Spectrum of Substance Use, Reasons for Use and Perceived Effects on Treatment among People Living with Human Immunodeficiency Virus (PLWHIV) in Benue State, Nigeria; A Qualitative Study

Godian C. Ezema^{1,2}, Elias C. Aniwada¹, Ojor R. Ayemoba³, U. O. Adekanye³ & Nathan AE. Okeji³

¹ Department of Community Medicine, College of Medicine, Enugu, Nigeria

²Centre for Infectious Diseases Control, 161 NAF Hospital Makurdi, Benue, Nigeria

³ Ministry of Defence Health Implementation Programme (HIP), Abuja, Nigeria

Correspondence: Elias C. Aniwada, Department of Community Medicine, University of Nigeria, Enugu Campus, Enugu state, Nigeria. Tel: 234-(0)803-872-2391. E-mail: eaniwada@gmail.com

Received: July 6, 2022 Accepted: October 26, 2022 Online Published: November 10, 2022 doi:10.5539/gjhs.v14n12p1 URL: https://doi.org/10.5539/gjhs.v14n12p1

Abstract

Introduction: Substance use is on increase and a major public health problem contributing about 1.7 million deaths among teenagers globally. Ironically, some are socially acceptable and freely consumed during social activities. They are consumed commonly for social, religious and medicinal reasons. This study aims to assess substance use, types, reasons and its perceived effects among PLHIV in Benue State, Nigeria

Methods: The study was at Centre for Infectious Diseases Control (CIDC), 161 Nigerian Air Force Hospital, Makurdi at Benue state, Nigeria. Qualitative data was collected using Focus Group Discussions (FGDs) among five homogeneous groups involving 40 discussants [30 and 10 health care workers]. The recorded discussions were transcribed verbatim, coded based on predetermined themes and reported.

Results: The commonest psychoactive substance used by People living with Human Immunodeficiency Virus (PLWHIV) for both males and females was Alcohol followed by Kola nut and Bitter Cola. Others were; cannabis, overdose dose of *Rohypnol, Tramadol* and *diazepam;* paracitamol mixed with *'la-cassera'* soft drink and codeine in cough syrup as well as Marijuana. Major reasons for use included to increase work, sexual performance, reading time and appetite; reduce nausea, vomiting and to manage stress or boredom. They perceived most substance to be safe though few expressed their concern on the possible interaction with Antiretroviral (ARV) medications and possibility of increasing Gastrointestinal tract (GIT) effect of some drugs. This they said depends on type and dose of consumption.

Conclusion: Substance use among PLWHIV is common. Misconceptions and poor appreciation of effect of these substance use among these clients abound. Every effort should be made to tame this menace.

Keywords: Substance use, reasons, perceived effect, Qualitative study, PLWHIV

1. Introduction

Substance use is a global public health problem. It is the consumption of any psychoactive substance at any level which may or may not progress to abuse (Lakhanpal & Agnihotri, 2007). In 2017, an estimated 271 million people (about 5.5 %) of the global population aged 15 to 64 had used drugs in the previous year. (United Nations Office on Drugs and Crime (UNODC), 2019). In Nigeria, studies among Persons Living with HIV (PLWHIV) documented that in Sokoto state about 50% (Yunusa et al., 2011), and Jos about 39.4% of PLWHIV had drinking problem (Goar et al., 2011). Some of the substances noted in the study in Sokoto state were tobacco use at prevalence of 5.7%, coffee at 11.3%, Kola nut 27.0% and solvents at 1.3% (Yunusa et al., 2011). The use of more than one substance among PLWHIV has also been noted in those studies (Goar et al., 2011; Yunusa et al., 2011).

Common substances used in Nigeria can be classified into five major groups; Opiates and narcotics, Sedatives/hypnotics, Stimulants (amphetamines), Hallucinogens and Cannabis (Osa-Edoh & Egbochukwu, 2012). The opiates include cocaine, heroin, morphine, codeine and pethidine etc. Sedatives include drugs commonly used for inducing sleep or as anxiolytics such as barbiturates (e.g.: phenobarbitone, thiopentone) and benzodiazepines (e.g. diazepam Lorazepam etc.). The stimulants are substances that enhance performance such as Amphetamine,

caffeine concentrates, Kola nut, coffee, nicotine (tobacco) and cocaine. Hallucinogens are Lysergic acid diethylamide (LSD) mescaline, psilocin and psilocybin (NIDA, 2020). Cannabis is known by different names and forms, which include hemp, marijuana, pot, grass, weed, gnaye, wee-wee, and Igbo (Omage & Omage, 2012). Bitter cola (Garcinia kola) and Kola nut (Cola nitida) are commonly consumed in virtually all parts of Nigeria. Both are believed to enhance alertness and physical energy as well as creates some level of euphoria when consumed (Suwala, 2014). However, Alcohol is the commonest used substance and are used in different forms and combinations. (Igwe & Ojinnaka, 2010; Kandel et al., 1992; NIDA, 2020; Suwala, 2014; United Nations Office on Drugs and Crime (UNODC), 2019).

Gender variation among PLWHIV on the type of psychoactive substance used has been noted. Among PLWHIV, males were more likely to use alcohol (Goar et al., 2011; Wandera et al., 2015; Farley et al., 2010) and even more likely to be hazardous alcohol drinkers compared to females (Mimiaga et al., 2013). Males were more likely to have poly-drug use commonly Marijuana, amphetamine and cracked-cocaine while females were more likely to use opiate according to a research done in USA (Mimiaga et al., 2013). Young adults with HIV who were yet to start ART treatment and those who were yet to disclose their HIV status are also more likely to drink alcohol compared to their counterparts (Mimiaga et al., 2013). According to research done in Jos, Nigeria, those with higher education were less likely to take alcohol than those with secondary education (Goar et al., 2011). Those that earn less than Ten Thousand Naira a month has more tendency to use alcohol among PLWHIV (Goar et al., 2011). In another research in Sokoto, Nigeria, those with tertiary education and those divorced were more likely to use substance than those with at most secondary and those staying in marriage (Yunusa et al., 2011).

Substance use can lead to problems as an entity or increase the complications faced by PLWHIV. The effects of substance use are widely varied. Its effect includes: on physical health eg liver damage, raised blood pressure; on the psychological health e.g mental illness, emotional problem, poor concentration, restlessness/nervousness and increased aggressiveness; on the social health eg financial issues, family problems, irresponsibility and increased tendency for violent behaviours as well as the effect on psychomotor skills and cognitive functions (Chihuri & Li, 2017; Hartman & Huestis, 2013; Makanjuola et al., 2008). Some substances affects directly the plasma concentration of some ARTs by lowering them below the desirable level which may lead to the development of resistant strain (Ma et al., 2011). It also predisposes PLWHIV to increased risky sexual behaviour and poor adherence to therapy (Ezeabogu et al., 2012; Lui et al., 2006). Chronic alcohol abuse weakens the immune system. Also studies have found that between 70-90% of substance abusers had a psychiatric condition before being diagnosed with HIV (Chaffee, 2011). Medical complications are also a serious concern when treating PLWHIV who has a substance use disorder. Appreciating these peculiarities and complications is imperative in minimizing the threats and enhancing health outcomes for individuals with HIV/AIDS.

PLWHIV who indulge in substance use are likely not to comply with ART, differ from non HIV patients during course of their care like reduced retention in care, delayed commencement of ART and worse HIV treatment outcomes (Mayer et al., 2013). Survey in New York City among 1,000 PLWHIV aged 50 and above reported that over half (54%) of the clients were actively registered in recovery programs then one-third stated to currently (past 3 months) use prohibited substances (37%) or alcohol (38%) (Suwala, 2014). Based on use of specific substances, prevalence was: tobacco (57%), pain killers (38%), marijuana (23%), cocaine (15%), and heroin (7%) (Brennan et al., 2011).

There are diverse reasons why these substances are used both for general public and Persons Living with HIV (PLWHIV). Common reason given for use of these substances were to avoid painful events including stigma associated with HIV, to sleep well and to be bold (Osa-Edoh & Egbochukwu, 2012). Other reasons reported were due to availability of the drug in the environment and peer pressure (Osa-Edoh & Egbochukwu, 2012). National Institute on Drug Abuse reported some reasons to include; to fit in, to feel good, to feel better, to do better and to experiment (Goar et al., 2011). PLWHIV may also be victims of physical and social abuse, have suboptimal social support, poor self-efficacy, suffer from other health problems such as mental illness, perceive stigma or have misinformation about care that hinders them from engaging in care (Celentano & Lucas, 2007).

Not minding these, there is gap on literature on substance use, types, reasons and perceived effects of use among PLWHIV in Nigeria. This is what this study aims to unravel. Investigating this is an essential aspect in unraveling reasons clients do not keep to ART adherence, clinic appointments as well as have poor treatment prognosis despite regular counselling on the importance of regular clinic attendance and adherence to treatment.

2. Methods

2.1 Study Setting and Design

The study was carried out at Centre for Infectious Diseases Control (CIDC), 161 Nigerian Air Force Hospital, Makurdi of Benue state, Nigeria. The Centre offers comprehensive HIV care services for more than seven thousand (7,000) clients comprising military personnel, their relatives and other civilian clients from Benue state and other bordering states of Taraba, Nasarawa, Cross River and Kogi. There are numerous drinking joints in Makurdi and other parts of Benue state. Cigarettes, Marijuana and other psychoactive substances are readily accessible. A qualitative cross-sectional study was done. Data collection involved use of Focus Group Discussions (FGDs) among five categories of discussants using FGD guide. Each FGD had an average of 8 to 12 participants.

2.2 Study Participants and Selection

These consisted of PLWHIV aged 18 years and above who have been on care for 12 months and above before the study at the facility or transferred in with record of being on treatment for 12 months and above who gave consent. However, Clients with frank psychosis were excluded. Purposive sampling technique was used to select 8 to 12 persons making a homogeneous group for each FGD. There were five homogenous groups including: ten staff of CIDC, twelve Married HIV positive women, eight married HIV positive men, eight unmarried males (male youths) and eight unmarried females (female youths) who were accessing care at the facility.

2.3 Data Collection and Management

Before data collection, the FGD guide was pretested in another health facility not used for the study to improve validity of guide. Each homogeneous group had only one contact session lasting between 40 to 60 minutes. The FGDs were conducted in pigeon English. Notes were taken by a note taker during the session and the interview taped using a tape recorder at secluded places in the facility.

The recorded discussions were transcribed verbatim following each session by transcribers. The scripts were matched with the written notes for completeness and accuracy as well as to ensure quality of the data. In addition, each script was checked against the audiotape by an independent reviewer. The audiotapes were doubly transcribed after which both scripts were checked for similarity and where differences existed, these were reconciled by the transcribers. This is to verify the quality of translations. Coding of transcripts were done based on predetermined themes as they formed the basis of the interview guide. The independent reviewers discussed and compared the initial codes and reconciled differences. The identified themes that emerged from each interview were reviewed by the researcher and grouped together under wider themes. Four themes and two sub themes emerged from the study. The themes included; common psychoactive substances used, reasons for use of psychoactive substances, the perceived effect of substance use and reasons for reduced psychoactive substance use among PLWHIV who are on ART.

2.4 Ethical Considerations

Ethical clearance was obtained from the Health Research and Ethics Committee of University of Nigeria Teaching Hospital (UNTH). Permission was obtained from Commander and management of the institution before the study. All participants signed a written informed consent after the purpose of the study was explained to them. Participant's freedom to withdraw from the study at any point in time in spite of the consent was also respected. Information obtained from participants were kept confidential.

3. Results

3.1 FGD Participants Profile

Report was based on five (5) homogeneous groups made up of; 12 adult females, 6 adult males, 6 unmarried females, 6 unmarried males and 10 health care workers. The average age of the FGD participants was 32years (\pm 9.39). There were equal number of males and females. Majority (47.5%) had tertiary education, followed by secondary education (40.0). The participants included; farmers (22.5%), traders (25.0%), civil/public servants (30.0%) and students/applicants (22%).

3.2 Common Psychoactive Substances Used by PLWHIV

The discussants generally believed that alcohol was the commonest psychoactive substance used by PLWHIV both for males and females but maintained that the forms of alcohol used vary from one group to another. They noted that males especially those that are commercial motorcycle riders take more of the local dry gin known as *Kaikai*. The form preferred by males include brandy, palm wine and *burukutu*, a local form of alcohol beverage, while females take more of stout, beer and wine. Other common psychoactive substances used by PLWHIV include some

other socializing substances such as *snuff*, sniffed tobacco, local tobacco referred to as *taba-tiv*, cigarette, bitter cola and kola nut. The discussants generally agreed that these substances are socially accepted in the communities and therefore freely offered to people during social functions. A male participant made a statement in this regards as thus:

I take beer when we go out, it is normal. Young boys also take hot drinks like alomo, while lots of women also preferred to take stout or wine. For those who smoke, when they are with friends, they smoke. In the village, snuff is common and even used to reduce stuffy nose or catarrh- Adult male discussant

Other psychoactive substances highlighted by discussants include cannabis, which is smoked or mixed with alcohol nicknamed 'monkey tail'; The use of overdose of some drugs, such as *Rohypnol* popularly known as *rochi, Tramadol* popularly known as *tramal, diazepam* popularly known as *valum-5*, paracitamol mixed with '*la-cassera*' soft drink and codeine in cough syrup; inhalation of soak away or pit toilet and petroleum product. Some newly discovered psychoactive agents being smoked such as bamboo leaves, paw-paw leaves, dry garri and white part of lizard excreta (urates). Other substances that were used for their medical purposes or as body cleansers as they were fondly referred to include; *gangalia, enu jeje*, and *ver-Kumbu*. The last group were generally not seen as psychoactive agents by discussants, but were said to have a short term euphoric effect immediately after drinking. Some statements by participants in this regards are as follows:

"These days you see young people use pipe to insert in soak away or pit latrine to inhale the fumes that come from it. People also inhale acid or petrol or gum just to make them feel high. It seems funny but it is a reality" – female discussant (unmarried)

"Because cannabis is banned, expensive and police arrest those found in possession of it, boys these days resort to substances they can get around that are free but can give them similar euphoric effect such as bamboo and pawpaw leaves, garri and white part of lizard excreta" (Married female discussant)

"There are some concoctions used in treating some diseases locally. They contain some alcohol and give short term euphoria when taken like ver-kumbu"- (Married female)

"These days people have gone beyond taking just alcohol, they mix cannabis with local gin known as' monkeytail'. It is difficult for anyone to arrest them because it does not smell like the smoked cannabis. (Married male)

3.3 Reasons for the Use of Psychoactive Substances by PLWHIV

Discussants enumerated various reasons PLWHIV use psychoactive substances and majority of them believed that most of the reasons were not peculiar to PLWHIV but rather were shared commonly by their peers who were not HIV positive and generality of their community members. The reasons were to be bold, to have a good appetite, to improve work performance, to manage stress, to socialise or peer pressure; to improve libido and to manage some opportunistic infections or limit the progression of HIV disease. Generally, the commonest reason shared by majority of the discussants was to socialise.

Alcohol was said to be a socializing agent but also used to manage stress or boredom. Other agents categorised as socializing agents include tobacco (snuff, cigarette and local tobacco), bitter kola and cola nut. These agents were used during social functions and offered to friends and relatives freely. The euphoric effect of these substance help clients manage stressful events like marriage problems, quarrels with loved ones, loss of job or disappointment in work or relationship.

"When I go out with friends I take one or two bottles. If you don't, people will start asking you why. Also sometimes when I become stressed up, one or two bottles of beer make me feel better. Although I have stopped smoking now, some engages in smoking cigarette for similar reasons". (Adult male discussant)

Tramadol, bitter kola, cola nut and marijuana were used to increase work and sexual performance according to discussants. They were used when going to farm or other manual labour or before sex to improve performance. Some students also use them to increase their reading time especially during examination. Some of the statements by discussants on this regards were:

"There is this substance called 'enu-jeje', it helps boys to have good sexual performance. Ladies also take codeine and alcohol for better sexual performance when they want to impress their friends". (Female youth)

"I used to take tramal before going to work; it makes me to work more. I only need to carry water and I could work till evening without getting tired" my friends also take marijuana and cola nut when we are going to work. (Male adult)

Discussants noted that marijuana increase appetite; reduce nausea, vomiting and helps HIV patients recover

quickly from acute phase of illnesses. One of the discussants, a health care worker summarised his discussion with another client whose wife was addicted to marijuana by the following statement as he reported:

"...his wife was very sick and almost died, she was not eating and was losing so much weight. She was asked to take marijuana. That was how she started eating and recovered. If not, by now she would have been dead". (Adult male discussant)

3.4 The Perceived Effect of Substance use by PLWHIV

The discussants generally believed that the side effects of psychoactive substances were type and dose dependent. Alcohol was regarded by majority of the discussant as being safe except when used by individuals with liver disease or those individuals that were not feeding well. Liver diseases were not attributed to use alcohol by discussants; rather it was believed that alcohol worsens liver diseases in those that have the disease in them already. They also believed that alcohol in moderation does not affect their ARV except if the individual fail to take his/her drug due to excess drinking. Discussants also generally believed that bitter kola or cola nut has no negative effect on PLWHIV, although few expressed their concern on the possible interaction between bitter cola and ARV medications and stated that it may increase GIT effect of some drugs. On the other hand, the opinion on tobacco was more divided with those who believed that tobacco have negative effect on treatment and general health outcome more vocal. Some believed that those who smoke were more likely to have cough and tuberculosis and therefore more likely to fall sick.

Discussants also believed that marijuana use is relatively safe when used periodically in many individual except some that become addicted to it and develop mental illness after repeated use. The knowledge about side effect of other psychoactive substances such as codeine, tramadol, inhalants and diazepam was poor among discussants. One discussant only mentioned likelihood of causing dependency and lose of money as the likely side effect.

Some statements on this regard among participants are as follows:

"I have been taking alcohol, and it makes me feel good. I am not the only one, a lot of my friends also take alcohol, but I know my capacity and I don't exceed that. Those that have problem are those that drink without eating or who start drinking from morning till night every day. If you have Liver problem, you are asked to stop drinking, if not it will kill you". (Adult male discussant)

"I know some young men that became useless because they are taking marijuana. Funny enough they were not the first to take it, but their head could not carry it. Others are taking it and they are ok. I tried it once or twice in the past but it was not good for my system so I had to stop. So it depends on the individual's make up and not just the substance". (A male youth discussant)

3.5 Reasons for Reduced Psychoactive Substance Use among PLWHIV Who Are on ART

1) Fear of drug-drug interaction among PLWHIV

Majority of the discussants believe that the use of some psychoactive substances especially those that are drugs like tramal, codeine and rohipnol is likely to be less among PLWHIV who are on ART because of fear that they may interact with ART. Some of the discussants, especially the females also explained that they reduced their alcohol intake after being diagnosed HIV+ and started ART. These were as expressed in the following statements by discussants:

"I used to take tramal before going to work; it makes me to work more. I only need to carry water and I could work till evening without getting tired" my friends also take marijuana and cola nut when we are going to work. Now I have stopped when I started taking ART, because I know that two drugs may react, but my friends still take theirs since they are not on ART (adult male discussant)

"I used to take alcohol especially beer, but when I was diagnosed HIV positive, I decided to stop because I was not sure how alcohol will affect my health and my HIV drugs"- A married female discussant

The young men and women also take overdose of some drugs such as rochi, tramal and codeine to make them feel high. Although this seems less among the clients because they are afraid that it may affect their HIV drugs" (male health care worker)

2) Counselling regarding substance use

Majority of the participants also agreed that the continual counselling regarding the use of other drugs during pre-ART counselling and morning health talks influenced them on the quantity and type of psychoactive substance they take. They explained that the counsellors always tell them that the use of other substance may lead to treatment failure. This was expressed by a participant. "Before I started my drugs, I was told that many things could react with my drug by the counsellor, and even the pharmacist. I was told that I must always tell any doctor that I am receiving HIV drugs whenever I go to hospital so that I am not given drug that can affect my ART" (Male youth)

4. Discussion

The discussants generally believed that alcohol was the commonest psychoactive substance by PLWHIV for both males and females. Males especially commercial motorcycle riders and artisans take more of the local dry gin known as *Kaikai*. brandy, palm wine and *burukutu*, a local form of alcohol beverage, while females take more of stout, beer and wine. Other common psychoactive substances used by PLWHIV include socializing substances such as *snuff*, sniffed tobacco, local tobacco referred to as *taba-tiv*, cigarette, bitter cola and Kola nut. These substances are socially accepted in the communities for both males and females especially alcohol. They are freely consumed during social activities such as marriage ceremonies, child naming, and burials. This may be partly due to the belief that alcohol enhances socialization (Dumbili, 2013) (Department of Health and Human Services, 2021).

In Benue, alcohol consumption starts at an early age as up to 21% of teenagers in junior secondary schools have commenced alcohol use before the age of 17 years with some initiating alcohol drinking before their tenth birthday (Eniojukan & Chichi, 2014). In United States of America Alcohol is the most frequently used substance among PLWHIV (Bensley et al., 2018). Alcohol use disorders prevalence is higher among PLWHIV than the national average. (Crane et al., 2018), Even at lower levels of alcohol consumption there is higher morbidity and mortality among HIV-positive individuals compared with HIV-negative individuals (Jennifer et al., 2018). The implication of this is that the society is at a risk since use of alcohol and other substances during youth is a predictor of their use in adulthood as well as the development of substance-related disorders (Farley et al., 2010).

Alcohol use has been documented to negatively effect HIV disease severity and mortality (Bensley et al., 2018). Excessive alcohol use can lead to liver damage hence compound other conditions that also affect the liver including HIV and antiretroviral therapy (ART). Chronic alcohol use also impacts on the immune system. This is imperative especially for HIV/AIDS patients since their immune systems are most times already deteriorated by HIV. Increased weakening of the immune system enhances the risk of opportunistic infections and furthermore increases the chance of HIV replication. Basically to prevent disease progression, clients on ART should strive to attain best immune function. Precisely, heavy drinkers are two to four times less likely to achieve a positive response while undergoing antiretroviral therapies (Miguez et al., 2006). Conflicting evidence abound for interactions between alcohol and ART efficacy. For instance Alcohol has been reported to disrupt membrane transporter proteins for some ART medications (Ogedengbe et al., 2018).

Similar to Alcohol use, kola nut is a socializing agents and has an important place in virtually all parts of Nigeria and West Africa where it is consumed commonly for social, religious and medicinal reasons. For example, it is used in the treatment of whooping cough and other obstructive airway diseases. Several studies conducted among Nigerian population documented high prevalence of Kola nut and bitter cola use in our society (Osa-Edoh & Egbochukwu, 2012; Odebunmi et al., 2008; Omage & Omage, 2012).

Other substances used include cannabis, overdose dose of some drugs, such as *Rohypnol, Tramadol, diazepam*, paracitamol mixed with '*la-cassera*' soft drink and codeine in cough syrup. Use of marijuana/cannabis was low as stated by discussants. The lower prevalence of marijuana use in this study may be due to many factors such as a more stringent measure for the control of marijuana in our environment and regular counselling regarding substance use at the facility. Other reasons may be the presence of other non-conventional psychoactive smoking agents used in the environment such as bamboo leaves, pawpaw leaves, taba tiv and Garri which are freely accessible in the communities. Possession of these agents are equally not illegal as were elicited from discussants.

However, previous studies found that smoking increases the occurrence of both HIV and non-HIV-related mortality (Shirley et al., 2013; Calvo et al., 2015; Helleberg et al., 2013). HIV and smoking are risk factors separately or in conjunction for serious conditions such as cardiovascular disease, chronic obstructive pulmonary disease (COPD), human papillomavirus (HPV), and related cancers (Shirley et al., 2013). Moreover, smoking indirectly adversely effects health of people by reducing ART adherence (mediated by depressive symptoms) (Webb et al., 2009), and consequently lowers the effectiveness of ART medication (Miguez-Burbano et al., 2006; Theresa et al., 2018). Since HIV deteriorates the immune system, HIV/AIDS patients who smoke have an amplified risk of mouth, throat, lung infections like *Pneumocystis carinii* pneumonia as well as thrush or leukoplakia (Palacio et al., 1997).

Various reasons reported by PLWHIV for use of these substances were not peculiar to PLWHIV but rather are shared commonly by their peers who are not HIV positive. These include to; increase work and sexual performance,

help recover from illness, increase appetite, increase their reading time especially during examination, reduce nausea and vomiting, for socializing, to manage stress or boredom and to manage stressful events like marriage problems, quarrels with loved ones, loss of job or disappointment in work or relationship. However, these were similar to reasons given for substances in previous studies (Osa-Edoh & Egbochukwu, 2012; NIDA, 2020; Suwala, 2014; Igwe & Ojinnaka, 2010; Kandel et al., 1992; Helleberg et al., 2013). While some of these reasons are real and good, others are unfounded or misconceptions. Concisely, these implies that use of these substances are deeply rooted and have become part of management of their condition. Nonetheless, efforts should be made at facility during visit and by other stakeholders to eliminate or minimize use of these drugs as the ultimate risk may out way these transient reasons proffered. This is the only way maximum benefit and meaningful success can be achieved in their treatment outcomes.

Discussants generally believed that the side effects of psychoactive substances were type and dose dependent. Alcohol was regarded by majority as being safe except when used by individuals with liver disease or those individuals that were not feeding well. They also believed that alcohol in moderation does not affect their ARV except if the individual fail to take his/her drug due to excess drinking. Other side effects enumerated were; possible interaction between bitter cola and ARV medications and increased GIT effect of some drugs. This implies that a full scientific understanding of the relative harms and benefits of recreational substances are important. This may expose the motivation behind substance use, which will be of help in developing treatment programmes for persons that use these substances and are on ART bearing in mind effect of each on the other. This will greatly influence health education offered to these clients and expectedly influence their compliance with HIV services and drug adherence.

Apart from increased risk of contracting HIV, the compromised judgment and mental effects of illicit drugs also create difficulties in preserving a consistent HIV/AIDS treatment. There is need to adhere to Antiretroviral therapies in order to keep the viral load low and decrease the chance of severe consequences and progression to AIDS. Unlawful drug use creates a barrier to consistent management of HIV, causing skipped treatments, incorrect dosages, and overall reduced effectiveness of treatment. (Bensley et al., 2018; Miguez et al., 2006). These challenges emphasize the need for special care for PLWHIV that use substances including good patient-provider relationship where the patient can articulate his or her needs and the provider can coordinate the necessary services.

Majority of the participants also agreed that the continual counselling regarding the use of other drugs during pre-ART counselling and health talks during clinic visits influenced their use of substance. This is highly commendable, should be sustained and even improved on for good prognosis among these clients.

5. Conclusion

Use of substance among PLWHIV is life and similar to general public. Socializing substances are commonly used and reasons for use similar to general population. There are misconceptions and poor appreciation of effect of substance use among these clients. Effort should be geared towards improving education on substance use and its implications on prognosis of their condition. Substance use should be screened for and its implications addressed as part of care for PLWHIV.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

References

- Bensley, K. M., Mcginnis, K. A., Fiellin, D. A., Gordon, A. J., Kraemer, K. L., Bryant, K. J., ... & Williams, E. C. (2018). Racial / ethnic differences in the association between alcohol use and mortality among men living with HIV. *Addiction Science & Clinical Practice*, 1-11. https://doi.org/10.1186/s13722-017-0103-z
- Brennan, M., Karpiak, S. E., Shippy, R. A., & Cantor, M. H. (2011). Older adults with HIV: An in-depth examination of an emerging population. In Older Adults with HIV: An In-Depth Examination of an Emerging Population. https://doi.org/10.1080/15381501.2013.766036
- Calvo, M., Laguno, M., Martinez, M., & Martinez, E. (2015). Effects of tobacco smoking on HIV-infected individuals. *Aids Reviews*, 17(1), 47-55. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/25427101
- Celentano, D. D., & Lucas, G. (2007). Optimizing treatment outcomes in HIV-infected patients with substance abuse issues. *Clinical Infectious Diseases*, 45(SUPPL. 4), 15-20. https://doi.org/10.1086/522557
- Chaffee, B. (2011). Screening and Ongoing Assessment for Substance Abuse in HIV. Medscape Family Medicine. https://www.medscape.com/viewarticle/739855_2

- Chihuri, S., & Li, G. (2017). Use of prescription opioids and motor vehicle crashes: A meta-analysis. *Accident; Analysis and Prevention, 109,* 123-131. https://doi.org/10.1016/j.aap.2017.10.004
- Crane, H. M., Mccaul, M. E., Chander, G., Hutton, H., Nance, R. M., ... & Michael, J. (2018). Prevalence and factors associated with hazardous alcohol use among persons living with HIV across the US in the current era of antiretroviral treatment. *AIDS Behaviour*, 21(7), 1914-1925. https://doi.org/10.1007/s10461-017-1740-7.Prevalence
- Department of Health and Human Services. (2021). *Guidelines for the Use of Antiretroviral Agents in Adults and Adolescents with HIV Developed by the DHHS Panel on Antiretroviral Guidelines for Adults*. Department of Health and Human Services USA. https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/ AdultandAdolescentGL.pdf.
- Dumbili, E. W. (2013). Patterns and Determinants of Alcohol use Among Nigerians University Students: An Overview of Recent Developments. *African Journal of Drug & Alcohol Studies*, 12(1).
- Eniojukan, J. F., & Chichi, R. M. (2014). Substance Abuse among Adolescents: Prevalence and Patterns of Alcohol Use in Benue State, Nigeria. *IOSR Journal of Pharmacy*, 4(12), 48-52.
- Ezeabogu, I., Copenhaver, M. M., & Potrepka, J. (2012). The Influence of Neurocognitive Impairment on HIV Treatment Outcomes among Drug-involved People Living with HIV/AIDS. *AIDS Care*, 24(3), 386-393. https://doi.org/10.1038/nmeth.2250.Digestion
- Farley, J., Miller, E., Zamani, A., Tepper, V., Morris, C., Oyegunle, M., ... & Blattner, W. (2010). Screening for Hazardous Alcohol Use and Depressive Symptomatology Among HIV-Infected Patients in Nigeria: Prevalence, Predictors, and Association with Adherence John. J Int Assoc Physicians AIDS Care (Chic), 9(4), 218-226. https://doi.org/10.1177/1545109710371133.Screening
- Goar, S., Audu, M., Agbir, M., & Dochalson, E. (2011). Prevalence and socio-demographic correlates of alcohol use disorders among HIV patients. *African Journal of Drug and Alcohol Studies*, 10(1).
- Hartman, R. L., & Huestis, M. A. (2013). Cannabis effects on driving skills. *Clinical Chemistry*, 59(3). https://doi.org/10.1373/clinchem.2012.194381
- Helleberg, M., Afzal, S., Kronborg, G., Larsen, C. S., Pedersen, G., Pedersen, C., ... & Obel, N. (2013). Mortality attributable to smoking among HIV-1-infected individuals: a nationwide, population-based cohort study. *Clinical Infectious Diseases*, 56(5), 727-734. https://doi.org/10.1093/cid/cis933
- Igwe, W. C., & Ojinnaka, N. C. (2010). Mental health of adolescents who abuse psychoactive substances in Enugu, Nigeria - a cross-sectional study. *Italian Journal of Pediatrics*, *36*. https://doi.org/10.1186/1824-7288-36-53
- Jennifer E, E., Emilty.C., W., & Brandon DL., M. (2018). Addressing unhealthy alcohol use among people living with HIV: recent advances and research directions. *Curr Opin Infect Dis*, 31(1), 1-7. https://doi.org/10.1097/QCO.00000000000422.
- Kandel, D. B., Yamaguchi, K., & Chen, K. (1992). Stages of progression in drug involvement from adolescence to adulthood: Further evidence for the gateway theory. *Journal of Studies on Alcohol*, 53(5). https://doi.org/10.15288/jsa.1992.53.447
- Lakhanpal, P., & Agnihotri, A. K. (2007). Drug Abuse an International Problem: A short review with special reference to African Continent. *Indmedica Indian Journal of Forensic Medicine & Toxicology*, *1*(1). Retrieved from http://www.indmedica.com/journals.php/maanasi@vsnl.net?journalid=11&issueid=98&articleid=1318&action=article
- Lui, H., Longshore, D., Williams, J. K., Rivkin, I., Loeb, T., Warda, U. S., & Wyatt, G. (2006). Substance Abuse and Medication Adherence Among HIV-Positive Women with Histories of Child Sexual Abuse. *AIDS Behaviour*, 10(3), 279-286. https://doi.org/10.1002/jcp.24872.The
- Ma, Q., Zingman, B. S., Luque, A., Fischl, M. A., Gripshover, B., Venuto, C., ... & Morse, G. D. (2011). Therapeutic Drug Monitoring of Protease Inhibitors and Efavirenz in Hiv-Infected Individuals With Active Substance Related Disorders. *Therapeutic Drug Monitoring*, 33(3), 309-314. https://doi.org/10.1097/FTD.0b013e31821d3adb
- Makanjuola, B. A., Oyeleke, S. A., & Akande, T. M. (2008). Psychoactive Substance Use Among Long Distance Vehicle Drivers In Ilorin, Nigeria. Nigerian Journal of Psychiatry, 5(1). https://doi.org/10.4314/njpsyc.v5i1.39895

- Mayer, K. H., Meyer, J. P., Althoff, A. L., & Altice, F. L. (2013). Optimizing care for HIV-Infected people who use drugs: Evidence-based approaches to overcoming healthcare disparities. *Clinical Infectious Diseases*, 57(9), 1309-1317. https://doi.org/10.1093/cid/cit427
- Miguez-Burbano, M. J., Burbano, X., Ashkin, D., Pitchenik, A., Allan, R., Pineda, L., ... & Shor-Posner, G. (2006). Impact of tobacco use on the development of opportunistic respiratory infections in HIV seropositive patients on antiretroviral therapy. *Addiction Biology*, 8(1), 3-105. https://doi.org/https://doi.org/10.1080/1355621031000069864
- Miguez, J. M., Shor-Posner, G., Morales, G., Rodriguez, A., & Burbano, X. (2006). HIV treatment in drug abusers: impact of alcohol use. *Addiction Biology*, 8(1), 33-37. https://doi.org/doi.org/10.1080/1355621031000069855
- Mimiaga, M. J., Reisner, S. L., Grasso, C., Crane, H. M., Safren, S. A., Kitahata, M. M., ... & Mayer, K. H. (2013). Substance use among HIV-infected patients engaged in primary care in the United States: Findings from the centers for AIDS Research Network of Integrated Clinical Systems Cohort. *American Journal of Public Health*, 103(8), 1457-1467. https://doi.org/10.2105/AJPH.2012.301162
- NIDA. (2020). What drugs are most frequently used by adolescents? Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. https://nida.nih.gov/publications/principles-adolescentsubstance-use-disorder-treatment-research-based-guide/frequently-asked-questions/what-drugs-are-mostfrequently-used-by-adolescents
- Odebunmi, E., Oluwaniyi, O., Awolola, G., & Adediji, O. (2008). Proximate and nutritional composition of kola nut (Cola nitida), bitter cola (Garcinia cola) and alligator pepper (Afromomum melegueta). *African Journal of Biotechnology*, 8(2).
- Ogedengbe, O. O., Naidu, E. C. S., & Azu, O. O. (2018). Antiretroviral Therapy and Alcohol Interactions: Xraying Testicular and Seminal Parameters Under the HAART Era. *European Journal of Drug Metabolism and Pharmacokinetics*, 43, 121-135. https://doi.org/https://doi.org/10.1007/s13318-017-0438-6
- Omage, E. I., & Omage, M. I. (2012). Illicit drugs use and dependency among Teenagers and Young Adults in Oredo Local Government Area, Benin City, Nigeria. *European Scientific Journal*, 8(20), 187-210.
- Osa-Edoh, G. I., & Egbochukwu, E. O. (2012). Classification of Frequency Abused Drugs amongst Nigerian Youth and the Social Influences: Implications for Counselling. *AFRREV STECH*, 1(3), 161-177. www.afrrevjo.net/stech
- Palacio, H., Hilton, J. F., Canchola, A. J., & Greenspan, J. (1997). Effect of Cigarette Smoking on HIV-Related Oral Lesions. J Acquir Immune Defic Syndr Hum Retrovirol., 14(4), 338-342. https://doi.org/10.1097/00042560-199704010-00005.
- Shirley, D. K., Kaner, R. J., & Glesby, M. J. (2013). Effects of Smoking on Non-AIDS-Related Morbidity in HIV-Infected Patients. *Clinical Infectious Diseases*, 57(2), 275-282. https://doi.org/10.1093/cid/cit207
- Suwala, M. (2014). Alcohol and other psychoactive substances addiction risk assessment among chosen high school students test group. *Przeglad Lekarski*, 71(11).
- Theresa, W., Daniel J, F., Rui, D., Jennifer L., B., Eric S, D., Raul, M., & Lisa R., M. (2018). Baseline cigarette smoking status as a predictor of virologic suppression and CD4 cell count during one-year follow-up in substance users with uncontrolled HIV infection. *Physiology & Behavior*, 22(6), 2026-2032. https://doi.org/10.1007/s10461-017-1928-x.
- United Nations Office on Drugs and Crime (UNODC). (2019). World Drug Report 2019: Stimulants. In *Word Drug Report 2019 Stimulants*. https://www.unodc.org/unodc/en/frontpage/2019/June/world-drug-report-2019_-35-million-people-worldwide-suffer-from-drug-use-disorders-while-only-1-in-7-people-receive-treatment.html
- Wandera, B., Tumwesigye, N. M., Nankabirwa, J. I., Kambugu, A. D., Parkes-Ratanshi, R., Mafigiri, D. K., ... & Sethi, A. K. (2015). Alcohol consumption among HIV-infected persons in a large urban HIV clinic in Kampala Uganda: A constellation of harmful behaviors. *PLoS ONE*, 10(5), 1-16. https://doi.org/10.1371/journal.pone.0126236
- Webb, M. S., Vanable, P. A., Carey, M. P., & Blair, D. C. (2009). Medication adherence in HIV-infected smokers: The mediating role of depressive symptoms. *AIDS Education and Prevention*, 21(SUPPL. 3), 94-105. https://doi.org/10.1521/aeap.2009.21.3_supp.94

Yunusa, M., Obembe, A., Ibrahim, T., & Njoku, C. (2011). Prevalence and specific psychosocial factors associated with substance use and psychiatric morbidity among patients with HIV infection at Usmanu Danfodiyo University Teaching Hospital, Sokoto State, Nigeria. *African Journal of Drug and Alcohol Studies*, 10(1). https://doi.org/10.4314/ajdas.v10i1

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).