

Substance Abuse Issues among University Undergraduates in Enugu State

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Abstract

The study focused on substance abuse issues among university undergraduates in Enugu State. Specifically, the study determined; commonly abused substances among university undergraduates in Enugu state and reasons for substance abuse among university undergraduates in Enugu state. The study adopted a survey research design. The population for this study was 112,475 students from the six universities in Enugu State. Questionnaire was used for data collection. Mean, standard deviation, percentages were employed for data analysis. Results of the study show 11 commonly abused substances among university undergraduates. These include, alcohol 330(96.2%), cigarettes 208(60.6%), codeine (*lean, coder, etc*) 331(96.5%), caffeine (in form of coffee) 308(89.8%), tramadol 299(87.2%), and others. Thirteen (13) reasons for substance abuse among university undergraduates were also identified. These include; means of feeling good or high 2.91, to be like my friends ($\bar{X} = 3.04$), to feel like an adult ($\bar{X} = 3.08$), boredom ($\bar{X} = 2.82$), form of social celebration ($\bar{X} = 3.14$), to forget academic problems ($\bar{X} = 3.28$), to reduce tension from academic work ($\bar{X} = 3.55$), curiosity to find out the effectiveness of a particular drug ($\bar{X} = 3.92$), easy access to psychoactive substances ($\bar{X} = 3.51$), and others. Based on these findings, the study recommended among others, that students should be encouraged to engage in gainful extra-curricular activities to keep them occupied so and prevent involvement in ill practices such as substance abuse; and the university administration should work with the appropriate authorities to identify the different sources of abused substances so as to shut down any existing drug houses to close to the institutions limit access of undergraduates to such sources.

Keywords: Prevalence, Pattern, Substance, Abuse, University, Undergraduate

Introduction

Substance can be described as drug which, when taken by a living organism is capable of producing in the person or animal, some extraordinary changes which could be negative or positive. It covers almost everything that can be ingested, inhaled, smoked, chewed, rubbed on the skin, injected or absorbed. It includes legal and illegal substances

such as alcohol, caffeine, tobacco cigarette, petrol, heroin, cocaine, cannabis (marijuana), non-prescribed drugs, food additives and industrial chemicals, among others.

Substance abuse refers to the wrong use of any substance (prescribed or unprescribed) that, if taken by a person modifies perceptions of one or more of the five senses (sight, hearing, taste,

touch and smell), mood, cognition, behaviour and motor function (Simbee, 2012). According to Daniel, Krishnan & Gupta (2017), substance abuse involves the use of any psychoactive substance or drug, including licit and illicit drugs, other than when medically indicated. Substances commonly abused include licit substance such as nicotine and alcohol, and illicit substance such as cannabis heroin, mandrax cocaine. Substance abuse is one of the ever-increasing problems amongst youths across the globe (Mayet, Legleye, Falissard & Chau, 2012). One of the available global reports indicates that between 3.4 and 6.6 percent of the adult population are using illicit drugs (United Nations Office on Drugs and Crime, 2016).

Available report indicates that there has been a steady increase in the prevalence of substance use and its associated consequences within the last three decades (Ihezue, 1988; Oshodi, Aina & Onajole, 2010; Onofa, Adamson, Ighoroje & Majekodunmi, 2016). Studies also show that a greater population of substance abusers are youths aged between 18 and 30 (Fareo, 2012; Onofa et. al., 2016). According to Fareo (2012), the desire to explore, experiment and seek abstract solutions to problems has been shown to be partly responsible for the high prevalence of substance abuse reported among youths. Unfortunately, many of these youths are possibly intending undergraduates or already undergraduates who would soon be away from their parents or already in school and away from home and parents.

Most of the undergraduates in the university environment are on their own and are not monitored by families. Due to not being monitored by their parents,

many of the undergraduates see the university as a place for experimentation and risk-taking, and the initiation into substance use often begins during this period (Daniel, Krishnan & Gupta, 2017). Substance abuse among undergraduates because it is a serious issue affecting undergraduates in today's world. Undergraduates who do not abuse substances yet are risk for substance abuse at this stage because of extreme freedom many of them enjoy for the first time in their lives (Robertson, David & Rao, 2003). Besides extreme freedom, numerous other factors might be responsible for substance abuse among undergraduates.

The factors contributing to youth substance abuse have been identified. These include attempt at suppression of anxiety, a way of fitting into the desired gang or social clubs, and as a means to feeling "good" at all times (Anyanwu, Ibekwe & Ojinnaka, 2016). The place of residence has also been identified as a factor as the rate of substance use among individuals who lived alone was significantly higher than others (Taghi, Izedi, Sarikhani, Kalani, Akbary, Miri, 2015). Living with appropriate parental supervision has thus been identified as a predictor of whether substance abuse will occur or not (Daniel et. al., 2017). Other factors include ignorance (Hajian, Khirkhah & Habibi, 2011), peer pressure (Njeri & Ngesu, 2014), curiosity (Taghi et. al., 2015), poor socio-economic condition (Idowu, Aremu, Olumide & Ogunlaja, 2018), among others. No matter the reason, substance abuse has several consequences.

The consequences of abusing substances are not palatable. Chronic use of substances can cause serious damage, sometimes irreversible physical and social damage (either temporarily or for

a long period of time). To this effect, some of these undergraduates, who are still in their growing stage, become insane, socially misfit in school situations and eventually drop out of school (Babalola, Akinhanmi & Ogunwale, 2014). Some of these substances in the form of medication give pleasure to the user and although the user at first may enjoys it, the user will want to experience the sensation again leading to addiction (Daniel, Krishnan & Gupta, 2017). An undergraduate who allows himself/herself to be controlled by a substance is referred to as a substance abuser. Substance abuse can lead to a condition called neurological misfunction and it affects his/her moods, perception, consciousness, and energy levels change to the extent that substances take over his/her normal functioning and well-being (Makanjuola, Abiodun & Sajo, 2014).

Enugu State is one of the South Eastern States in Nigeria. It has six universities. Undergraduates in the universities in Enugu State just like other areas make the transition from the restrictive lifestyle when monitored by parents and other adult relatives to a more independent self-directed life in which daily decision-making is grossly influenced by the university environment (Tarig et. al., 2016). Hence, the risk of substance use among adolescents and young adults is increased in university environments (Makanjuola, Abiodun & Sajo, 2014). Edozie (2021) reported that there is a high level of substance abuse among undergraduates in the area.

This scenario is linked to increased cultism and sexually transmitted diseases in the area because many abusers do things under the influence of

substances that they might regret later (Edozie, 2021). Available studies indicate that the use and abuse of substances have dramatically increased worldwide (Deressa & Azazh, 2011; Gebreslassie, Feleke & Melese, 2013), however, none of these studies have been carried out in Enugu State to ascertain the commonly abused substances in the area and the reasons for substance abuse among university undergraduates in Enugu state. Studies have also indicated that constant substance abuse if left unchecked asides affecting the health of the students could also increase crime and underdevelopment in any economy where it is common (Taghi, Izedi, Sarikhani, Kalani, Akbary, Miri, 2015; Makanjuola, Daramola & Obembe as cited in Tarig et. al., 2016). It is against this background that the present study is geared towards investigating the substance abuse among university undergraduates in Enugu state in a bid to proffer solutions to this phenomenon forming a youth sub-culture in Nigeria.

Purpose of the Study

The general purpose of the study was to investigate issues relating to the prevalence and pattern of substance abuse among university undergraduates in Enugu state. Specifically, the study determined:

1. commonly abused substances among university undergraduates in Enugu state
2. reasons for substance abuse among university undergraduates in Enugu state

Research Methodology

Research Design: - The study adopted survey research design.

Area of the Study: - The area of the study was Enugu state. The area has six

universities, namely; one federal government university, one state government university, and four private universities.

Population for the Study: - The population for this study comprised of all students in the six universities in the area. According to the document gotten from the Office of the Registrar (Admissions) of the institutions, the current population of undergraduate students in universities at the time of this study were University of Nigeria Nsukka (UNN) 36,078; Enugu State University of Science and Technology (ESUTH) 50,000; Caritas University, Enugu (Private 1) 6,032; Godfrey Okoye University, Ugwuomu-Nike (Private 2) 7,520; Renaissance University, Enugu (Private 3) 4,503; and Coal City University, Enugu State (Private 4) 8,342. Hence the total population was 112,475 students. Both UNN and ESUTH are public universities.

Sample for the Study: - The sample for the study was made up of 384 students. The two public universities in the state were purposively selected. This is because available report shows that students in public universities are usually been more involved in substance abuse than those in private universities where some level of strictness and monitoring are found (Edozie, 2021). Calculation using the Taro Yamane formula revealed that 384 represent the sample size for the population. Snowball sampling technique was used to draw 384 students from both universities.

Instrument for Data Collection: - Questionnaire was used for data collection. It was developed based on the specific purposes of the study and literature review. The first part of the instrument had two responses options of "Yes" or "No", while the other part had

a four (4) point scale had responses of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

The questionnaire was validated by three experts; two Home economics lecturers and one Health Educator. To establish the reliability of the instrument, 30 copies of the instrument were administered to 30 undergraduates of a university outside the area of this study. Cronbach Alpha was used to test for reliability. Cronbach alpha reliability coefficient of 0.80 was obtained.

Method of Data Collection: - Data collection was conducted by the researcher and four research assistants. A total of 384 copies of questionnaire were distributed by hand to the respondents. Only 343 copies of the questionnaire were properly filled and returned by the respondents. This represents 89.3 percent return.

Method of Data Analysis: - Percentage tables and frequency distribution were employed for analysis of the section A of the instrument. In section A, items that have a percentage of 50 percent or above on the "yes" column were considered an indication that the substance were abused while items that have a percentage of less than 50 percent or on the "yes" column were regarded as substance not abused. Items on reasons for substance abuse were analysed using mean and standard deviation. The decision rule was based on the upper limit of 2.50. Mean score less than 2.50 points was regarded as negative or disagree.

Findings of the Study

The following findings were made:

Commonly abused substances among undergraduate university students in Enugu State

Table 1: Frequency and Percentage Distribution on Commonly Abused Substances among Undergraduates

S/N	Commonly Misused or Abused Substances	Yes (F (%))	No (F (%))
1.	Alcohol	330 (96.2)	13 (3.8)
2.	Cigarettes	208 (60.6)	135 (39.4)
3.	Marijuana (<i>Mary Jane, Kush, Ganja</i> etc.)	336 (98.0)	7 (2.0)
4.	Cocaine	7 (2.0)	336 (98)
5.	Nicotine (in form of tobacco)	83 (24.2)	260 (75.8)
6.	Glue	11 (3.2)	332 (96.8)
7.	Codeine (<i>lean, coder</i> etc.)	331 (96.5)	12 (3.5)
8.	Caffeine (in form of coffee)	308 (89.8)	35 (10.2)
9.	Methamphetamines (<i>ice or glass</i>)	226 (65.9)	117 (34.1)
10.	Tramadol	299 (87.2)	44 (12.4)
11.	Rohypnol (<i>roche, R2, rope, forget me pill</i> , etc.)	180 (52.5)	163 (47.5)
12.	Crack	13 (3.8)	330 (96.2)
13.	Aphrodisiacs (<i>manpower, qurantashi</i> , etc)	57 (16.6)	286 (83.4)
14.	Skunk (<i>SK</i>)	290 (84.5)	53 (15.5)
15.	Shisha	269 (78.4)	74 (21.6)
16.	Paint	3 (0.87)	340 (99.1)

Key: Yes = frequency distribution of the students in agreement; No = frequency distribution of students not in agreement, (%) = Percentage of Undergraduate students in agreement, (%) = Percentage of Undergraduate students not in agreement

Table 1 reveals that 11 (items 1, 2, 3, 5, 7, 8, 9, 10, 11, 14 and 15) out of the 16 items recorded percentages of usage among undergraduates to be ranged from 52.5% - 98.0%. All 11 items had percentage of 50% or above on the 'yes' column indicating that the respondents agreed that those are the abused substances by the undergraduates. According to the result in Table 1, Marijuana is the most abused substance abused among respondents with a 98% agreement rate among respondents. It is closely followed by substances such as Alcohol at 96.2%, Codeine (*lean, coder* etc.) at

96.5%, Tramadol at 87.2% and Skunk (aka SK) at 84.5%. Furthermore, the Table revealed that the remaining 5 (items 4, 6, 12, 13 and 16) had percentages of usage among undergraduates to be ranged from 0.87% - 16.6%. All 5 items had percentages less than 50% on the 'yes' column indicating that the respondents agreed that those substances were not abused substances by the undergraduates

Reasons for substance abuse among university undergraduates in Enugu State

Table 2: Mean Responses and Standard Deviation on the Reasons for Substance Abuse Among Undergraduates

S/N	Reasons for Substance Abuse	$\bar{X}$	SD	Remark
1.	Means of feeling good or high	2.91	0.97	Agree
2.	To be like my friends	3.04	0.19	Agree
3.	To feel like an adult	3.08	0.79	Agree
4.	To reduce tension from academic work	3.55	0.55	Agree
5.	Socio-economic status of the parents	2.41	1.22	Disagree

Continue in the next page

6.	Solace from family problems	3.20	0.40	Agree
7.	To forget academic problems	3.28	0.60	Agree
8.	Emotional pressure due to bad peer-to-peer relationships	2.71	1.11	Agree
9.	Easy access to psychoactive substances	3.51	0.58	Agree
10.	Boredom	2.82	1.06	Agree
11.	Curiosity to find out the effectiveness of a particular drug	3.92	0.27	Agree
12.	Form of social celebration	3.14	0.20	Agree
13.	Aid in studying	3.28	0.45	Agree
14.	Ignorance of the dangers of illegal drug use	2.49	1.18	Disagree
15.	Lack of parental supervision	2.13	1.09	Disagree

Key: X_1 = Mean responses of Undergraduate Students, SD = Standard Deviation of the responses

Table 2 reveals that all the items on reasons for substance abuse recorded means above the criterion level of acceptance except items 5, 14, and 15 which were socio-economic status of the parents, ignorance of the dangers of illegal drug use, and lack of parental supervision respectively. This shows that the respondents agreed that those are the reasons for substance abuse by university undergraduates except for items 5, 14, and 15. The results also show that item 11 on "curiosity to find out the effectiveness of a particular drug" had the highest mean score of 3.92. Other items with high mean scores include items 4, 7, and 9 which were; to reduce tension from academic work (3.55), to forget academic problems (3.28), and easy access to psychoactive substances (3.51).

Discussion of Findings

The finding of the study shows that substance abuse is rife among undergraduate students in Enugu state. The findings revealed that the abused substances include: Alcohol, cigarettes, marijuana (mary jane, kush, ganja, etc.), codeine (lean, coder, etc.), caffeine (in form of coffee), methamphetamines (ice or glass), tramadol, Rohypnol (aka ref, Roche, r2, rope, forget me pill, etc.),

aphrodisiacs (aka manpower, qurantashi, etc), skunk (sk) and shisha. Out of these substances, the result showed that marijuana is the most abused substance among respondents with a 98% agreement rate among respondents. It is closely followed by substances such as alcohol at 96.2%, codeine (aka lean, coder, etc.) at 96.5%, tramadol at 87.2%, and skunk (SK) at 84.5%. Marijuana which is the most abused substance has the major active product is Δ^9 - tetrahydrocannabinol (Δ^9 -THC or simply THC), also known by its International Non-Proprietary Name (INN) as dronabinol. The unsaturated bond in the cyclohexene ring is located between C-9 and C-10 in the more common dibenzopyran ring numbering system (Anumba, 2013).

Furthermore, Anumba (2013) found that dronabinol in excess quantities is very harmful to the human brain and could affect cognitive reasoning. This could be why the academic performances of some of the students of students are affected by abusing the substance. Alcohol at 96.2% is the second most abused substance. Ethanol and water are the main components of most alcoholic beverages, although in some very sweet liqueurs the sugar content can be higher than the ethanol content.

Ethanol (CAS Reg. No. 64-17-5) is present in alcoholic beverages as a consequence of the fermentation of carbohydrates with yeast. Alcohol when abused can affect the vital organs of human beings such as their livers and kidneys. Cigarettes have a gas phase of cigarette smoke includes nitrogen (N₂), oxygen (O₂), carbon dioxide (CO₂), CO, acetaldehyde, methane, hydrogen cyanide (HCN), nitric acid, acetone, acrolein, ammonia, methanol, hydrogen sulfide (H₂S), hydrocarbons, gas phase nitrosamines, and carbonyl compounds. Hence smoking involves taking in CO₂ which is harmful to the lungs. The results are in line with findings made by Anyanwu, Ibekwe & Ojinnaka (2017) who found that substances like alcohol can affect the cognition of students which can affect their performance in their universities. The study findings differ from that of Babalola et. al. (2014) and Anyanwu, Ibekwe & Ojinnaka (2016), who carried out a similar study but had alcohol as the most prevalent substance abuse. The results also show that paint is the least abused or misused substance among undergraduates with a 0.87% agreement rate among respondents. The least abused or misused substances in the study area include Cocaine at 2%, Glue at 3.2%, and Crack at 3.8% which is in agreement with the result of the study carried out by Daniel et. al. (2017). However, findings on least abused substances were in disagreement with studies carried out by Ningombam, Hutin & Murhekar (2011), Yunusa, Obembe, Madawaki & Asogwa (2011) as the results in these studies show high consumption of cocaine, crack and glue among respondents in the same age bracket.

Findings of the present study also provide insight on the reasons for

substance abuse among undergraduates. The findings of this study show that undergraduates abuse substances for the following reasons; Means to one feeling good or high, to be like my friends, to feel like an adult, to reduce tension from academic work, solace from family problems, to forget academic problems, emotional pressure due to bad peer to peer relationships, easy access to psychoactive substances, boredom, curiosity to find out the effectiveness of a particular drug, form of social celebration and aid in studying. These findings were in line with the findings of the study by Anyanwu, Ibekwe & Ojinnaka (2016) and Daniel et. al. (2017). The findings also show that undergraduates abuse substances to take solace from family problems and emotional pressure due to bad peer-to-peer relationships, in line with findings made by Edozie (2021). The finding with the highest mean score suggested that the most prevalent reason that students engage in substance abuse is based on curiosity, a finding in agreement with the study carried out by Taghi et. al. (2015). On the other hand, the literature reviewed show that socio-economic status of the parents (Idowu, Aremu, Olumide & Ogunlaja, 2018), ignorance of the dangers of illegal drug use (Hajian et. al., 2011) and lack of parental supervision (Daniel et. al., 2017), are all reasons for substance abuse. However, the findings of this study state otherwise. The findings of a study among a population of Nepalese students (Sreeramareddy, Shankar, Binu, Mukhopadhyay, Ray & Menezes, 2007), report that substance abuse was the least coping strategy resorted to by distressed students. This finding was a direct opposite of the results of the present study as students in this study reported

resorting to using of substances to reduce tension from academic work.

Conclusion

The study focused on substance abuse issues among university undergraduates in Enugu State. Although substances such as drugs are useful, when misused it is referred to substance abused. The study sought to ascertain the commonly abused substances among university undergraduates in Enugu state and reasons for substance abuse among university undergraduates in Enugu state. The study found that the abused substances include: Alcohol, cigarettes, marijuana (mary jane, kush, ganja, etc.), codeine (lean, coder, etc.), caffeine (in form of coffee), methamphetamines (ice or glass), tramadol, Rohypnol (aka ref, Roche, r2, rope, forget me pill, etc.), aphrodisiacs (manpower, qurantashi, etc), skunk (SK) and shisha. It was also discovered that undergraduates abuse substances for the following reasons; means to one feeling good or high, to be like my friends, to feel like an adult, to reduce tension from academic work, solace from family problems, to forget academic problems, emotional pressure due to bad peer to peer relationships, easy access to psychoactive substances, boredom, curiosity to find out the effectiveness of a particular drug, form of social celebration and aid in studying. Based on the findings, it is concluded that undergraduates in universities in Enugu state abuse numerous substances due to a lot of reasons and this trend has to be stopped to ensure the undergraduates achieve their goals and the economy grows. To achieve this, some recommendations were made.

Recommendations

The following recommendations were made for reduction of the incidence of substance abuse;

1. undergraduates should be encouraged to engage in gainful extra-curricular activities to keep them gainfully occupied and away from substance abuse.
2. Government agencies like National Agency for Food and Drugs Administration and control (NAFDCA) should organize workshop for undergraduates and parents so that they can be educated about drug abuse and the related consequences.
3. University administrations should work with appropriate authorities to provide intelligence for identifying the different sources of abused substances so as to shut them and limit access of undergraduates to such sources.

References

- Anumba N. A. (2013). Demographic Characteristics of out-of-School Adolescent Substance Abusers in Aba South Local Government Area of Abia State. *Unpublished M.Ed. Project*. Department of Health and Physical Education, University of Nigeria.
- Anyanwu O. U., Ibekwe R. C. & Ojinnaka N. C. (2016). Pattern of substance abuse among adolescent secondary school students in Abakaliki. *Cogent Medicine*, 3, 1272160.
- Anyanwu O. U., Ibekwe R. C. & Ojinnaka N. C. (2017). Psychosocial dysfunction among adolescents who abuse substances in secondary schools in Abakaliki, Nigeria. *Nigerian Journal of Clinical Practice*, 20, 665 - 669.
- Babalola E. O., Akinhanmi A. & Ogunwale A. (2014). Who Guards the Guards: Drug Use Pattern Among Medical Students in

- a Nigerian University. *Annals of Medical and Health Sciences Research*, 4 (3), 397 – 403.
- Daniel L. T., Krishnan G. & Gupta S. (2017). A study to assess the prevalence and pattern of substance use among male adolescents in suburban area of Delhi. *Indian Journal of Social Psychiatry*, 33, 208 – 212.
- Deressa W. & Azazh A. (2011). Substance use and its predictors among undergraduate medical students of Addis Ababa University in Ethiopia. *BMC Public Health*, 11 (1), 14 – 17.
- Edozie, E.E (2021). Level of substance abuse among students in tertiary institutions in Enugu State. *Journal of Food Sciences and Home Management*, 2(1), 23 – 34.
- Fareo D. O. (2012). Drug Abuse among Nigerian Adolescents strategies for counselling. *Journal of International Social Research*, 20, 5 – 12.
- Gebreslassie M., Feleke A., & Melese T. (2013). Psychoactive substances use and associated factors among Axum University students, Axum Town, North Ethiopia. *BMC Public Health*, 13 (1), 86 – 93.
- Gudaji, M. I. & Habib, Z. G. (2016). Socio-Demographic Factors Associated with Psychoactive Substance Use among Commercial Motorcycle Operators in Kano, Nigeria. *Open Journal of Psychiatry*, 6, 76 – 85.
- Hajian K., Khirkhah F. & Habibi M. (2011). Frequency of risky behaviours among students in Babol Universities. *Journal of Gorgan University of Medical Sciences*, 13 (2).
- Hamed Al-Alawi A. S. & Shaikh J. (2018). Prevalence of Substance Abuse among the School Students in Al-Dhahirah Governorate, Sultanate of Oman. *Madridge Journal of Nursing*, 3 (1), 118 – 123, doi: 10.18689/mjn-1000121
- Idowu A., Aremu A. O., Olumide A., Ogunlaja A. O. (2018). Substance abuse among students in selected secondary schools of an urban community of Oyo-state, South West Nigeria: Implication for policy action. *African Health Science*, 18 (3), 776 – 785. <https://dx.doi.org/10.4314/ahs.v18i3.364> (May-June, 2014) ISSN: 2319-8834
- Ihezue U. H. (1988). Drug abuse among medical students at a Nigerian university: Part 1. Prevalence and pattern of use. *Journal of National Medical Association*, 80, 81-85.
- Lapsley D. K. & Edgerton J. (2011). Separation-Individuation, Adult Attachment Style, and College Adjustment. *Counselling & Development Journal*, 80 (4), 484 – 492.
- Makanjuola A., Abiodun O., & Sajo S. (2014). Alcohol and psychoactive substance use among medical students of the University of Ilorin, Nigeria. *European Scientific Journal*, 10 (8), 69 – 83.
- Mayet A., Legleye S., Falissard B. & Chau N. (2012). Cannabis use stages as predictors of subsequent initiation with other illicit drugs among French adolescents: use of a multi-state model. *Addictive Behaviours*, 37 (2), 160 – 166.
- Ningombam S., Hutin Y. & Murhekar M. V. (2011). Prevalence and pattern of substance use among the higher secondary school students of Imphal, Manipur, India. *National Medical Journal of India*, 24, 11 – 15.
- Okoli C., Greaves L. & Fagyas V. (2013). Sex differences in smoking initiation among children and adolescents. *Public Health*, 127 (1), 3 – 10. DOI: 10.1016/j.puhe.2012.09.015
- Onofa L. U., Adamson T., Ighoroje M. & Majekodunmi M. (2016). Prevalence and Patterns of Drug Abuse among Students of Tertiary Institutions in Abeokuta, Ogun State, Nigeria. *International Journal of Psychiatry*, 1 (1).
- Oshodi O., Aina O., Onajole A. (2010). Substance use among secondary school students in an urban setting in Nigeria; prevalence and associated factors. *African Journal of Psychiatry*, 13 (1).
- Robertson E. B., David S. L. & Rao S. A. (2003). Preventing drug use among children and adolescents: A research-based guide for parents, educators, and community leaders. In Hamed Al-Alawi

- A. S. & Shaikh J. (eds.). Prevalence of Substance Abuse among the School Students in Al-Dhahirah Governorate, Sultanate of Oman. *Madridge Journal of Nursing*, 3 (1), 118 – 123.
- Simatwa E. M. W., Odhong' S. O., Atieno-Juma S. & Choka G. M. (2014). Substance Abuse among Public Secondary School Students: Prevalence, Strategies and Challenges for Public Secondary School Managers in Kenya: A Case Study of Kisumu East Sub County. *Educational Research*, 5 (8), 315 – 330, DOI: <http://dx.doi.org/10.14303/er.2014.226>
- Simbee G. (2012). Prevalence of Substance Use and Psychosocial Influencing Factors among Secondary School Students in Dodoma Municipality. *M. Sc. Dissertation*, Muhimbili University of Health and Allied Sciences.
- Sreeramareddy C. T., Shankar P. R., Binu V. S., Mukhopadhyay C., Ray B. & Menezes R. G. (2007). Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Medical Education*, 26 (7), 20 – 27.
- Steyl T. & Phillips J. (2011). Actual and perceived substance use of health science students at a university in the Western Cape South Africa. *African Health Sciences*, 11 (3), 329 – 333.
- Taghi H. S., Izedi S., Sarikhani Y., Kalani N, Akbary A., Miri A., Mahmoodi M. & Akbari M. (2015). The Prevalence of Substance use and Associated Risk Factors Among University Students in the City of Jahrom, Southern Iran. *International Journal of High – Risk Behaviour and Addiction*, 4 (2), 1 – 7. DOI: 10.5812/ijhrba.4(2)2015.22381
- Tarig O., Victor C., Abdulmoneim A., Mohammed H., Abdalla F., Ahmed A., Ali E. & Mohammed W. (2016). Epidemiology of Substance Use among University Students in Sudan. *Journal of Addiction*, 2016, 1 – 8 <http://dx.doi.org/10.1155/2016/2476164>
- Tesfaye G., Derese A. & Hambisa M. T. (2014). Substance Use and Associated Factors among University Students in Ethiopia: A Cross-Sectional Study. *Journal of Addiction*, 2014, ID 969837, 1 – 8
- Yunusa M., Obembe A., Madawaki A., & Asogwa F. (2011). A survey of psychostimulant use among a University Students in North-western Nigeria. *Nigerian Journal of Psychiatry*, 9, 40 – 45.