Substance abuse has ravaged potentials and keeps clamping down on the stability of societies. It is increasingly becoming a social problem that demands sustainable remedies, particularly in Nigeria’s Niger Delta. This paper establishes a case for the utilisation of an ecological health model in dealing with harmful alcohol use in the region. What motivates the adoption of such a model is the fact that harmful alcohol use largely stems from nurture and can be remedied through same nurture. This paper adopted a case study research design using participant observation for data gathering, while using thematic analysis in organising and interpreting data.

Key words: drug-free therapy, ecological health model, Niger Delta, harmful alcohol use

1. Introduction

Alcohol is one substance whose harmful use is recorded to be on the high side by different studies and experts (Oluremi 2012; Oshodi et al. 2010; Ponyon 2009). It is heavily linked to several social problems characterised by violence and carelessness. Most often, harmful alcohol use as a disorder occurs alongside addiction and abuse of another substance, like tobacco or marijuana, among others (United Nations Office on Drugs and Crime 2007). Besides the said pleasure derived from alcohol that is based on the excessive stimulation of dopamine, there tend to be more reasons for uncontrolled, repeated, and consistent intake of the substance (Wloch et al. 2014; Amosun 2010). On one hand, it serves as a measure through which people try to suppress pressures they face in life, whereas it likeably generates even more pressures for them. It stems equally from peer orientations and influence, cultural backgrounds,
Regardless of whatever causative factor leads people to indulge in harmful alcohol use, the substance’s effects on behavioural performance, health, and relationships, makes it a concern for society (Barkan 2012; Bharmal et al. 2015).

It is in lieu of the foregoing that facilities and professionals are put in place and trained in the subject of mental health and substance abuse. They are charged with the responsibility of managing mental health risk behaviours with measures and models that defy superficial remedy (Canadian Centre on Substance Abuse 2014). It is in this vein that this paper seeks to look into the realities of applying ecological health models to the treatment of harmful alcohol use as observed to be pronounced in Nigeria’s Niger Delta (Peel 2010).

Nigeria’s Niger Delta is largely a coastal region, with most of its areas very close to bodies of water. They consist of nine states, namely: Rivers, Bayelsa, Akwa-Ibom, Cross-River, Delta, Edo, Abia, Imo and Ondo (Abazie-Humphrey 2014). The first six states are regarded as the core Niger Delta states, which might be because of their much closeness to water. They are also the chief sites for oil activities in Nigeria, which have occasioned ecological destruction of their flora and fauna, hence affecting their economy and health. As a result, the region is characterised by high-scale militancy, which seems to be a measure adopted by its youths to vent their frustrations (Akinwale 2010; Abazie-Humphrey 2014). Thus, it can be argued that while the frustrations could have reinforced their culture of harmful alcohol use so that they can boldly confront their aggressors, harmful alcohol use could equally be a measure they have adopted to suppress their frustrations.

Furthermore, the Niger Delta region tends to have hitherto maintained a culture of harmful alcohol use which is accepted and practiced by both genders, but preponderantly males (Akinwale 2010; Emuedo 2010). The locals have rationalised intake of these substances as a norm and also named them locally, as will be revealed in the case presentation. Surprisingly, the non-taking of alcohol as a Niger Deltan is met with some level of shock and perhaps considered a deviation from the people’s mainstream culture. The region records highly in domestic violence, cultism, sea piracy, polyandry, polygamy, and militancy (Emuedo 2013; Ukiwo 2011). It can be rationalised that harmful alcohol use as observed in this region has a connection to the proliferation of recorded vices in this territory (Dennis-Antwi et al. 2003; Flaskerud & Delilly 2012). This is so because of the relationship harmful alcohol use has been proven to have with poor judgement, poor decision making, poor learning and memory, as well as absence of behavioural control (Wloch et al. 2014; Uphoff et al. 2013).

In contemporary medicine, the use of medications such as disulfiram, acamprosate, naltrexone and topiramate are adopted as treatments for harmful alcohol use (Wloch et al. 2014). Despite the effectiveness of these medications to control the appetite for alcohol, they are however not free from the limitation of sustainability that generally characterise drug therapy in mental health (Stockwell 2005; Roberts 2008; National Institute on Drug Abuse 2003). Moreover, the cost of these medica-
tions might not be affordable for the average Niger Deltan, inasmuch as they are yet to fully accept the importance of psychiatric and mental health practices, owing to their general unpopularity in Nigeria. Therefore, placing the average Niger Deltan on a drug therapy for harmful alcohol use might be the most alien thing they have ever experienced in their lives. To this end, it becomes apparent that adopting an ecological health model seems most viable (LEVITT 2013; GITTERMAN 2009). This is because it does not only deal with the problem but with its root, resident in human interaction with the environment (TEATER 2010).

The guiding principle of the concept of ecology is in the interactional exchange people have with their environments (GITTERMAN & GERMAIN 2008; JILOHA 2009). This exchange influences behavioural features of people (GITTERMAN 2009). Environment in this context includes the surroundings and relationships of a person. It encompasses physical setting (town design), parenting style, peer influence, family communication pattern, work place ethics, government policies, culture, among others. Studies in psychology and other behavioural sciences confirm the roles played by nurture in determining the overall personality and behaviour of a person (GITTERMAN & GERMAIN 2008; LEVITT, 2013; JOHNSON & RHODES 2005). It is in this regard that this paper will take steps in addressing harmful alcohol use in Nigeria’s Niger Delta using the ecological health model.

Issues in Nigeria’s Niger Delta have been studied more from political and economic standpoints (UKIWO 2011; AKINWALE 2010; EMUEDO 2013; ABAZIE-HUMPHREY 2014; EMUEDO 2010). Rarely has any study been conducted on mental health risk behaviours of the region’s inhabitants with emphasis on harmful alcohol use. Therefore, this study focuses on issues of harmful alcohol use in the region, possible antecedents, influence, and remedies that defy drug therapies. Pointers from this paper could be investigated and adopted by social workers, psychologists, psychiatrists, policy makers, among others. Apart from the findings having enormous impact on mental health practice within the region, it is important not to rule out its significance as a measure that could be coopted into the trajectory of panaceas for the region’s development.

2. Materials and methods

2.1. Study area

The study was conducted in two riverine Local Government Areas of Rivers and Bayelsa States, namely: Okrika and Yenagoa. Both areas have a combined population of 574,570 people (National Population Commission 2010). These areas are home to oil wells and several Multi-National Oil Corporations, including a jetty. Its indigenes are adept in brewing local dry gin and engage in the trade of palm-wine which justifies why the areas were chosen. Both areas are relatively developed but still grapple with ecological issues resulting from oil activities. They are very fond of speaking Pidgin English.
2.2. Data collection

The study was conducted in the Okrika and Yenagoa areas of the Niger Delta. The period of the study lasted from December, 2016 to April, 2017. It adopted a case-study research design. The primary researcher, who is the first author, made six visits to those areas intermittently within the stated time frame. In each visit, the researcher spent a maximum of two weeks as an observer. However, the primary researcher spent more time in the Okrika area for cost effective reasons. Therefore, quite principal to this research was participant observation, with an emphasis on ‘complete observer’ and little of ‘observer as participant’. This implies that the researcher collected data via very limited interactions with participants, for the purpose of concealing his identity, which if known would influence the study group’s observed behaviour.

The researchers collectively built a framework for the study which guided observations of the primary researcher. We adopted a simple random sampling technique by means of balloting, selecting four specific areas in each of the two localities where the observation was carried out. The four selected areas in Okrika were Ibaka, Isaka, Obomoton and Kirike, while those of Yenagoa were Ekeki, Okaka, Imgbii and Kpansia. In each of the eight districts, the primary researcher specifically visited four streets that were randomly selected through balloting as well. Due to the nature of the study, respondents were not exact in terms of figures. Thus, all dwellers in the chosen areas were captured into the respondents’ framework and were liable to observation and interaction where necessary. The primary researcher observed in detail the activities and behaviours that concerned the subject of his research. At the end of every research day, he returned to his residence and put into writing what he had observed. The few interactions he had with some participants were recorded in similar fashion. The primary researcher equally observed and interacted with participants at beer parlours, specific community gatherings, and random casual gatherings. Data sourced through such means contributed greatly to the researchers’ positions.

2.3. Data analysis

Observations and interactions were preserved through notes in the English language. They were much later put into themes representing the goals of the research that answer the following questions: 1) What is the reality of harmful alcohol use in Nigeria’s Niger Delta? 2) What thoughts do people in the region hold toward harmful alcohol use? 3) What are the likely perceived motivations of harmful alcohol use in the area? 4) How can harmful alcohol use be managed in Nigeria’s Niger Delta?

2.4. Case presentation and discussion

The experiences from the case are presented in themes. The first centers around the realities of harmful alcohol use in the region and the extent of its severity. The second investigates thoughts that accompany harmful alcohol use in the territory and how
indigenes rationalise harmful alcohol use. The third captures perceived motivations of the realities. Lastly, remedies are explored and suggested.

2.4.1. Realities of harmful alcohol use in Nigeria’s Niger Delta

Harmful alcohol use might be a norm for most Niger Deltans (PEEL 2010) and not acquiescing to the trend is a responsibility of choice. The Niger Deltans have local names for their various alcoholic drinks. These names include: ogospere, kai-kai, ekpekishi, ogogoro and tombo [palm-wine]. Apart from tombo, the rest of the drinks are gin-like and synonymous to spirits, having a very high percentage of alcohol content of not less than 35%. They are served during festivals, meetings, and even sold in local/conventional drinking bars and streets. These drinks are measured in what they call ‘shots’. So you can have ‘one shot’, ‘two shots’ etc. a shot is sold for 50 naira or 70 naira (roughly 20 cents). The instrument for measuring shots is cup-like, which is neither too big nor too small. From the study, it was discovered that these drinks have a parallel spiritual significance as they are used to make libations when communicating with ancestral spirits. The proliferation of drinking bars where these drinks are sold, and the high patronage they get, confirms the strong affinity tied to them. At these drinking bars, particularly the local ones, traditional high-life songs are often played, which usually serve as a motivation for the drinkers to drink more. They drink oftentimes with cigarettes and are very noisy. The local drinking bars ooze an offensive odour consisting of a mixture of ogogoro, kai-kai, tombo and cigarettes. People not used to being in such an environment would find it suffocating, as the primary researcher experienced first-hand.

One cannot say whether those who are found there are of the rich or poor class, as no direct effort was aimed at investigating their financial status. However, critical observation shows that varying economic classes converge at the drinking bars. Those with a relatively low financial status would sometimes take shots of their preferred drink without paying, and you will always see them quarrelling with the sellers. The local drinking bars are dominated by males with scarce if any presence of females. Some females were seen participating in the activity, however, either through romantic support to their boyfriends or husbands and/or direct indulgence.

Usually, customers patronise their drinking bars more in the evenings because people who go to work retire there to unwind before going home. Surprisingly, it was experienced that these local drinking bars are always selling because their customers defy time. It was observed that those who ride motorcycles and tricycles would intermittently park their vehicles and go into these local bars to take one or more shots of the locally brewed drink. Thereafter, their eyes turn red and their mouths start smelling of the drink. The offensive odour of these local drinks, particularly ogogoro and kai-kai is, a turn-off for non-drinkers who are not used to the smell.

Due to the very high content of alcohol in these drinks, intoxication is observed to be very high. It was seen that when these persons are intoxicated, they act in three
different ways. Some get very moody, some get very nasty and funny, while others get very confrontational and provocative. On some occasions, their family members would come and drag them home. Records indicate that at times these drinking men return home and engage their wives in fights or even beat them. One lady who gave a narrative in Pidgin English said, ‘Sometimes, my neighbour wey de drink well well, go come back house con de beat him wife, especially if the wife begin tell am say make him stop to de drink. The man no de give the wife money and even him children no de too go school . . .’. The woman tried to say that her neighbour who is a drunk does not keep to his responsibilities as a man courtesy of his drinking attitude. This is not surprising as it was observed that a good number of those who drink at the local bars conversed either in their indigenous language or Pidgin English. They might have a likelihood of poor schooling and invariably might not set much value on education.

It was observed that most inhabitants in the study areas are usually bold and confrontational. They do not mind if you are older or occupy a higher status. Cases of militancy, struggles for chieftaincy titles, sea-piracy, and high-scale cultism recorded in the region are evidence enough. These people’s confrontational attitudes have a very strong link to their exposure to alcohol even before 18 years. On several occasions, young boys who cannot be more than 13–15 years of age were seen with little bottles containing kai-kai. They sip it at intervals while gallivanting up the creeks. During one of the interactions, someone said in Pidgin English, ‘These boys no de fear ooo . . . them fit do you anything’. He was trying to imply the absence of fear in their minds and the extent they could go if they wanted to deal with you.

One observed practice in the region is polygamy/polyandry. It was seen that some women with children could account for more than one father to their children. Surprisingly, this is not so frowned on in the region. From interactions, it was revealed that some of the women take in men by mistake, courtesy of alcohol influence. They have learned to live with this. One might ask about the influence of the Christian religion on the morality of the people. The truth as witnessed in the region is that the Niger Delta people are more cultural than religious. This implies that they respect their traditions. Thus, certain traditional practices of the people tend not to be eschewed by Christianity.

In the regional hinterlands where traditional practices of childbirth and childcare are still obtainable, alcohol (kai-kai) is used to remove the umbilical cord of a child. Sometimes people serve it to the child for medicinal purposes. The Niger Deltans hold to this common practice. In the mornings, after they have woken up, they resort to taking spirits. As this usually precedes breakfast, the day might not have begun for them without some shots of alcohol. Someone said in Pidgin English, ‘For this place, alcohol na our thing . . . na our life . . . na we get am . . . especially dry gin’. He was trying to express his love – and that of his people – for the drink. From observations, this love can’t be contested.
2.4.2. Rationalising harmful alcohol use in Nigeria’s Niger Delta

There exist certain supportive thoughts that those who indulge in harmful alcohol use promote. These thoughts aim to justify the trend in the region. They are largely cultural and collectively shared. On one hand, these people believe that alcohol is a measure through which their gods or ancestors can be reverenced. Someone said, ‘We make incantations, after which we use spirits (hot drinks) to pour libation. We don’t pour all, so we drink the rest, which is like drinking together with the ancestors . . . It is a great feeling’. Someone also said, ‘I would hardly drink without pouring libation. You know that our ancestors will not drink Coke or Fanta or even beer. They drink hot drinks (dry gin) . . . I like what my ancestors like’.

Furthermore, the region’s observed restiveness seems too confrontational not to be linked with the influence of alcohol. It was observed that the slightest of provocations often amount to fights in streets and in communities. They most often do not just fight with bare hands; rather, they take to weapons like bottles or sticks, etc. Coupled with the high rate of cult groups and militants, it shows that the region’s people are too restive not to have a bearing to substance abuse. Therefore, it can be said that harmful alcohol use is a means through which people survive the harsh and restive atmosphere. This should remind us of the adage that states, ‘If you can’t beat them, you join them’. Courtesy of this atmosphere, it was observed that even younger people parade with such thoughts, justifying their reasons to take alcohol. During one of the interactions, somebody said in a blend of Pidgin English and English, ‘This environment no be for faint-hearted. You need to be high (intoxication) to confront your enemies’.

One such thought attached to alcohol intake is its medicinal and protective purposes. There is a particular wooden-built shop in the study area that was discovered to be selling shots of alcohol to motorcycle riders who happen to be its chief customers. In the early hours of the morning and intermittently during the day, it was discovered that motorcycle riders were always there, ready to purchase the substance. Investigations revealed that these motorcycle riders felt that the tedious nature of their jobs needs them to be overly active. They felt like the substance brightened their eyes and they could ride their motorcycles actively until they were tired or made enough money for the day. They did not mind the offensive odour it portends for passengers. Quite the contrary, one participant said, ‘Spirits are good for the lungs. It makes you breath fine’. Some hold the belief that their locally brewed alcohol is effective in fighting germs in children. Lastly, they maintain that it keeps them warm, thus helping them to overcome the cold clime that characterises the region.

2.4.3. Perceived motivations for harmful alcohol use in Nigeria’s Niger Delta

From observations and interactions in the field, it was understood that harmful alcohol use in the Niger Delta might not be unconnected with some perceived motivations. The primary researcher, in a bid to understand these motivations, had passive
interactions with some local inhabitants who expressed their thoughts. Among the observed and mentioned motivations, the cold terrain of the region tends to rank top. It was observed that these hot drinks enhance bodily warmth and take care of cold-related ailments. One of the participants said in Pidgin English, ‘Any time wey I take ogogoro or any other spirit, cold de run comot for my body’. The participant was trying to say that hot drinks drive away the cold from his bodily system. Another said, ‘As you see us for this place, we no de play with hot drinks. You no go fit stay for this place wey near water if you no get wetin go de warm you. Woman no de enough’. The message he tried to put across was that the area is a riverine area and one can’t live there without means to provide bodily warmth from time to time. He implied that sex isn’t enough, hence the need for hot drinks.

In another development, it was observed in the study areas that the people’s plural family lifestyle also contributed to their harmful alcohol use. This was observed mostly in the hinterlands. As recorded previously, a woman could have children from more than one man and a man could have children from more than one woman. This results in family pressure. Thus, harmful alcohol use tends to be an avenue of escapism from family pressure. In addition, it was equally observed in the region that community togetherness is held in very high esteem. The people here are fond of community meetings and festivals. During these times, the absence of alcohol is unacceptable. As the people gather, they spend time drinking and conversing. Sometimes, they scream at the top of their voices while dancing to their cultural songs. On some occasions, the likelihood of violence erupting is not ruled out.

According to historical accounts, the Niger Deltans were the very first Nigerians to get in contact with the Europeans. This is the reason why the Niger Deltans are the only people in Nigeria who bear names, and even surnames, similar to those of the white man, such as: Green, Brown, Bob, etc. From interactions, they said that when the white man came, they saw him taking the ‘Scottish Whisky’. That influence became the precedent upon which they grew fond of hot drinks. Moreover, due to the fact that a good number of Niger Deltans appreciate hot drinks, it became a business opportunity for so many. It was observed that one viable business in the area is that of drinking bars, whether they be basic local ones or the very sophisticated ones. With sellers of hot drinks – and other alcoholic drinks – so proliferated, it is expected that consumption would be on the high side. This was in no way lost to the researcher’s observation.

3. Discussion and recommendation

In this paper, the researchers have endeavoured to establish the need for an ecological health model as the principal antidote to harmful alcohol use in the Niger Delta. The paper argued that the psychoactive drugs that relate to harmful alcohol use are not readily available in the everyday pharmaceutical stores in Nigeria and might not be affordable for most of the people in the region – were they even available. It also lacks the advantage of dealing with issues of harmful alcohol use from the very root.
Hence, the therapist or professional should build resilience in these victims of harmful alcohol use by using environmental coordinates and interactions. This paper recognises that harmful alcohol use in this region might not be completely obliterated, but measures can be put in place to guarantee top-notch management.

As observed in the field, people have a poor education on this subject. They do not adequately understand the implications of what they excessively gulp. They hold traditional ideologies which are devoid of the advantages of science. The fact that the topic is poorly or not discussed at all in the territory adds to the problem. Human beings would always care about new knowledge no matter how long their traditional ideals might have survived. In this vein, it becomes incumbent on professionals such as social workers, public health practitioners, home economists, among others, to turn their attention to this issue in the Niger Delta. This can be done through town-hall meetings, radical media outreaches, sensitisation through social media, stakeholder forums, inter alia. For such sensitisation to be successful, the utilisation of audiovisuals and graphics must occur, as well as appropriate language matching. This will convincingly relate both the picture and needful rhetoric to the recipients without so much technical explanation.

Moreover, the film industry should be engaged to produce movies that express this situation in the region. These films should be funded by significant agencies poised to ensure that upon completion, they are taken to the very doorsteps of these communities for viewing, instead of having them premiered and subsequently shown at cinemas – venues that these locals might never access. Furthermore, it was observed that health centres in these communities only had print adverts that focus on infant care, maternal health and normative hygiene. There were scarcely any adverts that addressed issues of harmful alcohol use or substance abuse, despite these issues serving as antecedents to so many health complications for the region’s inhabitants. Therefore, it is very important that community health centres should begin paying attention to the health behaviours of these persons as related to substance abuse and, particularly, alcohol.

As revealed through the findings of this research, poor family planning in these territories, especially by those who occupy their hinterlands, fosters their consumption of alcohol. This points to the fact that there should be a scale-up of the activities of family planning in Nigeria directed at the Niger Delta’s hinterlands. In addition, the research records poor economic wellbeing in the region, evident in cases of unemployment and under-employment, as well as oil-instigated destruction of farm life. These frustrations culminate in most of the people resorting to alcohol to suppress their inadequate feelings. Government policies and programmes should accommodate measures that will revamp the Niger Delta’s economic and ecological life in order to abet the management of harmful alcohol use. This study equally advocates health policies and programmes backed up with sufficient legislative and executive impetus that will address harmful alcohol use in the region. To make this particular idea more viable, the development of rehabilitation centres around the area, manned by social workers, psychologists, psychiatric professionals, public health practitioners,
among others, would be quite necessary. These practitioners should be adept in ecological health models, counselling, and reformatory services, behavioural modification inter alia. Also, the government and significant agencies should endeavour to encourage education from primary to tertiary institutions via adequately undertaking a curriculum approach to mental health risk behaviours.

5. Conclusion

The emphasis of this research paper has been on promoting treatment of harmful alcohol use in the Niger Delta using the ecological health model as against drug therapy. This is because of the sustainable advantages of an ecological health model which accentuates dealing with risky health behaviours from their very roots. The study revealed the realities of harmful alcohol use in the region and found out the extent to which it amounts to being a problem in the area. It went further to reveal the various ways in which people have rationalised harmful alcohol use, as well as perceived motivations surrounding facts of cultural beliefs/practices, colonial influence, and climatic conditions. Finally, it proposes the need for the ecological health model as a panacea. Hence, treatment must focus on building resilience through the environment, using appropriate education and sensitisation to deconstruct inimical cultural beliefs, and promoting productive health behaviours, as well as counseling/reformatory services, among others. It is in hope that an application of this model as advocated by this research paper would eventually put a stop to harmful alcohol use, which is regarded as an antecedent to a plethora of social issues undermining the corporate peace, development, and the existence of the region.

Lastly, the study was not void of limitations. Funding was key to the reason the study could not be conducted in more than two Local Government Areas. The researcher who went to the study sites on one occasion could not complete his two weeks stay due to a cold-related ailment he caught while there. Finally, the researcher avoided much interaction and probing for the purpose of ensuring that his identity remained in anonymity.
References

ABAZIE-HUMPHREY, I.M. (2014) Engaging the Nigerian Niger Delta Ex-Agitators: The Impacts of the Presidential Amnesty Program to Economic Development. A Paper Presented at the EADI General Conference, 23–26 June, retrieved 8 Oct 2018 from https://www.eadi.org/typo3/fileadmin/Documents/Events/General_Conference/2014/gec2014-abazie-humphrey-41.pdf.

ABDULAHI, Z. (2009) ‘Drug Abuse Among Youth’s Strategies for School Counseling’, Jos: The Nigerian Society of Educational Psychologists, 131–36.

AKINWALE, A.F. (2010) ‘Amnesty and Human Capital Development Agenda for the Niger Delta’, Journal of African Studies and Development 2:8, 201–07.

AMOSUN, P.A., O.A. IGE & O. AJALA (2010) ‘A Study of Some Causative Factors of Substance Abuse among Selected Secondary School Students in Ibadan, Nigeria’, The African Symposium 10:2, 4–10.

BARKAN, S. (2012) A Primer on Social Problems, retrieved 8 Oct 2018 from https://2012books.lardbucket.org/books/a-primer-on-social-problems/.

BHARMAL, N., K.P. DEROSE, M. FELICIAN & M.M. WEDEN (2015) Understanding the Upstream Social Determinants of Health, © RAND Social Determinants of Health Interest Group, retrieved 8 Oct 2018 from https://www.rand.org/content/dam/rand/pubs/working_papers/WR1000/WR1096/RAND_WR1096.pdf.

Canadian Centre on Substance Abuse (2014) Substance Use Prevention and Health Promotion, retrieved 8 Oct 2018 from http://www.ccsa.ca/Resource%20Library/CCSA-Substance-Use-Prevention-Health-Promotion-Toolkit-2014-en.pdf

DENNIS-ANTWI, J., S. ADJEI, J.B. ASARE & R. TWENE (2003) A National Survey on Prevalence of Social Consequences of Substance (Drug) Use among Second Cycle and out of Shool Youth in Ghana, retrieved 8 Oct 2018 from http://www.who.int/countries/gha/publications/substance_abuse_report.pdf.

EMUEDO, C.O. (2010) Oil, the Nigerian State and Human Security in the Niger Delta (PhD Diss., University of Benin, Benin, Edo State).

EMUEDO, C.O. (2013) ‘Challenges to Sustainable Peace and Security beyond the Amnesty in the Niger Delta, Nigeria’, Afro Asian Journal of Social Sciences 4:4, 1–20.

FLASKERUD, J.H. & C.R. DELILLY (2012) ‘Social Determinants of Health Status, Issues in Mental Health Nursing, 33, 494–97 (http://dx.doi.org/10.3109/01612840.2012.662581).

GITTERMAN, A. (2009) The Life Model (New York: Oxford UP).

GITTERMAN, A. & C.B. GERMAIN (2008) The Life Model of Social Work Practice (New York: Columbia UP).

JILOHA, R.C. (2009) ‘Social and Cultural Aspect of Drug Abuse in Adolescents’, Delhi Psychiatry Journal 12:2, 167–75.

JOHNSON, M.M. & R. RHODES (2005) Human Behavior and the Larger Social Environment: A New Synthesis (Boston: Allyn & Bacon).

LEVITT, M. (2013) ‘Perceptions of Nature, Nurture and Behaviour’, Life Sciences, Society and Policy 9:13, n.p. (https://doi.org/10.1186/2195-7819-9-13).

National Institute on Drug Abuse (2003) Preventing Drug Use among Children and Adolescents: A Research-Based Guide for Parents, Educators, and Community Leaders, © U.S. Department of Health and Human Services, retrieved 8 Oct 2018 from https://www.drugabuse.gov/sites/default/files/preventingdruguse_2.pdf.

National Population Commission (2010) Priority Table, Volume Four: Population Distribution by Age and Sex, retrieved 8 Oct 2018 from http://www.ibenaija.org/uploads/1/0/1/2/10128027/priority_table_vol_4.pdf.

EJMH 13:2, December 2018
OLUREMI, D.F. (2012) ‘Drug Abuse among Nigerian Adolescents’, *Journal of International Social Research* 5:20, 342–47.

OSHODI, O.Y., O.F. AINA & A.T. ONAJOLE (2010) ‘Substance Use among Secondary School Students in an Urban Setting in Nigeria: Prevalence and Associated Factors’, *African Journal of Psychiatry* 13:1, 52–57.

PEEL, M. (2010) *A Swamp Full of Dollars* (Chicago: Lawrence Hill).

PONYON, R. (2009) ‘Substance Abuse in Adolescents: An Expert Panel’, *Annals of the American Psychotherapy Association* 11:4, 35–39.

ROBERTS, G. (2008) *Best Practices for Preventing Substance Use Problems in Nova Scotia*, retrieved 8 Oct 2018 from https://novascotia.ca/dhw/addictions/documents/Best-Practices-for-Preventing-Substance-Use-Problems-in-Nova-Scotia.pdf.

STOCKWELL, T. (2005) ‘Alcohol Supply, Demand and Harm Reduction: What is the Strongest Cocktail?’ *International Journal of Drug Policy* 17:1, 269–77 (http://dx.doi.org/10.1371/journal.pmed.1001767).

TEATER, B. (2010) *Applying Social Work Theories and Methods* (Berkshire: Open UP).

UKIWO, U. (2011) ‘The Nigerian State, Oil and the Niger Delta’ in C. OBI & S.A. RUSTAD, eds., *Oil and Insurgency in the Niger Delta: Managing the Complex Politics of Petro-Violence* (London: Zed Books) 87–98.

United Nations Office on Drugs and Crime (2007) *Drug Abuse and Drug Dependence in Nigeria*, retrieved 8 Oct 2018 from http://www.unodc.org/docs/treatment/CoPro/Web_Nigeria.pdf.

UPHOFF, E.P., K.E. PICKETT, B. CABIESES, N. SMALL & J. WRIGHT (2013) ‘A Systematic Review of the relationships between Social Capital and Socioeconomic Inequalities in Health’, *International Journal of Equity Health* 12:54 (https://doi.org/10.1186/1475-9276-12-54).

WEITZ, R. (2013) *The Sociology of Health, Illness, and Health Care: A Critical Approach* (6th ed. Thousand Oaks, CA: Wadsworth).

World Health Organization (2012) *Social Determinants of Health*, retrieved 8 Oct 2018 from http://www.who.int/social_determinants/en/.

WLOCH, K., P. KSIAZEK, E. WARCHOL-SLAWINSKA, B. DROP & A. Falkowski (2014) ‘Drug Addiction: Relationship to the Ecological Health Model and Social Interactions’, *Health & Wellness* 4, 1–7, retrieved 8 Oct 2018 from http://www.neurocentrum.pl/dcten/wp-content/uploads/w%C5%82och4-a.pdf.