of psycho-social services.

There were 3 sub-sections: the first assessed traumatic experiences, the second evaluated psychological distress and the third explored coping mechanisms. The psychological distress, traumatic events and coping methods were measured by the Kessler Psychological Distress Scale (K10), the Post-traumatic Stress Disorder Checklist (PCL-5) and the Brief Cope-28, respectively. The respondents' degree of psychological discomfort was gauged using the ten questions on the K-10 scale.

Four trained research assistants (two males and two females) served in data collection. The criteria for their selection included having a college degree, fluency in Hausa and English languages and familiarity with the region. They were trained for 5 days on the research objectives as well as quantitative and qualitative data and research integrity.

Data Analysis

Quantitative component: The collected data were cleaned before transferring them into the Statistical Package for Social Sciences (SPSS) version 26 software. P-value for level of statistical significance was set at ≤ 0.05.

The psychological distress level cut-off scores, according to Kessler (2002), are 10 to 15 points for "low distress", 16 to 21 points for "moderate distress ", 22 to 29 points for "high distress" and 30 to 50 points for "very high distress". For univariate analysis, we examined the frequencies of various background characteristics. To explore the relationship between armed conflict experiences (intervening factors) and demographic variables (independent variables) and their impact on the mental well-being of displaced individuals, we employed multivariate correlation analysis.

Qualitative Component: The qualitative data were analysed thematically using the following processes:

1. Data Management: A professional transcriber converted field notes from the FGDs into transcripts.
2. Preliminary Coding: A small team of four members reviewed the transcripts, took notes and created initial codes.
3. Theme Identification: The researcher collaborated with the research assistants to determine thematic codes based on emerging patterns.
4. Hierarchy Development: The research team established a hierarchy of themes and sub-themes, connecting them to theories and literature.
5. Report Writing: Finally, the findings were synthesized into a comprehensive report.

Ethical Consideration

The study was approved by the Ethics Committee of the Ministry of Humanitarian Affairs and Poverty Alleviation, FCT, Abuja, Nigeria (FHREC/2023/01/84/25-05-23). Permission was obtained from the local government authorities and the camp heads. Written informed consents were obtained from the study participants after explaining to them the study objectives and procedures in the language they understand. They were assured of confidentiality and anonymity; and were also informed that the information obtained from them will be used for research purposes only and that they have the right to opt out of the research at any stage without any consequences.

RESULTS

Three hundred and eighty- two (382) questionnaires were interviewer-administered and all were used in the analysis giving a response rate of 100%. The age range of the respondents was 18 to 65 years, with a mean age of 30.3 ± 10.1 years.

Quantitative component:

More than half of the respondents are females (57%) and within the age bracket of 18 to 25 years (55.2%). About one-third of them were married and farmers (Table 1). The respondents experienced lack of food/ water (74.1%), lack of access to medical care (74.3%), separation from family members (62%) and sexual abuse (32.7%) among others (Table 2). Approximately 42% of the respondents

had moderate distress and 31% had high distress using the Kessler classification of psychological distress (Table 3). Almost a third of the respondents (30.9%) had extremely severe depression with the score of ≥ 28 points (Table 4). A quarter (25.1%) of the respondents have a stress score of moderate magnitude and 10.7% of them had extremely severe magnitude (Table 5). Table 6 shows the association between trauma and psychological distress with various levels of statistical significance.

Qualitative component:
During the focus group discussions, the researchers observed that 4 out of the 10 participants were emotionally distressed. About half (48.4%) have directly witnessed humans being slain, burnt (persons) and many have suffered the horrible loss of loved ones. The researchers came across a few women who had mental health problems. During the visits, these ladies were roaming the camps and could not be subdued by conversation. The researchers discovered that all of their family members had died in the ethnic violence and that these ladies were the only survivors in their families (after speaking with the locals). One of the mothers was unable to stop reciting the names of her attacked children who died. When the respondents were asked about their traumatic experiences and symptoms, it became evident that they had a high degree of reported trauma. Some distressing events were notably frequent. For instance, participants commonly reported experiences such as repeated disturbing dreams related to stressful events, heightened alertness or vigilance, feelings of detachment from others and unwelcomed memories of the traumatic experience.

Table 1: Socio-demographic Characteristics of the Respondents (n= 382)

Variables		Frequency	Percent (%)
Sex	Male	165	43.2
	Female	217	56.8
Age (in years)	18-25	211	55.2
	26-35	83	21.7
	≥ 36	88	23.1
Marital status	Single	100	26.2
	Married	126	33.0
	Separated	92	24.0
	Co-habiting	64	16.8
Educational status	No Formal Education	74	19.4
	Islamic Education	87	22.8
	Primary Education	110	28.8
	Secondary Education	66	17.3
	Tertiary Education	45	11.7
Occupation	Civil Servants	52	13.6
	Small Business Owners	69	18.1
	Casual Laborers	54	14.1
	Farmers	118	30.9
	Artisans	89	23.3

Table 2: Trauma Events Experienced by the Respondents (n=382)

Variables	Responses n (%)	
	Yes	No
Forced to hide	237 (62.1)	145 (37.9)
Witnessed combat situation	241 (63.1)	141 (36.9)
Lack of food or water	283 (74.1)	99 (25.9)
Disappearance of family member or friend	203 (53.1)	179 (46.9)
Murder or death due to violence of family member or friend	172 (45.0)	210 (55.0)
Forced separation from family members	237 (62.0)	145 (38.0)
Forced evacuation under dangerous conditions	173 (45.3)	209 (54.7)
Witnessed torture	244 (63.9)	138 (36.1)
Witnessed killing/murder	185 (48.4)	197 (51.6)
Forced to betray family member or friend placing them at risk of death or injury	136 (35.6)	246 (64.4)
Kidnapped	101 (26.4)	281 (73.6)
Sick but without access to medical care	284 (74.3)	98 (25.7)
Witnessed rape or other sexual abuse	125 (32.7)	257 (67.3)

Table 3: The Prevalence of Psychological Distress among the Respondents (n=382)

Variables	Frequency	Percent (%)
Low distress	49	12.8
Moderate distress	160	41.9
High distress	118	30.9
Very high/severe distress	55	14.4

Table 4: Depression Score of the Respondents (n=382)

Score	Magnitude	Frequency	Percent (%)
0-9	Normal	62	16.2
10-13	Mild	28	7.3
14-20	Moderate	55	14.4
21-27	Severe	119	31.2
≥ 28	Extremely severe	118	30.9

Table 5: Stress Score of the Respondents (n=382)

Score	Magnitude	Frequency	Percentage (%)
0-14	Normal	87	22.8
15-18	Mild	68	17.8
19-25	Moderate	96	25.1
26-33	Severe	90	23.6
34 and above	Extremely severe	41	10.7

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Table 6: Association between Trauma and Psychological Distress among the Respondents

Independent variables		Dependent variable Distress (k10 total score) (n=382) β coefficient (95% Confidence Interval), P value		
Primary independent		Trauma (PCL -5 total score)	Crude 0.42 (0.35, 0.48) p<0.001 **	**Adjusted** 0.45 (0.37, 0.53) p<0.001**
Confounding variables (Variables that potentially can have a link with both psychological distress and trauma)	Sex	Female	0.44 (-1.38, 2.25) p=0.637	-1.71(-3.18-0.25) p=0.022
		Male	0.32 (-8.28, 8.91) p=0.942	-2.34 (-8.16, 3.48) p=0.429
	Age	18-25 (reference)	1	1
		26-35	2.53 (0.26, 4.79), p=0.029	272.(0.74, 4.71) P=0.007
		36 - 45	-2.09 (-4.34, 0.16) p=0.069	1.56 (-0.58, 3.70) p=0.153
		46 years and above	4.23 (1.53, 6.94) p=0.002	6.55(4.01, 9.10) p<0.001**
	Marital status	Married (reference)	1	1
		Single	0.32 (-8.28, 8.91) p=0.942	-2.34 (-8.16, 3.48) p=0.429
		Separated	1.32 (-2.79, 5.43) p=0.529	-0.88 (-3.72, 1.97) p=0.544
	Educational status	Non-literate (No Formal Education)	1	1
		Literate (primary, Secondary, tertiary, Islamic Educations)	-9.64(-11.71, -7.56) p<0.001**	0.64 (-2.34, 3.63) p=0.670
	Employment status	Employed (government and private)	1	1
		Self-employed (Small business owners, Artisans, etc.)	5.82(3.28, 8.36) p<0.001**	0.03 (-3.51, 3.56) p=0.989
		Unemployed (had nothing doing for a living)	6.82 (4.87, 8.77) p<0.001**	3.54 (0.94, 6.15) p=0.008
	Coping (total score)	Adaptive coping	-0.23 (-0.44, -0.03) p=0.027*	-0.20(-0.37, -0.03) p=0.022*
		Maladaptive coping	-0.17 (-0.38, 0.04) p=0.107	-0.03 (-0.21, 0.15) p=0.755

**Significant at 0.01 * significant at 0.05

DISCUSSION

The study showed that depression and psychological discomfort were quite common among internally displaced people in the study area. It equally showed a clear link between psychological discomfort and traumatic events. This is similar to research done in different parts of the Nigeria on this topic as referenced below.

In Africa, about 29.19 million people (9% of 322 million) suffer from depression, with over 7 million in Nigeria alone (3.9% of 322 million). Estimates place the lifetime prevalence of depressive disorders from 3.3% to 9.8% (Esan and Esan, 2016). The prevalence of depression and post-traumatic stress disorder among internally displaced persons in Maiduguri, north-eastern Nigeria (Aluh, Okoro and Zimboh (2020) revealed that 1,153 (96.1%) of the respondents were depressed, while 936 (78%) of them were symptomatic for post-traumatic stress disorder (PTSD). Another research on socio-demographic correlates and associated factors of depression and anxiety among internally displaced adults in Ogoja, southern Nigeria (Ugbe et al., 2022) revealed that of the 335 respondents, 73.4% were depressed and 66% had anxiety disorder. A work done on mental health literacy, prevalence of depression and PTSD among internally displaced persons in northern Nigeria (Jour and Olufadewa, 2023) showed that out of 637 respondents, 54.6% had depression and 19.9% had PSTD.

The prevalence of mental health conditions including depression and post-traumatic stress disorder (PTSD) tends to be higher among IDPs compared to the general population. The reasons for these similarities across geographical locations could be attributed to common stressors faced by IDPs such as pre-migration stressors, migration travel and transit stressors, post-migration stressors, unemployment and socio-economic conditions, lack of social integration and pre-existing vulnerability. Public health implications would involve addressing mental health needs, integration and well-being and continuity of care focusing on overcoming barriers to accessing mental health services and ensuring continuity of care during displacement and settlement.

The study employed both crude and adjusted models for analysis. Crude refers to the bivariate coefficient between the independent and dependent variables while adjusted measures the coefficient after other model variables have been held constant. Traumatic experiences were found to be significantly associated in both the full model adjusted model (which included all explanatory variables

and outcome variables) (β = 0.45 CI (0.37, 0.53) p < 0.001) models with psychological distress and in the crude model (β = 0.42 CI (0.35, 0.48) p < 0.001). Both the crude and adjusted models showed a substantial correlation between psychological distress and trauma, meaning that a unit change in the independent variable (trauma) causes a 0.45-times change in the dependent variable (psychological distress). Additional factors, such as literacy (0.64 (-2.34, 3.63) p=0.670) and the age group 46 years and over (β = 6.55(4.01, 9.10) p<0.001), were shown to be positively correlated with psychological distress. Additionally, in the crude model, there was a substantial and positive correlation between unemployment and self-employment with distress in β = 6.82 CI (4.87, 8.77) p < 0.001 and β = 5.82 CI (3.28, 8.36) p < 0.001, respectively. Furthermore, a negative and significant correlation was established between the adaptive component of coping strategy (β = -0.20 CI (- 0.37, -0.03), p = 0.022) and psychological discomfort.

This study was not without limitations. We relied on self-reported information by the respondents that could have been biased by social desirability and recall biases. Cross-sectional design limits the ability to infer causality between trauma, coping mechanisms and mental health outcomes. Participants may have under-reported or exaggerated their experiences and psychological symptoms due to stigma, fear of judgment or misunderstanding of the survey questions. In addition, the use of the Kessler Psychological Distress Scale (K10) and other standardized tools may not fully capture the culturally specific expressions of distress and coping mechanisms among internally displaced persons (IDPs) in Nigeria. The tools, while validated, may not entirely reflect the nuances of mental health challenges in this population.

Conclusion

The study showed the prevalence of extremely severe depression and emotional distress among the IDPs. There is an urgent need for targeted mental health interventions in the IDP settings through coordinated efforts from governments, humanitarian agencies and mental health practitioners, among others.

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Conflict of interest:

The authors wish to declare that there is no conflict of interest.

Authors' contribution:

AAO, DA, and CN were actively involved in the conceptualization, design, data collection and analysis, manuscript preparation, editing, and review. However, AAO was the team lead.

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