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THE EFFECT OF ALCOHOLIC HERBAL BEVERAGES CONSUMPTION AMONG STUDENTS IN SELECTED HIGHER INSTITUTIONS IN OSUN STATE

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Abstract: Introduction: Alcohol is the most widely used psychoactive substance, and its use remains a significant public health concern. Alcohol accounted for 4.9 million deaths in youths and 5.5% of the global burden of disease and injury. The study aims to assess the effect of alcoholic herbal drinks and beverages consumption on students in selected higher institutions in Osun State. Materials and Methods: A simple random sampling technique was used in selecting four hundred (400) students for this study. A well-structured, self-administered questionnaire to collect information from the students. The statistical package for social sciences (SPSS) version 23 was used in analyzing and calculating the simple percentage. Results and Discussion: The results of the study reviewed that 49.5% had series of health challenges, 8.75% on physical health, 3.0% on mental alertness, emotional problems: 7.7% taking alcohol for happiness, 3.0% to be high in spirit, 63.5% taking it just for enjoyment and 14.0% for other emotional problem such as sadness, hopelessness, the consistency of taking alcohol daily: 4.5% once daily, 3.0% twice daily, 17.25 are taking it more than twice daily and 75.5% are taking herbal alcoholic drink based on health condition.. Conclusion: The study revealed that students who indulge in chronic alcoholism and smoking have a greater tendency to experience extreme mood shifts, anxiety, and depression, and this is linked to emotional imbalance.

Key words: Alcohol, consumption, Herbal, students

INTRODUCTION

Herbal drinks are beverages produced from natural substances derived from various morphological plant parts, including leaves, stems, roots, fruits, buds, and flowers, (Shaik, 2023) historically use as traditional medicine especially among elders by many countries of the world such as China, India, Sri Lanka, Indonesia, Malaysia, and others, (Ekor, 2014). known as bitters, "which is traditionally an alcoholic preparation flavoured with botanical matter such Carbonated Herbal alcoholic beverages are drinks which contain herbs, alcohol and carbonated. They are also that the end result is characterized by a bitter, sour or bittersweet flavor. It has been reported that the earliest origins of bitters can be traced back as far as the ancient Egyptians, who may have infused medicinal herbs in jars of wine (Barazesh, 2009). This practice was further developed upon the emergence of the Middle Ages, where the availability of distilled alcohol coincided with a renaissance in pharmacognosy, which made possible far more concentrated herbal bitters and tonic preparations (Eze et al, 2017)

The number of herbal alcoholic beverages being paraded as sex enhancers is on the rise in Nigerian markets with products like Dadubule, Alomo bitters, Kerewa, Ogidiga, Pasa bitters, Oremiti, Osomo, Koboko, Sabrina, Charger, Durosoke, Yoyo sappiro and Guinness recent product, Orijin (Araba, 2014)

Alcohol and alcoholic beverages contain ethanol, which is a psychoactive and toxic substance with dependence-producing properties. Alcohol has been widely used in many cultures for centuries, but it is associated with significant health risks and harms (WHO, 2024). Alcohol consumption is a major public health problem issue in the worldwide. It is one of the most important risk behaviors among young University students, Alcohol consumption accounts for 5.9% of annual global deaths, a significant proportion of which occur among youth (WHO, 2018). According to the Global Case Report from 2014, 26.5% of university students and adolescent age are current alcohol drinkers, resulting in 2.5 million people dying each year from alcohol-related causes (Getahum, 2023). Alcohol is ranked the seventh global contributor of morbidity and mortality that affected 3.8% of female and 12.2% of male deaths between aged 15–49 years (Griswold, 2018)

2024 WHO global reports found that 2.6 million deaths were attributable to alcohol consumption in 2019, and an estimated of 400 million people aged 15 years and older live with alcohol use disorders, also an estimated 209 million live with alcohol dependence. It was also found that people of younger age (20–39 years) (13%) of alcohol-attributable deaths occurring within this age group with the highest proportion of alcohol consumption in 2019 WHO, 2024).

Nigeria ranks second for per capital alcohol consumption and heavy episodic drinking in Africa (WHO, 2024). This does not include fact that quarter of the alcohol consumed in the country is unrecorded

Alcohol is formed when yeast ferments breaks down without oxygen the sugar in different food substances and alcohol can be consumed by mixing in beverages or in it raw form, and the end product after digestion by the body is formaldehyde, which is dexterous to the body and also the cause of alcohol poisoning. Liver cirrhosis, gastric ulcers, gastritis, fatty liver, alcohol hepatitis and pancreatitis are examples of some disorders resulting from alcohol intoxication. (BockermanP, et al., 2015). The yeast species that dominates in the production of alcoholic beverages worldwide

Alcohol is the most commonly used psychoactive in most part of the world and heavy consumption of it leads to many health and social problem. In 2010, alcohol accounted for 4.9 million deaths in youths and 5.5% of the global burden of disease and injury (GBD, 2018)

Alcoholic herbs and beverages problem are major health concern in developing countries and there is growing concern over a 'perfect storm' of alcohol availability, consumption and the paucity of effective alcohol control policies in these countries (National institute on Alcohol Abuse and Alcoholism, 2014).

It is found that the excessive intake of alcohol causes much harm to human health, resulting to hangover symptoms, alcoholic hepatitis, cirrhosis, and hepatocarcinoma and when People get drunk and have hangover symptoms more easily with higher level of acetaldehyde in blood, As a result, acetaldehyde accumulation caused unpleasant symptoms such as tachycardia, hypotension, diaphoresis, flushing, dyspnea, nausea, and vomiting, (Frang et al, 2016).

Study found alcohol use as a risk factor for over 60 disease conditions, in furtherance, harmful alcohol use is associated with mental and behavioral disorder (Gureje S et al., 2015). Moderate consumption of alcohol may have some health benefits that could prolong life, but when taken in

excess or as an escape route from problems, then abuse or alcoholism is inevitable. (Umoh, et al., 2012).

MATERIALS AND METHODS

The research focused on how most students are addicted to alcoholic herbal beverages consumption and the effects of these drinks they consume on their health

Study Area

The study was conducted on students at some selected higher institutions across the three senatorial district of Osun state.

TARGET POPULATION

The researchers focused mainly on students in the selected higher institutions including Polytechnics and Universities in Osun state, to access the effects of these drinks on their health.

STUDY DESIGN

A descriptive cross sectional study on students who are into drinking all forms of related to alcoholic drinks.

Sample size & Sample Techniques

A sample size of 400 was targeted for respondents in these selected institutions and was used for the study.

Formula for calculating sample size:
$$N = \frac{z^2 x p x q}{d^2}$$

METHOD OF DATA COLLECTION

A simple random sampling technique was used in selecting respondent for this study. Four hundred (400) respondents were selected among students in selected higher institutions using a well structured self administered questionnaire.

STATISTICAL ANALYSIS

The data collected were analysed using statistical package for social sciences (SPSS) version 24. Descriptive statistics (frequency and percentage) were computed for socio-demographics, the rate of alcoholic beverages consumption among youths, the behavioural characteristics related to alcohol consumption and the associated risk factors, and also examine the effect of alcoholic herbal drinks consumption.

RESULTS OF FINDINGS

Table 1 Socio-economic status of the respondents

Variable	Frequency	Percentage	
Age			
17- 20	84	21.00	
21-30	243	60.75	
31-40	69	7.50	
41 above	4	2.00	
Gender			

Male	246	61.50	
Female	154	38.50	
Income per month			
5,000 - 10,000	234	58.50	
11,000 – 15,000	122	30.50	
Above 15,000	44	11.00	
Academic qualification			
National Diploma	111	27.80	
HND	89	22.20	
BSc.	154	38.50	
M.Sc. and above	46	11.50	

Table 2 Brand of Alcoholic Herbal /Beverage and level of consumption

Family History of Alcoholic consumption					
Variable	Frequency	Percentage			
Yes	198	49.50			
No	202	50.50			
Brand					
Beer	31	7.75			
Wine	12	3.00			
Bitters	4	1.00			
Liqueurs	10	2.50			
Herbal such as Alomo, Kerewa, etc	343	85.8			
Consistency consumption/day					
Once	18	4.50			
Twice	12	3.00			
More than twice	69	17.25			
Herbal drink on condition	301	75.25			

Table 3: Feeling & Health related issue

Variable	Frequency	Percentage	
Physical health	35	8.75	
Mental alertness	12	3.0	
Emotion imbalance			
Нарру	31	7.75	
High	12	3.00	
Others (Sad, Hopeless/Helpless etc)	56	14.00	
Just for taking enjoyment	354	63.50	
Health problem			
Yes	198	49.50	
No	202	50.50	

DISCUSSION OF FINDINGS:

The above table shows that 84(63.5%) respondents were between 17-20 years of age, 243(60.7%) respondents were between 21-30, (7.5%) respondents were between 31-40 years,

while 4(2.0%) of the respondents were between 36 – 40 years of age. Indicating that most of the respondents were in between the age range of 21- 30. Their mean age was 25.5 years approximately 26 years. The above table also shows that (61.5%) of the respondents are male, while (38.5%) of the respondents are female this implied that most of the respondents are male. The study reveals that consumption of alcoholic is higher among male students compare to female students, and this is in line with the study done by some Russia medical personnel, which proved that consumption of alcohol is higher in males Keenan et al., (2015) Samuel (2023), another reported also significant higher alcohol use among men than women in Uganda. A similar report has also been affirmed by the World Health Organization that, in Africa females are less often current drinkers than males, and when women take alcohol, they drink less than the men (WHO, 2019)

The study shows that majority of the students (58.50%) having low income per month as stipends, the amount is very small and most the students without any other means of income may look for other things that may keep them busy such as indulgence in alcohol intake, this is similar to report of Shaikh which concluded that the student's academic achievement in higher education can be augmented by supporting students with financial aid through scholarships (Shaikh et al,2023), another study simplify taht institutional financial support significantly impacted the students' overall success (Ganem & Manasse, 2011). More than half of the respondents are undergraduate within the age range of 15-26 years which denoted that they are youth

The above table shows that (4.5%) of the total respondents drink once in a day, (3.0%) of the total respondent drink twice in a day, (17.25%) of the respondents drinks more than twice in a day among the students that are taking different forms of alcohol.

The above table shows that (7.7%) of the total respondents feel happy when drinking, (3.0%) of the total respondents feel high when drinking, (10.50%) of the total respondents has other feeling such as sadness, helpless, hopeless situation ets when drinking, while (75.25%) of the total respondents taking every forms of alcoholic drinks just for enjoyment. A study revealed that students who indulge in chronic alcoholism have a greater tendency to experience extreme mood shifts, anxiety and depression. Boden et al., (2011), this study confirmed a significant association between alcoholic consumption and emotional imbalance.

In the study (49.50%) of the total respondents had associated health problem related to alcohol consumption. The similar study revealed that alcohol is linked to occurrence of different kinds of diseases such as high blood pressure, heart disease, stroke, liver diseases and digestives problems are types of diseases linked to alcohol consumption, Lamyaa et al., (2020), and this also confirmed by the study done by some medical scientist, which proved that diseases such as stroke, liver disease, digestive problem that can be linked to part of the effect of alcohol consumption at early stage (Garcia et all., 2013]. The study is in agreement with WHO (2015) which found that alcohol consumption is carcinogenic and consuming it can lead to some certain type of cancer such as pancreatic cancer, prostate cancer, kidney cancer and many more related cancer. The study is consistent with previous studies this includes WHO (2014) which reported that alcohol causes around 3 million deaths every year in its victims, which confirmed the memo made by global status report on alcohol and health. The study encourages increase in the publicity and awareness of dangers related to alcohol consumption so as to reduce the consumption of it and also eliminate the side effects of alcoholism in the society and on its consumers.

Drinking alcohol is associated with risks of developing non-communicable diseases such as liver diseases, heart diseases, and different types of cancers, as well as mental health and behavioural conditions such as depression, anxiety and alcohol use disorders.(WHO, 2024). Furthermore, another study revealed that alcohol intake has a harmful impact on a number of medical conditions, including infectious diseases, cancer, neuropsychiatric disorders, cardiovascular diseases, pancreatic diseases, and unintentional and deliberate injuries Alcohol consumption accounts for 5.9% of annual global deaths, a significant proportion of which occur among youth. An Asian multi-country study, which included Japan, reported that the alcohol-related mortality rate among 15 to 24-year-old youth was 15% among males and 6% among females. (Rehm, 2017).

A Serbian study found that university students consume alcohol to relieve stress and improve mood (Hein 2020) In this study, students who felt hopeless or sad were more likely to consume alcohol than their hopeful and happy counterpart, People who experience feelings of hopelessness tend to harbour negative expectations about future life events and are more likely to experience depressive disorders or depend on substances like benzodiazepines, opiates, and alcohol [Hein et al, 2020]

In the present study, one of the strongest predictors of alcohol consumption is peer alcohol consumption. Indeed, students with friends who consumed alcohol were seven times more likely to consume alcohol than those without. This finding concurs with the results of other studies such as Ajilore,2016, and Chauke 2015)]. A study that was conducted in Thailand showed that peer influence has a significant impact on the initiation to alcohol consumption among youth [Singkorn 2019). This major problem that is affecting healthy life style among young people but extend to adulthood.

RECOMMENDATION

The reduction of harmful alcohol consumption should be integrated into the Global Action Plan of any government at all levels for the Prevention and Control Therefore, counselling centres in all higher institution must active and more proactive and help students who exhibit the symptoms of depression or experience feelings of hopelessness. Intervention strategies that alleviate these feelings may be effective in preventing alcohol consumption among students of higher learning. Government should promote and create more awareness through media and seminars on the mental health among students of higher learning.

Moreover, awareness campaigns that rely on media and peer education should be developed to facilitate positive behavioural changes among students of higher learning.

CONCLUSION

In conclusion, although alcohol is an important psychoactive substance used daily in the production and preservation of many useful and important materials, food items, and many more that are consumed by humans daily, the ingestion of alcoholic herbal drinks and beverages should be limited and be consumed in moderation. Because excessive and continuous consumption of it will definitely lead to the occurrence of serious health issues and diseases in the life of its consumers.

REFERENCES

- 1. Shaik M.I, Hamdi I.H, Sarbon N.M (2023). A comprehensive review on traditional herbal drinks: Physicochemical, phytochemicals and pharmacology properties of Food *Chemistry Advances* 3, 100460.
- 2. Ekor, M. (2014). The growing use of herbal medicines: Issues relating to adverse reactions and challenges in monitoring safety. Frontiers in Pharmacology, 4, 177. https://doi.org/10.3389/fphar.2013.00177.
- 3. Barazesh Solmaz (2009). An Ancient Remedy: Bitters Herbs and Sweet Wine www.sciencenews.org.
- 4. Eze CU, Uzoeghe UI (2015). Alcohol use among full-time students of the University of Abuja. *Int J Emerge Mental Human Resilience*; 17(1):283-7.
- 5. Araba, Sola (2014). Danger in a bottle. www.thecapital.ng/index.php/living/ 1056.
- 6. WHO (2024). https://www.who.int/news-room/fact-sheets/detail/alcohol 28 June 2024
- 7. World Health Organization (2018). Global status report on alcohol and health 2018. Geneva: World Health Organization.
- 8. Getahun Boltana, Mesfin Markos Kacharo, Amene Abebe, Daniel Baza (2023). Alcohol consumption and associated factors among undergraduate regular students in Wolaita Sodo University, Southern Ethiopia, 2021: a cross-sectional study. *Pan African Medical Journal*;45(192). 10.11604/pamj.2023.45.179.35980
- 9. Griswold MG, Fullman N, Hawley C, Arian N, Zimsen SR, Tymeson HD, et al.(2018). Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the global burden of disease study 2016. *Lancet*. (2018) 392:1015–35. doi: 10.1016/S0140-6736(18)31310-2, PMID: [DOI] [PMC free article] [PubMed] [Google Scholar.
- 10. Bockerman P, Hyytinen A, Maczulakj T. (2015). Alcohol consumption and long-term labor market outcomes. *Health Econ.*: 26(3): 275-91.
- 11. GBD (2018). Alcohol collaborators. Alcohol use and burden for 195countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease study 2016. *Lancet*.2018.392.1015-35.
- 12. National Institute on Alcohol Abuse and Alcoholism (2014). Alcohol facts and Statistics. Overview of alcohol consumption, ,11:6
- 13. Fang Wang 1, Yu-Jie Zhang 1, Yue Zhou 1, Ya Li 1, Tong Zhou 1, Jie Zheng 1, Jiao-Jiao Zhang 1, Sha Li 2, Dong-Ping Xu 1, Hua-Bin Li 1,3 (2016). Effects of Beverages on Alcohol Metabolism: Potential Health Benefits and Harmful Impacts *Int J Mol Sci.* 2016 Mar 9;17(3):354. doi: 10.3390/ijms17030354.
- 14. GurejeS, Lasebikan V. Alcohol beverages type, problem drinking and self reported health status. *Nigeria J psychiatry* 2015; 4 (1): 4-8.
- 15. Umoh, O.O, Obot, P.P., &Obot, 1. (2012). Perception of alcohol availability, promotion and policy by Nigerian University students. (null) *African Journal of Drug Alcohol Studies*, 11(2), 107-116.
- 16. Keenan K, Saburona L, Bobrova N, Elbourne D, Ashwin S, Leon DA (2015) Social factors influencing Russian Male Alcohol use over the Life course: A qualitative study investigating Age based social Norms, Masculinity, and workplace context. *PLOS ONE* 10(11): e0142993: 10.1371/Journal.Pone.0142993.
- 17. Samuel Maling Jerome Kabakyenga Charles Muchunguzi Eunice Apio Olet Paul Erasmus Alele (2023) . Treatment outcomes of alcohol use disorder by traditional

- medicine practitioners using plant derivatives in southwestern Uganda: findings from indepth interviews. *Front Psychiatry*; 14:1185108. doi: 10.3389/fpsyt.2023.1185108
- 18. WHO (2017). Alcohol facts and statistics. National survey on Drug use and Health (NSDUH).
- 19. Shaikh Fatima, Khalil Ahmed Channa, Gul Afshan, Murk Memon, (2023). The Influence of Financial Assistance on Student's Academic Achievement: A Case-Based Research Study. *iafor The International Academic Forum* www.iafor.org
- 20. Ganem, N. M., & Manasse, M. (2011). The Relationship between Scholarships and Student Success: An Art and Design Case Study <u>Education Research International</u> 2011(3) DOI: 10.1155/2011/743120
- 21. Boden JM, Fergusson DM (2011). Alcohol and depression Addiction. *Epub* 106(5):906-14 doi: 10.1111/j.1360-0443.2010.03351.x.
- 22. Lamyaa Ben Eljillahi, Bouchra. Benezzouz, Aboubaker EL Hesseni, Ali Ouichou & Abdelhalem Mesfioui (2020) Prevalennce of alcohol consumption and alcholol use disorders among middle & high school students in the province of Khemisset, Morroco: a cross sectional study, 25:1, 638-648,D01: 10.1080102673843.2019.1700807.
- 23. Garcia Ruiz C, Fernandez Checa JC. (2013). To binge or not to binge: Binge drinking disruts glucose. Homeostasis by impairing hypothalamic but not liver insulin sign aling. *Hepatology*; 57: 2535-238.
- 24. WHO (2014). Alcohol and inequalities Guidance for addressing inequities in alcohol-related harm. Copenhagen: WHO Regional Office for Europe.
- 25. World health organization. (2015). Global status report on alcohol health.
- 26. Rehm J, Gmel GE Sr, Gmel G, Hasan OSM, Imtiaz S, Popova S et al.(2017). The relationship between different dimensions of alcohol use and the burden of diseasean update. Addiction. *Addiction*;112(6):968-1001. PubMed | Google Scholar
- 27. Hein Htet, Yu Mon SawID, Thu Nandar Saw, Nang Mie Mie HtunID, Khaing Lay Mon, Su Myat Cho, Thinzar Thike,, Aye Thazin Khine, Tetsuyoshi KariyaID, Eiko Yamamoto, Nobuyuki Hamajima (2020). Prevalence of alcohol consumption and its risk factors among university students: A cross-sectional study across six universities in Myanmar. *PLoS ONE* 15(2): e0229329. https://doi.org/10.1371/journal.pone.022932
- 28. Ajilore O, Amialchuk A, Egan K.(2016). Alcohol consumption by youth: Peers, parents, or prices? *Econ Hum Biol*; 23:76–83. https://doi.org/10.1016/j.ehb.2016.07.003 PMID: 27507725.
- 29. Chauke TM, van der Heever H, Hoque ME.(2015). Alcohol use amongst learners in rural high school in South Africa. *Afr J Prim Health Care Fam Med*. 2015; 7(1):755. https://doi.org/10.4102/phcfm.v7i1.755 PMID: 26466397.
- 30. Singkorn O, Apidechkul T, Putsa B, Detpetukyon S, Sunsern R, Thutsanti P, et al.(2019). Factor associated with alcohol use among Lahu and Akha hill tribe youths, northern Thailand. *Subst Abuse Treat Prev Policy*; 14(1):5. https://doi.org/10.1186/s13011-019-0193-6 PMID: 3067.