Correlates of substance use and dependence among internally displaced persons in Maiduguri, Nigeria

Deborah Oyine Aluh, Roland Nnaemeka Okoro & Osaro Aigbogun

Published online: 18 May 2023.

Submit your article to this journal ↗

Article views: 299

View related articles ↗

View Crossmark data ↗

Taylor & Francis
Taylor & Francis Group

🔓 OPEN ACCESS | Check for updates

Correlates of substance use and dependence among internally displaced persons in Maiduguri, Nigeria

Deborah Oyine Aluh[a], Roland Nnaemeka Okoro[b], and Osaro Aigbogun [c]

[a]Department of Clinical Pharmacy and Pharmacy Management, University of Nigeria Nsukka, Nsukka, Nigeria; [b]Department of Clinical Pharmacy and Pharmacy Administration, Faculty of Pharmacy, University of Maiduguri, Maiduguri, Nigeria; [c]Department of Management, Marketing and Digital Business, Faculty of Business, Curtin University, Miri, Malaysia

ABSTRACT

Background: Internally displaced persons (IDPs) are frequently subjected to traumatic events, making them vulnerable to using substances. This study explores predictors and types of substances used by IDPs, prevalence of substance dependence, and reasons for substance use.

Methods: Cross-sectional survey data were obtained from 520 IDPs living in camps located in Borno State, Nigeria. The Drug Use Disorders Identification Test (DUDIT) was adapted and administered to the participants. IBM SPSS was used to conduct univariate and multivariate linear regression analyses.

Results: More than half (66.2%, $n = 344$) of the survey participants used at least one substance while a third of them (31.2%, $n = 162$) used more than one substance. About one in ten respondents met the instrument cut-off for dependence. The most popular substance used was Kolanut (46.5%, $n = 242$). Popular reasons for substance use were availability of substance, influence from others, and having a disease condition. Education, marital status, employment, and number of substances used were significantly associated with substance dependence.

Conclusions: A high prevalence of substance use was found among the IDPs. The study highlights the need for intervention in the substance use problem affecting this vulnerable population.

Introduction

According to the United Nations Guiding Principles on Internal Displacement, internally displaced persons (IDPs) are "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border" (United Nations, 1998). Internal Displacement Monitoring Centre global reports issued at the end of 2020 revealed that 55 million people had been displaced worldwide (Internal Displacement Monitoring Centre [IDMC], 2021). Of this figure, 48 million were IDPs due to conflict and violence, of which 24.1 million were in Sub-Saharan Africa, and Nigeria accounted for 2.7 million (IDMC, 2021).

At the global level, Nigeria ranked seventh among the countries with the largest number of IDPs due to conflict and violence, followed by Sudan (2.3 million), and Ethiopia (2.1 million) (Internal Displacement Monitoring Centre, 2021). This figure is expected to rise daily as a result of Boko Haram and bandits' activities, herders-farmers clashes, intercommunal clashes, and ethno-religious conflicts. In 2020, a total of 169, 000 new

displacement due to conflict and violence was recorded in Nigeria (IDMC, 2021). In the last 12 years, Boko Haram's insurgent activities have forced a significant number of people in north-eastern Nigeria to flee their homes for safety. This has resulted in an unprecedented humanitarian crisis in this region and the Lake Chad region (Internal Displacement Monitoring Centre [IDMC], 2016). The estimated number of IDPs identified during Displacement Tracking Matrix assessments in conflict-affected north-eastern states of Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe between July 27 and August 15 2020, was 2,118,550 IDPs or 436,058 households (International Organization for Migration [IOM], 2020). It is worth noting, however, that the most conflict-affected state, Borno, continues to host the greatest number of IDPs, with 1,566,011 people (IOM, 2020). Displaced people are frequently subjected to a wide range of traumatic and violent events, as well as poor living conditions, impoverishment, loss of self-esteem, and cultural and social disarray (Horyniak et al., 2016). As a result, some IDPs may resort to substance use to cope with these stressors (Ezard, 2012; Roberts & Ezard, 2015). According to IDPs, the use of substances mitigated the effects of stress, depression, and traumatic experiences (Usoro et al., 2017). In view of an appreciable prevalence

(12.0%, $n = 350,000/2,916,667$ people aged 15–64 years) of substance use in the general population in Borno State (United Nations Office on Drugs and Crime, 2018), IDP camps in this State may become breeding grounds for substance users.

Substance use among IDPs in Nigeria's armed conflict-ravaged north-eastern region is a neglected area of research and public health importance. Previous studies haven't paid attention to substance use among IDPs, instead they have concentrated on their living conditions. Also, humanitarian organizations and governments, on their part, have prioritized food, shelter, education, security, gender-based violence, and other aspects of health, while ignoring substance use among the displaced. However, displacement areas are high-risk environments for substance use and the development of substance-related harms like mental disorders, gender-based violence, HIV infection, hepatitis B and C, and tuberculosis (Aaraj et al., 2021; Adesina et al., 2022; Gire & Ibaishwa, 2019). This demonstrates that substance use among displaced people is far too important to ignore. To our knowledge, a review of the literature revealed only one previous study conducted in IDP camps in Borno State (Gire & Ibaishwa, 2019). Despite the existence of this study, understanding of substance use among IDPs in Borno State remains limited. The present study, on the other hand, was carried out to better understand the recent trend of substance use among IDPs in Borno State. Therefore, the objectives of the present study were to enumerate the types of substances used by IDPs, screen for drug use disorders, investigate the reasons for substance use, and determine the association between substance use and socio-demographic variables.

Materials and methods

Study design and setting

The study was a cross-sectional survey carried out in the three IDP camps in Maiduguri, Borno State. The IDP camps were purposely selected because they were located in the state capital and were less likely to be attacked at the time of data collection.

Study sample

The most recent detailed enumeration of Internally Displaced persons, the Census 2016, revealed a total population of about 2 million (UNHCR – Nigeria Emergency, 2022.). The sample size was computed using G*Power software (version 3.1.9) to perform a priori power analyses (Faul et al., 2007). The effect size ($f^2 = 0.15$); significance level ($\alpha = 0.05$); desired statistical power ($1 - \beta = 0.95$); and the total number of predictors (seven in this study) were entered, and the results indicated that a minimum sample size of 153 is ideal for a regression-based statistical analysis. Study participants were conveniently sampled.

Ethical considerations

The ethical approval for this study was obtained from the Borno State Ministry of Health through the Borno State Emergency Management Agency. Informed consent for the study was obtained after the study objectives were explained to them. They were assured of anonymity and confidentiality of the study data, and the right to withdraw consent if they wanted to.

Data collection

Data were collected between November and December 2021. The survey was carried out by a team of data collectors fluent in Kanuri, Hausa, and English. Intensive training was provided for the team, focusing on the study aims and intended value of the study, review of the individual items in the survey, and ethical issues related to carrying out research among a vulnerable population. Training, supervision, and quality control were provided by a competent professional. All internally displaced persons living in the selected camps who were above 18 years old, were able to give informed consent, and could communicate in Kanuri, Hausa or English language were eligible to participate. The total number of people eligible to participate in the survey could not be determined due to the lack of reliable data on the demographics of the IDP community. About two hundred people from each camp who fit the eligibility criteria and were willing to participate were consecutively recruited for the study. Most study participants were low literates; thus, the survey was interviewer-administered.

Study instrument

The study instrument comprised three parts. The first part sought socio-demographic details of the study participants; the second part was the Drug Use Disorders Identification Test (DUDIT) which was adapted to suit the study population. The drug list was changed to include the substances available in the study location (Maigida & Hassan, 2019). The last part of the instrument sought to identify the reasons for substance use among the respondents. The Kanuri version of the DUDIT was employed for the study (Drug Use Disorders Identification Test [DUDIT] 2005). With permission from the developers of the instrument, the DUDIT was translated into Kanuri and back-translated to English. Kanuri is the indigenous language of Borno State spoken by most of the IDPs. The translation passed through a rigorous review by language experts from the Department of Linguistics, University of Maiduguri, Borno State, and the developers of the DUDIT. DUDIT was developed as a parallel instrument to the AUDIT (Alcohol Use Disorders Identification Test) for the identification of individuals with drug-related problems. The DUDIT was intentionally used for this study because the study population is predominantly Muslim and prohibits the intake of Alcoholic beverages. The DUDIT screens effectively for drug-related problems in clinically selected groups and has been suggested to be useful in the context of public health surveys (Basedow et al., 2021; Pape et al., 2022). Anchored on a

Likert scale, the DUDIT comprises eleven questions that aim to assess the extent of dependence on substances. Questions 1 to 9 are scored on a scale of 0 to 4 while questions 10 and 11 are scored 0, 2, or 4. The screening cut off score for males is 6, and 2 for females. Scores of 25 and above for both sexes indicate probable drug dependence on one or more drugs. The DUDIT has been established as a psychometrically sound drug use screening measure with a Cronbach's alpha reliability of 0.94 and a high convergent validity ($r = 0.85$). In this population, the DUDIT was found to have a Cronbach's alpha of 0.766.

Data analysis

Data analysis was carried out using Statistical Package for Social Sciences software version 21.0. Descriptive analyses were performed to characterize the sampled population. The prevalence of substance use and dependence were estimated using the instrument cutoff scores. Univariate and multivariate linear regression analyses were carried out with the total dependence score as the outcome variable. P-values less than 0.05 were considered significant.

Results

Socio-demographic characteristics of the study sample

A total of 520 people agreed to participate in the study. The mean age of study participants was 33.45 ± 13.48 years. The mean time spent in the camp was 5.09 ± 1.96 years. More than three-quarters of the study sample were female (76.2%, $n = 396$) and did not have any formal education (75.1%, $n = 383$). They were also mostly unemployed (86.3%, $n = 440$). More than half of the females screened positively for substance use (59.6%, $n = 236$) and more than half of the males also screened positively for substance use (54.8%, $n = 68$). A total of 68 people (13.1%) had a DUDIT score >25 and thus were categorized as being dependent. Fifty female participants were dependent, representing 12.6% of the entire female population and 18 males were dependent representing 14.5% of the entire male population. The most popular substance used by the study population include Kolanut (46.5%, $n = 242$), Sleeping pills (20.0%, n − 104), Bitter Kola (15.6%, $n = 81$) and Anabolic steroids (12.9%, $n = 67$). One hundred and sixty-two participants (31.3%) used more than one substance at a time with five people (1%) using five substances at the same time (Table 1).

Table 1. Sociodemographic characteristics of study population.

Characteristics	Frequency (N)	Percentage (%)
Gender		
Male	124	23.8
Female	396	76.2
Education		
Non-formal	383	75.1
Primary	46	9.0
Secondary	61	12.0
Tertiary	20	3.9
Marital Status		
Single	101	19.5
Married	327	63.0
Widow	61	11.8
Divorced	30	5.8
Employment		
Employed	36	7.1
Unemployed	440	86.3
Retired	7	1.4
Student	27	5.3
Substances Used		
Kolanut	242	46.54
Sleeping pills	104	20.0
Bitter kola	81	15.58
Anabolic steroids	67	12.88
Marijuana	31	5.96
Codeine containing syrups	24	4.62
Cocaine	6	1.15
Shoe Polish	6	1.15
Green tea	5	0.96
Pit toilet gas	4	0.77
Tramadol	4	0.77
Glue	3	0.58
Benzhexol	2	0.38
Lizard dung	1	0.19
Number of substances		
0	176	33.8
1	182	35.0
2	110	21.2
3	31	6.0
4	16	3.1
5	5	1.0

Reasons for substance use

The most popular reasons for using substance were availability of substance (35.1%, n = 108), influence from others (14.3%, n = 44) and having a disease condition (13.96%, n = 43) (Table 2).

Association between socio-demographic characteristics and drug dependence

The Nagelkerke R^2 indicates that this model accounted for 20.2% of the variability observed in the DUDIT scores among the internally displaced persons surveyed. Internally displaced persons with no formal education had 6.164 higher scores on the DUDIT compared to people with a tertiary education (CI: 1.780–10.547, $P < .01$). A progressive increase in the total DUDIT scores was observed with increasing number of substances use, although significance was lost when the number of substances were 3 or 4 compared to 5. People who used one substance had 10.954 lower DUDIT scores compared to people who used five substances at the same time when other variables were adjusted for (CI: −19.439-(−2.468), $P = < .05$). Education , Marital status, Employment status and Number of substances used remained significantly associated with DUDIT scores in the multivariate model. (Table 3).

Table 2. Reasons for substance use.

Reasons	Frequencies	Percentage
Availability	108	35.06
Euphoria	44	1.43
Influence from others	44	14.29
Disease condition	43	13.96
Addiction	33	10.71
Enhanced Performance	23	7.47
Unemployment	21	6.82
Pregnancy	2	0.65

Discussion

Although the Nigerian government has consistently shown concern for the IDPs' situation, efforts to reintegrate them into mainstream life have not resulted in appreciable gains. In their research of IDPs in Jos, Nigeria, Rwang et al. (2021) found that IDPs still experience physical and cognitive signs of depression, which reduces their capacity to reintegrate into their communities. This research sheds light on the correlates of substance use and dependence among IDPs in Maiduguri, Nigeria. This study is relevant considering the recent realities of prolonged terrorism activities in North eastern Nigeria. Also, although several existing literature focus on substance use and misuse, there is a research deficit among the growing population of IDPs occasioned by the heightened terrorist activities in the study area. This is a relatively unexplored context from a relational standpoint.

The demographic profile of the survey participants revealed that more than three-quarters of the study sample were female, a large percentage of whom lacked formal education. The fact that the terrorists primarily target the men to murder or enlist as combatants can explain why there are so many women living in the IDP camp. The general low literacy rate in Northern Nigeria, where this study was done, can be blamed for a lack of formal education among a sizable portion of the population.

Over half (66.2%) of the IDPs who were screened for substance use were found to be users, with a higher percentage being single substance users. Kolanut, sleeping pills, bitter kola, and anabolic steroids were the most often used substances in the study population. Since bitter kola and kolanut are abundantly available in Northern Nigeria, it can be postulated that the drugs utilized were dependent on their availability. This finding contradicts the finding from a study on

Table 3. Bivariate and multivariate associations between socio-demographic characteristics and DUDIT scores.

Variable	Crude Estimate	95% CI	P-value	Adjusted Estimate	95% CI	P-value
Gender						
Female (Ref)	-	-	-	-	-	-
Male	0.696	−1.464–2.855	NS	1.595	−0.813–4.003	NS
Education						
Tertiary (Ref)	-	-	-	-	-	-
Secondary	3.155	−2.032–8.342	NS	5.138	−0.378–9.851	NS
Primary	3.935	−1.468–9.338	NS	5.326	0.141–10.766	p < .05
No formal education	6.164	1.780–10.547	p < .01	7.250	2.228–11.480	p < .01
Marital status						
Divorced (Ref)	-	-	-	-	-	-
Widowed	−3.353	−7.386–0.679	NS	−4.669	−8.509- (−0.830)	p < .05
Married	−5.844	−9.424-(−2.264)	p < .01	−6.696	−10.089-(−3.303)	p < .01
Single	−3.527	−7.548–0.494	NS	−2.625	−6.746–1.496	NS
Employment						
Student (Ref)						
Retired	4.452	−5.315–14.220	NS	4.585	−4.613–13.783	NS
Unemployed	9.483	5.274–13.692	p < .01	7.777	3.442–12.111	p < .01
Employed	8.013	2.764–13.262	p < .01	7.749	2.389–13.108	p < .01
Number of substances used						
5 (Ref)	-					
4	−6.333	−16.151–3.484	NS	−2.886	−12.101–6.329	NS
3	−10.481	−19.928-(−1.035)	p < .05	−6.679	−15.571–2.213	NS
2	−12.310	−21.404-(−3.216)	p < .01	−9.975	−18.487-(−1.462)	p < .05
1	−14.455	−23.498-(−5.411)	p < .01	−10.954	−19.439-(−2.468)	p < .05
None	−5.167	−19.337–9.004	NS	−1.441	−14.873–11.992	NS
Age	0.090	0.025–0.155	p < .01	0.060	−0.015–0.135	NS
Time spent in camp	0.029	−0.440–0.499	NS	−0.151	−0.589–0.287	NS

NS = Not significant.

substance usage among guests at selected bunks in Uyo, Southern Nigeria (Abikoye et al., 2021). In their study, Abikoye et al. (2021) discovered that the most common substances used among patrons of selected bunks were cannabis, heroin, alcohol, cigarettes, opiates, and cocaine. Moreover, in a study by Obadeji et al. (2021) conducted on commercial motorcyclists in Ekiti State, South-western Nigeria, alcohol was the commonest substance used, followed by cigarettes, tramadol, and cannabis. The disparities between the results of the present study and that of these studies could be due to differences in the study population, study areas, and predominant religion. Although the use of Marijuana (cannabis), was reported among a small percentage of the present study's population (5.96%, $n = 31$), it is considered the most commonly used illicit substance worldwide (Alzyoud et al., 2021; Huffer & Cservenka, 2021; Lins-Filho et al., 2022). The higher percentage of IDPs that used substances that are cheaper and easier to obtain is a reflection of the poor socio-economic conditions prevailing in the study region. The IDP camp is an environment housing survivors who have been exposed to overwhelming and distressing experiences, leaving them feeling frustrated and powerless (Musau et al., 2018). These encounters prompt individuals to turn to substance use for solace. In a setting like the one of the present study, it makes sense that the relatively more expensive substances, like cannabis, will be out of the price range of the majority of substance users.

Investigating the reasons for substance use in this present study sample revealed that the most popular reasons were availability of substance, influence from others, and having a disease condition. This result contrasts with that of Obadeji et al. (2021) who found out that the major reason for substance use among commercial motorcyclists in Ekiti State, South-western Nigeria, was dissatisfaction with life. Several other studies with different population characteristics reported varied results. For example, Klimas et al. (2022) observed that certain individuals in Canada indulged in substance use, such as Cannabis, as an opioid substitution attempt. In Greece, changes in substances used during the COVID-19 pandemic were mostly attributed to factors linked to the lockdown (Rantis et al., 2022).

Exploring the prevalence of substance dependence among the IDPs of the present study revealed that more than one in ten people had a DUDIT score greater than 25, and thus were categorized as being dependent. Fifty female participants were dependent, representing 12.6% of the entire female population and 18 males were dependent representing 14.5% of the entire male population. This finding is quite worrying because prolonged engagement with substance use has been shown to predict substance use dependence. This result may indicate an impending calamity in the future if the tide is not stemmed. In a study carried out in 6 selected Nigerian universities, Asagba et al. (2021) observed a high prevalence of alcohol use among university students. Moreover, the study by Obadeji et al. (2021) conducted among commercial motorcyclists in Ekiti State, South-western Nigeria, revealed a lifetime and current prevalence of any substance use of 61.0% and 53.7% respectively.

Education, marital status, work status, and number of drug used were shown to be significantly linked with DUDIT scores in the multivariate model after examining the relationship between substance use and socio-demographic characteristics. The results of this study are consistent with those of Kumar and Kumar (2022), who discovered that among males aged 14 to 19 years living in Bahir, India, education including the education of the household head significantly affected substance use. In the present study, there was no significant link between gender and drug usage. This is in contrast with a vast majority of studies that have found gender to be a significant influencer of substance use. For instance, the findings of Lins-Filho et al. (2022) demonstrated that the likelihood of substance use was greater among non-heterosexual individuals in female prisons located in Recife, the capital of Pernambuco, a state in Brazil. Huffer and Cservenka (2021) found age and gender to be significant determinants of cannabis use (Huffer & Cservenka, 2021). Other studies show that adverse childhood experiences and the domains of socio-sexuality were positively associated with tramadol use in a predominantly male sample of Nigerian students (Onu et al., 2021). The length of stay in camp did not show any significant association with substance use. This result is contrary to the finding of Sadzaglishvili and Scharf (2018) who found out that in the 2008 Russian-Georgian War, worse psycho-emotional responses to the conflict were observed in recent IDPs. These recent IDPs who have spent a shorter time in camp showed higher death anxiety compared to other IDPs who have spent a longer time in camp. It can be argued that this difference in result is because the survey participants in this present study have been exposed to severe terrorist activities in Northeastern Nigeria which is typified by large-scale atrocities on the human population likely instigated by people known to the IDPs. Moreover, the IDPs are currently living in environmentally inhabitable camp conditions, thus predisposing a recent or long-term IDP to constant psychological trauma that pushes them to substance use irrespective of their length of stay in the camp.

Limitations

Caution must be applied when considering reasons for substance use and making deductions on the association between substance use and socio-demographic variables. While certain disease conditions may drive individuals to use substances to alleviate physical and/or psychological pain; the use of other substances, such as alcohol, in a predominantly Muslim population like the present study, may not receive factual responses from the survey participants due to the underlying religious connotation. Exploring religious affiliation as one of the socio-demographic factors considered in this study might have produced some more interesting findings, such as the influence of religion on the choice of substance to use. The socio-cultural practices in the study population may also make it difficult for females to disclose non-culturally acceptable substances; however, this study did not consider the influence of cultural and socioeconomic factors which may be impossible to control and may constitute risk factors for substance use. Therefore,

examining the influence of religious affiliations on reasons as well as the choice of substance to use would be a worthy future research agenda in a similar population.

Conclusion

More than half of the study sample used at least one substance. About one-third of them used more than one substance while about one in ten of them were dependent on the substances used. The most popular substance used by the study population includes Kolanut, Sleeping pills, Bitter Kola, and Anabolic steroids. The most common reasons for substance use were availability and influence from friends. Internally displaced persons with no formal education had significantly higher scores on the DUDIT compared to people with tertiary education. A higher number of substances used was also associated with higher DUDIT scores. The study highlights the need to address the problem of substance use among this vulnerable population.

Disclosure statement

Funding

ORCID

Osaro Aigbogun 🔟 http://orcid.org/0000-0001-7425-3615

References

Aaraj, E., Haddad, P., Khalife, S., Fawaz, M., & Van Hout, M. C. (2021). Understanding and responding to substance use and abuse in the Palestinian refugee camps in Lebanon prior to and during COVID-19 times. *International Journal of Mental Health and Addiction*. https://doi.org/10.1007/s11469-021-00714-9

Abikoye, G. E., Ineme, M. E., Akinnawo, E. O., Okonkwo, E. A., & Osinowo, H. O. (2021). Drug use and motivation for treatment in patrons of selected bunks in Uyo, Nigeria: A qualitative perspective. *Journal of Substance Use*, 26(6), 599–602. https://doi.org/10.1080/14659891.2021.1871979

Adesina, M., Olufadewa, I., Oladele, R., Ayorinde, T., Solagbade, A., Isiek, E., Ishatah, G., & Muleta, T. (2022). Prevalence of anxiety and drug abuse disorders among young internally displaced persons in Northern Nigeria *Research Square* (Preprint). https://doi.org/10.21203/rs.3.rs-1994061/v1

Alzyoud, S., Shotar, A., & Khoshnood, K. (2021). Cannabis use among a sample of adult male Jordanian inmates: Use, consequences and associated factors. *Journal of Substance Use*, 26(3), 324–330. https://doi.org/10.1080/14659891.2020.1827461

Asagba, R. B., Agberotimi, S. F., & Olaseni, A. O. (2021). Prevalence and psychological correlates of alcohol use among Nigerian university students. *Journal of Substance Use*, 26(6), 608–613. https://doi.org/10.1080/14659891.2021.1875067

Basedow, L. A., Kuitunen-Paul, S., Eichler, A., Roessner, V., & Golub, Y. (2021). Diagnostic accuracy of the drug use disorder identification test and its short form, the DUDIT-C, in German adolescent psychiatric patients. *Frontiers in Psychology*, 12, 2108. https://doi.org/10.3389/fpsyg.2021.678819

Drug Use Disorders Identification Test (DUDIT). (2005). Retrieved April 11, 2022, from https://www.emcdda.europa.eu/drugs-library/drug-use-disorders-identification-test-dudit_en

Ezard, N. (2012). Substance use among populations displaced by conflict: A literature review. *Disasters*, 36(3), 533–557. https://doi.org/10.1111/j.1467-7717.2011.01261.x

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. https://doi.org/10.3758/BF03193146

Gire, J. T., & Ibaishwa, R. L. (2019). Patterns of substance use among internally displaced persons in Borno state, Nigeria. *African Journal of Drug and Alcohol Studies*, 18(1), 17–30.

Horyniak, D., Melo, J. S., Farrell, R. M., Ojeda, V. D., & Strathdee, S. A. (2016). Epidemiology of substance use among forced migrants: A global systematic review. *PLos One*, 11(7), e0159134. https://doi.org/10.1371/journal.pone.0159134

Huffer, M. C., & Cservenka, A. (2021). Effects of age and sex on primary form and method of cannabis use. *Journal of Substance Use*, 26(5), 505–510. https://doi.org/10.1080/14659891.2020.1851408

Internal Displacement Monitoring Centre. (2016). *Global report on internal displacement*. Retrieved April 20, 2022, from https://www.internal-displacement.org/globalreport2016/

Internal Displacement Monitoring Centre. (2021). *Global report on internal displacement*. Retrieved April 20, 2022, from https://www.internal-displacement.org/global-report/grid2021/

International Organization for Migration (IOM). (2020). Displacement report 33: North East Nigeria. Assessment on Displacement Trends in Six Conflict-Affected States.

Klimas, J., Mok, W. Y., Lake, S., Socías, M. E., DeBeck, K., Hayashi, K., Milloy, M. J. . . . Milloy, M. J. (2022). Prevalence and correlates of intentional substance use to reduce illicit opioid use in a Canadian setting. *Journal of Substance Use*, 27(3), 277–282. https://doi.org/10.1080/14659891.2021.1941341

Kumar, S., & Kumar, K. A. (2022). Prevalence of substance use and their correlates among adolescent boys in Bihar, India. *Journal of Substance Use*, 1–7. https://doi.org/10.1080/14659891.2022.2091045

Lins-Filho, P. C., Carvalho, F. M. T. D., Freitas, J. L. D. M., Ferreira, A. K. A., Melo, M. C. F. D., Godoy, G. P., & Caldas, A. D. F., Jr. (2022). Drug use pattern among non-heterosexual and transgender people detained in a female prison complex. *Journal of Substance Use*, 27(2), 206–211. https://doi.org/10.1080/14659891.2021.1916850

Maigida, K., & Hassan, A. (2019). Prevalence and pattern of substance use among internally displaced persons in north-central Nigeria. *Drugs in the Nigerian Population*, 62, 49. https://doi.org/10.18356/65268F37-EN

Musau, J. N., Omondi, M., & Khasakhala, L. (2018). The Prevalence of Post-Traumatic Stress Disorder (PTSD) among Internally Displaced Persons (IDPs) in maai mahiu Camp in Nakuru County, Kenya. *Journal of Internal Displacement*, 8(1), 20–33.

Obadeji, A., Kumolalo, B. F., Ajiboye, A. S., Oluwole, L. O., Oderinde, K. O., & Ebeyi, R. C. (2021). Substance use among commercial motorcyclists and its relationship with life satisfaction and significant depressive symptoms. *Journal of Substance Use*, 26(2), 177–183. https://doi.org/10.1080/14659891.2020.1800844

Onu, D. U., Ifeagwazi, C. M., Orjiakor, C. T., & Iorfa, S. K. (2021). Adverse childhood experiences and tramadol use in Nigeria: The mediating role of sociosexuality in a predominantly male student sample. *Journal of Substance Use*, 26(4), 427–433. https://doi.org/10.1080/14659891.2020.1846805

Pape, H., Lobmaier, P., & Bukten, A. (2022). An evaluation of eight short versions of the Drug Use Disorder Identification Test (DUDIT). A prison population study. *Drug and Alcohol Dependence Reports*, 3, 100043. https://doi.org/10.1016/J.DADR.2022.100043

Rantis, K., Panagiotidis, P., Parlapani, E., Holeva, V., Tsapakis, E. M., & Diakogiannis, I. (2022). Substance use during the COVID-19 pandemic in Greece. *Journal of Substance Use*, 27(3), 231–238. https://doi.org/10.1080/14659891.2021.1941344

Roberts, B., & Ezard, N. (2015). Why are we not doing more for alcohol use disorder among conflict-affected populations. *Addiction*, 110(6), 889–890. https://doi.org/10.1111/add.12869

Rwang, G. T., Kibanja, G. M., & Mayanja, K. M. (2021). Depression and occupational reintegration among IDPs in Jos. *Journal of Internal Displacement*, *11*(2), 28–42.

Sadzaglishvili, S., & Scharf, S. (2018). Measuring IDPs' Psycho-emotional responses to war. *Journal of Internal Displacement*, *8*(1), 34–44.

UNHCR - Nigeria emergency. (2022). Retrieved April 11, 2022, from https://www.unhcr.org/nigeria-emergency.html

United Nations Commission on Human Rights. (1998). Guiding principles on internal displacement, E/CN.4/1998/53/add.

United Nations Office on Drugs and Crime. (2018). Drug use in Nigeria. 20.

Usoro, N. A., Okediji, E. A., Udoh, E. A., & Ineme, M. E. (2017). Prevalence of drug use among internally displaced persons in Akwa Ibom State, Nigeria. In *Nigeria Perspectives on Drugs, Alcohol and Society in Africa* (Vol. 4, pp. 11–23).