



PREVALENCE AND PATTERN OF ALCOHOL USE AND ABUSE AMONG SECONDARY SCHOOL STUDENTS IN MAKURDI LGA OF BENUE STATE, NIGERIA

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ABSTRACT: *Introduction: Alcohol is a substance with toxic effects mainly on the central nervous system; it is metabolized primarily by the liver. The scourge of alcohol consumption by adolescents is generally becoming a worrisome phenomenon in Nigeria with increased risk of the concerned population for alcohol abuse and alcohol dependence, which poses a significant threat to public health, according to the Global Burden of Disease (2024) study. This study was therefore undertaken to determine the prevalence and pattern of alcohol consumption and abuse by secondary school students in Makurdi LGA of Benue State. Methodology: A cross-sectional descriptive study was employed for this research. The study population consisted of all secondary school pupils enrolled in Makurdi Local Government Area of Benue State, Nigeria. A multistage sampling method was employed to select 14 secondary schools and 386 students as samples. Data was collected using a self-developed questionnaire and analyzed with IBM SPSS version 21. Chi-square test was employed in analyzing the hypotheses at 0.05 alpha level. Result: The majority of the respondents are females (50.5%), Christians (96.1%), and all fall within the age group of 10-18 years. The prevalence rate determined was 42.5%, initiation of drinking age was 13-14 years (15.8%) and with more male drinkers (59.8%). The most preferred drink is alcoholic wine (26.9%). The majority (8.8%) get the drinks through friends, while 7.8% purchase by themselves and major sources of funds used include pocket money (8.3%) and money from parents under deceit (2.3%). The feeling of happiness (4.4%), among others, characterized the drunken states. No link was established between pupils in public and private schools with regards to alcohol intake. Conclusion: The prevalence of alcohol use and abuse among secondary school students in Makurdi LGA of Benue State is significantly high and most users begin at an early age, which is of concern. It has been recommended that there is a need to develop a viable underage preventive measure on alcohol use in this area.*

KEYWORDS: Alcohol, Students, Adolescents, Prevalence, Alcoholism.



INTRODUCTION

Wine, beer, spirits and a host of locally brewed substances all include alcohol—a colourless, flammable liquid produced by fermentation of yeast, sugars and starch. Alcohol is a substance with toxic effects mainly on the central nervous system; it is metabolized primarily by the liver (Quigley, 2018). Addiction to alcohol may have serious untold consequences on personal life and health, including (but not limited to) intoxication, dependence, craving, increased risk of physical damage to the individual and the society, disruption of family relationship, and mental disorders. Kinjo et al. (2020) states that excessive alcohol use may lead to various negative health outcomes which, according to Ben et al. (2020), can be avoided.

There are over 3 million deaths annually attributable to alcohol intake, and 28.7% injuries (WHO, 2019). Alcohol use before the age of 18 years is a major risk factor for the development of alcohol dependence and abuse in adulthood (Lisdahl et al., 2020). Therefore, understanding the causes and consequences of alcohol intake and analyzing consumption patterns is very necessary for engaging in early intervention approaches, which are vital for preventing alcohol use disorders and reducing alcohol-related harms and diseases (Auerbech et al., 2018; Dumas et al., 2017). The rates of alcohol abuse and use amongst students vary in different regions as Europe has an estimated 69.5%, America 52.7%, Western Pacific region 37.3%, Africa and 29.3% (Finan et al., 2020).

Heavy secondary school drinkers may struggle academically for they are frequently in drinking pubs and joints after class, particularly those in public schools. This hampers their academic aspirations, which is shown in increased school absenteeism, poor test scores, higher rates of school attrition and less attention paid to school activities including assignments (Saether et al., 2019). Wechsler (2017) reports that 25% of students report having academic difficulties as a result of drinking, such as having low marks, doing poorly in exams, skipping classes and failing behind. Besides, time spent on caring for intoxicated and stuporous colleagues may ultimately have serious consequences on the caregiver. Mettill (2018) observes that the brain cells responsible for memory, coordination, and judgement are especially susceptible to the damaging effects of alcoholism. Further, underage drinking can have serious consequences for a student's health, and even death. Hangovers, unplanned/unprotected sexual activity, blackouts, assaults and dependencies may be some outcomes accruing to students' alcohol consumption.

It is in light of the aforementioned that this study is conducted to examine the rate and patterns of alcohol abuse and use among secondary school students in Makurdi LGA of Benue State, Nigeria.



METHODOLOGY

Research Design: A cross-sectional descriptive study design was employed for this study.

Research Instrument and Data Collection: A pre-tested, anonymous self-administered questionnaire was used for data collection with a robust Cronbach Alpha score of 0.81. The tool was divided into sections: Section "A" evaluated the respondents' demographic traits, including age, sex, class, and religion; Section "B" addresses the prevalence of alcohol use and abuse patterns.

Taro Yamane's formula of $n = \frac{N}{1+N} (e)^2$ was used to determine a sample of 386.

A multistage sampling technique was adopted. Thirteen private schools and one public school, with sample sizes of 270 and 22, respectively, were chosen by simple random sampling from each stratum after separating the schools into private and public strata. A prior visit was made to each of the 14 schools chosen to get the number of the students in each school and classes. This was to ensure that each school and class got a proportionate share of the 386 questionnaires.

The 14 secondary schools that were chosen received a proportional share of the sample size. Classes were further proportionally split (JSS1, JSS 2, JSS 3, SSS 1, SSS 2, and SSS 3). The questionnaire was distributed in each class by simple random sampling after explaining the purpose of the study and the instructions to fill in the questionnaire. Class hours and break periods were used to fill in the questionnaire. Students were assured that confidentiality would be observed with information shared and thus were encouraged to be truthful in their responses. All the three hundred and Eighty-Six (386) copies of the questionnaire were filled and collected on the spot by the researchers.

Method of Data Analysis

Statistical Package for Social Sciences (SPSS version 21) was used in this study's statistical analysis of the data obtained. The data were represented in a table using frequencies and percentages. Pearson's chi-square was used to test the hypotheses with a significance interval set at $p < 0.05$.

RESULT

Table 1: Demographic Characteristics of Respondents

Variable		Frequency	Percentage (%)
School	Public	32	8.3%
	Private	354	91.7%
Gender	Male	191	49.5%
	Female	195	50.5%
Age (Year)	10-12	82	21.2%
	13-14	139	36.0%
	15-16	103	26.7%
	17-18	62	16.1%



	18 above	0	0%
Class	JSS 1	66	17.1%
	JSS 2	69	17.9%
	JSS3	65	16.8%
	SSS 1	66	17.1%
	SSS 2	73	18.9%
	SSS 3	47	12.2%
Religion	Christianity	371	96.1%
	Muslim (Islam)	15	3.9%
	Others	0	0.0%

A total of 386 students participated in this study, with a 100% response rate. More women participated (50.5%) than men (49.5%); overall, 91.7% of the respondents attended a private school. Most respondents were between the ages of 13 and 14 (36.0%), followed by those between the ages of 15 and 16 (26.7%). However, not a single pupil who was beyond the age of 18 was recorded. 17 percent, 17 percent, 16 percent, 17 percent, 18 percent, and 12 percent of responders came from the JSS 1 arm, the JSS 2 arm, the JSS 3 arm, the SSS 1 arm, the SSS 2 arm, and the SSS 3 arm, respectively. Most of the participants in this survey were Christians (96.1%), with just 3.9% identifying as Muslims.

Result of the Prevalence of Alcohol Use and Abuse

Table 2: Prevalence of Alcohol Use and Abuse

Variable		Frequency	Percentage (%)
Have you ever had an alcoholic drink?	No	222	57.5%
	Yes	164	42.5%
Have you ever got drunk?	No	358	92.7%
	Yes	28	7.3%
At what age did you first drink alcohol?	10-12	59	13.3%
	13-14	61	15.8%
	15-16	33	8.5%
	17-18	11	2.8%
	18 above	0	0%
	None	222	57.5%
Prevalence by sex	Male	98	59.8%
	Female	66	40.2%
Prevalence by age (years)	10-12	17	10.4%
	13-14	56	34.1%
	15-16	49	29.9%
	17-18	42	25.6%
	18 above	0	0%
Prevalence by class	JSS 1	8	4.9%
	JSS 2	28	17.1%
	JSS 3	27	16.5%
	SSS 1	31	18.9%
	SSS 2	37	22.6%
	SSS 3	33	20.1%



The incidence of alcoholism is shown in Table 2. Fewer than half of those polled (42.5%) said they had used alcohol before, compared to more than half (57.5%) which declined. It is estimated that just 7.3% of alcoholics admitted to being drunk often, leaving 92.7% who said they have never done so. When asked when they first developed a drinking habit, 15.8% said between the ages of 13 and 14, while 15.3% said between the years of 10 and 12. In fact, just 2.8% of those who participated said they started between the ages of 17 and 18. More males (59.8%) than females (40.2%), and especially those between the ages of 13 and 14 (34.1%) and 15 and 16 (29.2%), were found to be drinkers in the current research. Each grade level had alcohol usage, although it peaked in SSS 2 with 22.6%. The ratio was much lower in JSS 1, at 4.9%. Alcohol use and abuse were significantly higher than normal ($x^2 = 17.696$, $p = 0.024$).

Drinking Pattern of alcohol

Table 3: Pattern of Alcohol Consumption in Students

Variable		Frequency	Percentage (%)
What type of alcohol do you usually drink?	Beer	52	13.5%
	Spirit (Ogogoro)	8	2.1%
	Wine (alcoholic)	104	26.9%
	None	222	57.5%
Do you sometimes take mixtures of alcoholic drinks?	No	371	96.1%
	Yes	15	3.9%
How often do you drink?	Daily	2	0.5%
	Twice weekly	5	1.3%
	Once a week	23	6.0%
	Others	134	34.7%
	None	222	57.5%
How do you get your alcoholic drink?	Buy	30	7.8%
	Friends	34	8.8%
	Others	100	25.9%
	None	222	57.5%
Source of fund	Pocket money	32	8.3%
	Book fees	0	0.0%
	School fees	3	0.8%
	Parents under	9	2.3%
	Deceit		
	Others	119	30.8%
	None	223	57.8%
How many bottles do you consume before you get drunk?	1 bottle	20	5.2%
	2 bottles	4	1.0%
	>2 bottles	0	0.0%
	Taking mixtures	3	0.8%
	Others	9	2.3%
	None	350	90.7%
How do you feel when you get drunk?	Happy	17	4.4%
	Relieved of stress	2	0.5%
	Depressed	4	1.0%
	Sorry	5	1.3%



Others	6	1.6%
None	352	91.2%

Alcohol use among students is seen in Table 3. In this study, the consumption of alcoholic wine (26.9%) and beer (13.5%) were found to be the most common, while the consumption of local spirit, Ogogoro (2.1%), was found to be the least common. Only 3.9% of the respondents had ever mixed alcohol with other beverages. Only 0.5% of adults drank alcohol daily, whereas 1.3% consumed it twice weekly, and 6.0% consumed it once weekly. Most students who drank (8.8%) say they usually got it through friends, while another 7.8% reported buying it on their own. In addition to spending one's own money, 8.3% of the kids reported using money gained dishonestly from their parents. Twenty (52%) out of the thirty-two respondents said they felt the effects of alcohol after ingesting only one bottle. The remaining three people (0.8% of the sample) reported feeling drunk after consuming mixed alcoholic beverages. Among those who had used alcohol before, one percent (1%) report feeling down, one percent (1%) guilty, 0.5 percent less stressed, and four percent (4%) ecstatic.

Research Hypothesis

Table 5: Pearson Chi-square Between Use/Abuse of Alcohol and School Type

		School			
		Public		Private	
		Frequency	%	Frequency	%
ALCHOL USE /ABUSE	Have you ever had alcohol drink?	15	9.1%	149	90.9%
	Have you ever got drunk?	3	10.7%	25	89.3%
Pearson Chi-Square Tests					
		School			
ALCOHOL USE/ABUSE	Chi-square	.100			
	df	2			
	Sig.	.951			

In order to determine whether or not there is a statistically significant difference in the prevalence of alcohol use/abuse between public and private schools, we conducted a chi-square test, the results of which are shown in Table 5. The Pearson chi-square test was used to find out whether there were statistically significant differences in drinking habits across the various educational institutions. As can be seen up above, the Pearson chi-square $\chi^2(1) = 0.100$; $p = 0.951$. The chi-square statistic is significant at the 0.05 level of analysis. Since 0.951 is larger than 0.05, we reject the alternative hypothesis and accept the null. Therefore, there is no link between school and either alcohol use or dependence.

**Table 6: Chi-square Between Pattern of Alcohol Use/Abuse and School Type**

		School	
		Public	Private
		Count	Count
Pattern	At what age did you first drink alcohol?	3	56
	What type of alcohol do you usually drink?	10	42
	Do you sometimes take mixtures of alcoholic drinks?	0	15
	How often do you drink?	0	2
	How do you get your alcoholic drink?	4	26
	Source of fund	2	32
	How many bottles do you consume before you get drunk?	1	19
	How do you feel when you get drunk?	2	15

Pearson Chi-Square Tests

		School
Pattern	Chi-square	17.696
	df	8
	Sig.	.024
Results are based on nonempty rows and columns in each innermost sub table. *. The Chi-square statistic is significant at the 0.05 level.		

Table 6 shows the chi-square test findings for comparing public and private secondary schools on the prevalence of alcohol use and abuse. The Pearson chi-square test was used to evaluate whether there were statistically significant differences in the frequency with which students at different schools used and abused alcohol. Results for the Pearson chi-square test are shown above: $\chi^2(8) = 17.696$; $p = 0.024$. The chi-square statistic is significant at the 0.05 level of analysis. The difference of 0.024 is large enough to reject the null hypothesis. Thus, there may be a robust association between drug use habits and school.



SUMMARY OF FINDINGS

1. Prevalence of Alcohol Use and Abuse

- 42.5% have had alcoholic drinks, while 57.5% are abstainers. 7.3% have gotten drunk while 92.7% have not gotten drunk.
- Most of the respondents said they got initiated at the age of 13-14.
- Male students (59.8%) were the majority who took alcohol as compared to their female counterparts (40.2%).
- There is no link between school and either alcohol use or dependence.

2. Drinking Pattern

- The most preferred alcoholic drink is wine (26.9%), followed by beer (13.5%), and the least favoured is spirit (2.1%). Only 3.9% of them have ever taken mixtures of alcoholic drinks.
- With regards to frequency, 0.5% drink daily, 1.30% twice a week and 6.0% once a week.
- Sources of funds include pocket money (8.3%), from parents under deceit (2.3%) and school fees (0.8%).
- For those who have gotten drunk, the feelings after are that of depression (1.0%), feeling sorry (1.3%), relief from stress (0.5%) and happiness (4.4%).
- There may be a robust association between drug use habits and school.

CONCLUSION

In the current study, 42.5% of the participants reported using or consuming alcohol, although only 7.3% of them admitted to abusing it to the point of intoxication. The majority of the respondents (15.8% and 15.3%, respectively) stated that they were introduced to the act when they were 13-14 and 10-12 years old. In the current study, more male students (59.8%) than female students (40.2%) used alcohol, with the SSS 2 class having the greatest incidence (22.6%). Alcoholic wine (26.9%) and beer (13.5%) were the two most popular alcoholic beverages noted in this survey, while native spirit, Ogogoro (2.1%), was the least popular. Only 3.9% of those surveyed had ever consumed alcoholic drink combinations. Regarding frequency, 0.5% drank every day, 1.3% drank twice weekly, and 6.0% drank once weekly. The majority of students who drank (8.8%) stated they usually received it from friends, while others (7.8%) bought it for themselves. The two main sources of money utilized were pocket money (8.3%) and money obtained from parents under false pretense (2.3%). The majority of 20 responders (5.2%) claimed they became inebriated after consuming just one bottle of alcohol. Those who had used alcohol before reported feeling depressed (1.0%), guilty (1.3%), stress-relieved (0.5%), and happy (4.4%) afterward.



RECOMMENDATIONS

1. There is a need to develop viable underage preventive programmes on alcoholic access, use and abuse.
2. Parents must guide their children and monitor them closely and effectively with the connivance of teachers (schools).
3. Parents should be mindful of the amount of money they give their children and get these children to account for it holistically and accurately.
4. Regulatory bodies should make and effectively apply laws to limit the sale of alcohol to young students and minors with appropriate punishment for defaulters to act as deterrents.
5. School authorities and guidance counsellors should use education as a tool for teaching adolescents the effects and dangers of alcohol use in order to enhance the general well-being and development of students.

REFERENCES

- Abiona, O., Oluwasanu, M., & Oladepo, O. (2019), Analysis alcohol policy in Nigeria: multi-sectorial action and the integration of the WHO “best-buy” interventions. *BMC Public Health*, 19 (1), 1-9.
- Adebayo, D., (2019). A worrying development in alcohol usage among Nigerian secondary school pupils. “Journal of Clinical Research in Nigeria.
- Adegboyega, J.A. (2017). “Alcohol abuse and tobacco use among secondary school students in Ekiti Atate, Nigeria”. International Journal of Education and Research.
- Agofure, O., Okandeji-Barry, O., & Odijimogho, S. (2020). Prevalence of Alcohol Consumption among Primary and Secondary School Adolescent in Obiaruku Community in Delta State, Southern Nigeria. *African Journal of Biomedical Research*, 23 (1), 35-40.
- Ajayi A.I., Owolabi, E.O., & Olajire, O.O. (2019). Alcohol use among Nigeria university students: prevalence, correlates and frequency of use. *BMC public Health*, 19(1), 1-11.
- Akers, R. (2017). Social learning and social structure: A general theory of crime and deviance. New York, NY: Routledge.
- Ai-Atifi, M. Abushams, L., Sakka, M., Shehada, M., Afifi, R., Alloush, M.,... & Van Hout, M.C. (2020). Perspective of frontline professionals on Palestinian children living with sibling and parental drug use in the West Bank and Gaza strip. *International Journal of Mental Health and Addiction*, 18(4), 1097-1112.
- Auerbach, R.P. Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P.,... & Kessler, R.C. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders *Journal of abnormal psychology*, 127(7), 623.
- Ben El Jilali, L., benazzouz, B., El Hessni, A., & Mesfioui, A. (2020). Prevalence of alcohol consumption and alcohol use disorder among middle and high school students in the province of Khemisset, Morocco: a cross-sectional study, *International Journal of adolescence and Youth*, 25(1), 638-648.



- Bonar, E.E., Walton, M.A., Carter, P.M., Lin, L.A., Coughlin, L.N., & Goldstick, J.E., (2022). Longitudinal within-and between-person associations of substance use, social influences, and loneliness among adolescents and emerging adults who use drugs. *Addiction research and theory*, 30(4), 262-267.
- Bugbee, B.A., Beek, K.H., Fryer, C.S., & Arria, A.M. (2019). Substance use, academic performance, and academic engagement among high school seniors, *Journal of school health*, 89(2), 145-156.
- Canfield, M., Radeliffe, P., Marlow, S., Boreham, M., & Gilchrist, G. (2017). Maternal substance use and child protection a rapid evidence assessment of factors associated with loss of child care. *Child abuse & neglect*, 70, 11-27.
- Chege, R., Mungai, P., & Orese, S. (2017). An investigation of the factors contributing of drug and substance abuse among the youth in Kenya: a survey of select rehabilitation centre in Mombasa Country. *International Journal of Public Health*, 1(5), 53-70.
- Di, A.i., Bell, R.L., Adams, Z.W., & Hulvershorn, L.A. (2017). Gender differences in risk factors for adolescent binge drinking and implications for intervention and prevention. *Frontiers in psychiatry*, 289.
- Domas, D.M., Esp, S., Flay, B., & Bond, L. (2017). A randomized controlled trial; testing the efficacy of a brief online alcohol intervention for high school seniors. *Journal of studies on alcohol and drugs*, 78(5), 706-715.
- Eniojukan J., & Chichi R., (2014). Substance Abuse among Adolescents: Prevalence and patterns of Alcohol Use in Benue State. Nigeria. *Journal of Pharmacy*.
- Etyang M., & Winga M., (2021). "The Prevalence, Causes and Impacts of Drug Use and Abuse on Performance Indicators Among Secondary School Students in Kenya's Teso South Constituency". *European Journal of Science*.
- Eze, N.M., Njoku, H.A., Eseadi, C., Akubue, B.N., Ezeanwu, A.B., Ugwu, U.C., & Ofuebe, J.I. (2017). Alcohol consumption and awareness of its effects on health among secondary school students in Nigeria. *Medicine*, 96(48).
- Federal Ministry of Health, National Strategic plan of action on prevention and control of non-communicable diseases, 2017.
- Federal Road Safety Commission, Federal Road Safety Act 2017.
- Finan, L.J., Lipperman-Kreda, S., Grube, J.W., Balassone, A., & Kaner, E. (2020). Alcohol marketing and adolescent and young adult alcohol use behaviours: a systematic review of cross-sectional studies. *Journal of Studies on Alcohol and Drugs. Supplement*, (s19), 42-56.
- Haugland, S.H., Coombes, L., & Strandheim, A. (2020). Parental alcohol intoxication and adverse health outcomes among offspring. A 4-year follow up HUNT study among 2399 Norwegian adolescents. *Preventive Medicine reports*, 20, 101-170.
- Hill, L., (2019). "Don't make us talk!: listening to and learning from children and young people living with parental alcohol problems. *Children & Society*, 29(5), 344-354.
- 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 sciences*, 18(3), 776-785.
- Kinjo, A., Kuwabara Y., Fujii, M., Okada, T., Shimogawa, K., Minobe, R.,... & Osaki, Y. (2022). Alcohol's harm to others in Japan: different rates for different relationship to the drinker in a 2018 national survey. *Drug and alcohol review*.
- Lamberti, M., Napolitano, F., Napolitano, P., Arnese, A., Crispino, V., Panariello, G., & Di Giuseppe, G. (2017). Prevalence of alcohol use disorders among under-and post-graduate healthcare students in Italy. *PLoS One*, 12(4), e0175719.



- Lisdahl, K.M., Sher, K.J., Conway, K.P., Gonzalez, R., Ewing, S.W.F., Nixon, S.J., ... & Heitzeg, M. (2020). "Adolescent brain cognitive development (ABCD) study overview of substance use assessment methods". Erratum.
- Livingston, J.A., Eiden, R.D., Lessard, J., Casey, M., Henrie, J., & Leonard, K.E. (2018). Etiology of teen dating violence among adolescent children of alcoholics, *Journal of youth and adolescence*, 47(3), 515-533.
- Mason, M.J., Zaharakis, N.M., Rusby, J.C., Westling, E., Light, J.M., Mennis, J., & Flay, B. R. (2017). A longitudinal study predicting adolescent tobacco, alcohol, and cannabis use by behavioral characteristics of close friends' psychology of addictive behaviors, 31(6), 712.
- Mehanovic, E., Virk, H.K., Ibanga, A., Pwajok, J., Prichard, G., Van der Kreeft, P., ... & Unplugged Nigeria Coordination Group. (2022). Correlates of alcohol experimentation and drunkenness episode among secondary-school students in Nigeria. *Substance abuse*, 43(1), 371-379.
- Mruk, C.J. (2019). *Self-esteem research, theory, and practice: Toward a positive psychology of self-esteem*. Springer publishing company.
- Muthigani (2017). Effects of drug Abuse on Students' Discipline in Public Secondary Schools in Mbeere South District, Kenya.
- Nelson, E.U.E. (2018). Alcohol consumption and related problems: Treatment and policy responses in Nigeria. *Journal of Substance Use*, 23(4), 339-344.
- Nesi, J., Rothenberg, W.A., Hussong, A.M., & Jackson, K.M. (2017). Friends' alcohol-related social networking site activity predicts escalations in adolescent drinking: mediation by peer norms, *Journal of Adolescent Health*, 60(6), 641-647.
- Newman, M., & Newman, P. (2017). Theories of human development: Lawrence Erlbaum.
- NIAAA. (2017). Underage Drinking: Why Do Adolescents drink, what are the Risks, and how can underage drinking be prevented? Alcohol Alert, (67).
- Orth, U., Erol, R.Y., & Luciano, E.C. (2018). Development of self-esteem from age 4 to 94 years: A meta-analysis of longitudinal studies. *Psychological bulletin*, 144(10), 1045.
- Oshri, A., Hallowell, E., Liu, S., Mackillop, J., Galvan, A., Kogan, S.M., & Sweet, L.H. (2019). Socioeconomic hardship and delayed reward discounting: Associations with working memory and emotional reactivity. *Developmental cognitive neuroscience*, 37, 100642.
- Owolabi, E.O., & Olajire, O.O. (2019). Alcohol use among Nigerian University Students: prevalence, correlates and frequency of use. *BMC public Health*, 19(1), 1-11.
- Peltzer, K., & Phaswana-Mafuya, N. (2018). Drug use among youth and adults in a population-based survey in South Africa. *South African journal of psychiatry*, 24(1), 1-6.
- Phillips, A.R. (2022). Crime and Desistance: Exploring and Perceptions of Detained Youths Regarding the Risk and Perspective Factors Associated with Misconduct in Kimberley, South Africa. *Southern African Journal of Social Work and Social Development*.
- Quigley, B.M. (2018). Trinity years of research show alcohol to be a cause of intimate partner violence: Future research needs to identify who to treat and how to treat them. *Drug and alcohol review*, 36(1), 7-9.
- Radianti, J., Majchrzak, T.A., Fromm, J., & Wohlgenannt, I. (2020). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers & Education*, 147, 103778.
- Reid, K., beilin, R., & McLennan, J. (2018). Shapping and sharing responsibility: Social memory and social learning in the Australian rural bushfire landscape. *Society & Natural Resources*, 31(4), 442-456.



- Saether, S.M.M., Knapstad, M., Askeland, K.G., & Skogen, J.C. (2019). Alcohol consumption, life satisfaction and mental health among Norwegian college and University students. *Addictive behaviours reports*, 10, 100216.
- Samuel A., George O., Ogbun N., Agaba O., & Yisa, M., (2022). “Opinions of Students and Teachers on Drug Abuse among Senior Secondary in Zaria Education Zone. Kaduna State, Nigeria”. *African Journal of Health, Safety and Environment (AJHSE)*; Vol. 1 No.2.
- Satinsky, E.N., Kakuhikire, B., Baguma, C., Rasmussen, J.D., Ashaba, S., Cooper-Vince, C.E., ... & Tsai, A.C. (2021). Adverse childhood experiences, adult depression, and suicidal ideation in rural Uganda: A cross-sectional, population-based study. *PLoS Medicine*, 18(5), e1003642.
- Trucco, E.M. (2020). A review of psychosocial factors linked to adolescent substance use. *Pharmacology Biochemistry and Behaviour*, 196, 172969.
- Tsitsimpikou, C., Tsarouhas, K., Vasilaki, F., Papalexis, P., Dyllis, G., Choursalas, A.,... & Bacopoulou, F. (2018). Health risk behavior among high school and university adolescent students. *Experimental and therapeutic medicine*, 16(4), 3433-3438.
- Vigna-Taglianti, F., Mehanovic, E., Alesina, M., Damjanovic, L., Ibanga, A., Pwajok, J.,... & Unplugged Nigeria Coordination Group, (2021). Effects of the “Unplugged” school-based substance use prevention program in Nigeria: A cluster randomized controlled trial. *Drug and alcohol dependence*, 228, 108966.
- Weaver, S., & Turri, J. (2018). Personal identity and persisting as many, *oxford studies in experimental philosophy*, 2, 213-242.
- World Health Organization (2019). Global status report on alcohol and health 2018. World Health Organization
- World Health Organization (2018). Global status on alcohol and health, 2018. Geneva: World Health Organization WHO Press.