

SUBSTANCE USE IN A UNIVERSITY POPULATION: THE IMPLICATIONS OF PERCEIVED SOCIAL ANXIETY AND DEPRESSION

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ABSTRACT

The rate at which young people indulging in substance use is becoming distressing and have raised critical public health concerns globally especially among undergraduate students. Substance use is defined as taking a substance into the body for an intended purpose, such as behavioural or emotional change. According to, substance users are individuals who have rejected imposed cultural goals and the means to achieve those goals. Alcohol, cocaine, heroin, methamphetamine, and tobacco/nicotine among many others have been the major substances used among adolescents and young adult population especially in Nigeria. According to use of substances may occur without having a significant impact on an individual's functioning, but when tolerance is built and use increases, even at the expense of work or school, relationships, or one's own health or safety, this can indicate a substance use disorder.

Keywords: Substance use among university students, social anxiety, Depression, Mental health, young adults, substance use disorder

1.0 INTRODUCTION

Substance use disorders are characterized by a growing addiction or dependence on the substance, and an inability to curb one's use. Substance use by young people is a serious social concern because of its negative impact on both social function and individual brain development. It has been observed that many of these substances used by young people can alter a person's thinking and judgment and can lead to health risks, including addiction, drugged driving, infectious disease, and adverse effects on the victims. For example, World Health Organization in 2016, alcohol alone was responsible for 3 million deaths and 132.6 million disability-adjusted life years worldwide. Reports suggest that alcohol has been found to be the most commonly used substance, followed by cannabis and cigarettes among students both in colleges and tertiary institutions.

Several factors have been linked to substance use problems and social anxiety has been largely reported to be associated with substance use. Social anxiety refers to a condition where individuals fear and tend to avoid social and performance situations in which they anticipate negative evaluations by others. Individuals with social anxiety tend to perceive social situations as dangerous and fear scrutiny from others, which leads to feelings of anxiety. Though, it is normal to experience occasional mild discomfort and anxiety in a new social situation or public engagement. However, when this emotion becomes a marked and persistent fear causing

distress or leading to avoidance of certain situations, the physician should consider a diagnosis of social anxiety disorder, a condition previously termed social phobia. People with social anxiety disorder may misuse substances to try to reduce their anxiety. Individuals may turn to substances as a form of self-medication to cope with social fears. However, the symptoms of substance intoxication or withdrawal, such as trembling, can also intensify social anxiety and depressive symptoms.

Depression is a common and easily neglected mental illness. It has become a major factor of mental disability worldwide, especially among young and middle-aged individuals. Depression is a common type of mood disorder characterized by significant and lasting depression. It has the characteristics of chronic, recurrent, persistent, and high suicide rates. Major depressive disorder may be characterized by severe anxiety and social isolation, and is also associated with neuro-vegetative signs and symptoms that are not typical of social anxiety disorder; such sleep and appetite changes, anhedonia or lack of ability to feel pleasure, and suicidal thinking. Though, human beings are prone to mood changes from time to time but persistent and chronic feeling of dejection, sadness and worthlessness can be an indication of problem in health condition and depressive disorder.

2.0 STATEMENT OF PROBLEM

Substance use and misuse has become a crucial issue that governments, drug law enforcement agencies, health care practitioners and non-governmental organizations have continued to express concern over the increase level of substance use and abuse among young people globally including Nigerian youths. In the case of Nigeria, substance use is becoming increasingly widespread and a substantial percentage of the national budgetary health allocation is utilized for treatment and rehabilitation of people with substance use problems. The various reports of rapid situation assessments of substance use in the country show a picture of widespread consumption of cannabis (10.8%), followed by psychotropic substances (mainly the benzodiazepines and amphetamine-type stimulants) 10.6% and to a lesser extent heroin (1.6%) and cocaine (1.4%) in both the urban and rural areas. The use of volatile organic solvents (.05%) is reported to becoming popular, especially among the street children, in-school youth and women. Thus, concerns for the control of substance use and misuse have become a major issue. Although there are many investigations on how social and psychological factors contribute to substance use among young people in the past, however, very few studies have been conducted on the influence of social anxiety and depression on substance abuse especially among Nigeria undergraduate students' population. Hence, this study is motivated to investigate the predictions of social anxiety and depression on substance use among undergraduates of Adekunle Ajasin University, Ondo State.

2.1 Objective of the Study

The objective of this study is to investigate the predictions of social anxiety and depression on substance use among university undergraduates. However, the specific objectives of this study are to:

1. Investigate the extent to which social anxiety predict substance use among undergraduates.
2. Ascertain the extent to which depression predict substance use among undergraduates.

3. Examine the joint predict of social anxiety and depression on substance use among undergraduates.

2.2 Relevance of the Study

The significance of this study centered on the need to sensitize and raise awareness about substance use, identifying its hazardous effects on human health, most especially, its enlightenment on how social anxiety and depression contributed to substance use. This will enhance students' knowledge on how to identify the symptoms of social anxiety and depression in order to seek for professional help at early stage. The outcome of this study will enhance our understanding on treatment and intervention of substance use and misuse in order to apply accurate and effective therapy. Also, the outcome of this study will help university management and government to implement effective policies that will possibly prevents and control substance use among tertiary students.

3.0 LITERATURE REVIEW

3.1 Social Learning Theory of Substance Use

Social Learning Theory by posits that by observing others who engage in substance use, people gain insight and knowledge of rules, beliefs and attitudes associated with the behaviour. They learn through observing the usefulness and effectiveness of the behaviour as well as the consequences of the modeled behaviour. They then act in relation to the said consequence based on the expected outcome. However, social learning theory proposes that behaviour is influenced by environmental factors, thus assuming that specific behaviour develops as a result of psychological and environmental factors. It proposes that people learn from one another by observational learning, imitation and modeling. It explains human behaviours in terms of continuous reciprocal interactions between cognitive, behavioural and environmental influences. In using this theory to understand the relationship between substance abuse and learned behaviour. Social learning theory bases its assumption on three principles which are observational learning that occurs through modelled behaviour being structured, rehearsed and enacted, as the modelled behaviour becomes encoded into words, labels or images. For instance, young people choose to actively engage in substance abuse and model their peers or role models. Youths' engagement in substance abuse such as alcohol, cigarette, and marijuana may be related to several factors, such as peer pressure and lack of parental or adult supervision.

4.0 REVIEW OF RELATED EMPIRICAL STUDIES

4.1 Social Anxiety and Substance Use

Examined the predictive ability of social anxiety and cannabis use expectancies on cannabis use among college students in American states. The study was carried out among 125 undergraduate students currently enrolled in a college or university in the United States, recruited through Amazon Mechanical Turk. The researcher found that social anxiety symptoms and positive cannabis use expectancies predicted cannabis use among college students. Fear of negative evaluation and fear of positive evaluation which are components of social anxiety were found to be significant predictors of alcohol use, but their influence did not extend to cannabis use among college students. Tested a sequential mediation model of the

cognitive (fear of negative evaluation) and behavioral (protective behavioral strategies) mechanisms to predict whether fear of negative evaluation predicts the drinking behaviors of students with social anxiety and found that fear of negative evaluation accounted for the relationship between interaction social anxiety disorder and alcohol-related negative consequences.

Explored the relationship between fear of positive evaluation and alcohol use problems among college students in the United States. The study was carried out among 351 undergraduate students from two American universities. They found that fear of positive evaluation significantly predicted alcohol use problems, above and beyond fear of negative evaluation. Examined the relationship between drinking problems and social anxiety among college students. The findings revealed that social anxiety symptoms for college students are related to heavier drinking behaviors in social situations and more drinking problems as compared to those who do not experience social anxiety symptoms.

Similarly, conducted a meta-analysis to examine the relationship between social anxiety and alcohol variables in college students. They found that individuals with high social anxiety tend to report greater drinking behaviors to cope in social situations. Furthermore, social anxiety correlated with alcohol use variables and college students with high social anxiety drank less frequently, consumed less alcohol, and consumed fewer drinks. Examined the positive association between anxiety disorders and cannabis use or cannabis use disorders in a general population-a meta-analysis of 31 studies. The study sample comprised of 112,000 individuals selected from 10 countries. The findings showed that there was a positive association between anxiety and cannabis use and cannabis use disorders, even after controlling for demographics.

4.2 Depression Anxiety and Substance Use

A research was carried out by to determine whether there is a relationship between depression and drug abuse among students in Calabar, Cross River State in Nigeria, and the study sample consisted of 190 students who successfully participated in the research study. Their findings revealed that there was an increased prevalence of depression and abuse of drugs among the students. Further analysis revealed that there was a statistically significant relationship between depression and drug abuse. From the findings, the researchers recommended that schools and homes should be made friendlier to students, so that they can comfortably open up about their challenges to parents, guardians, or teachers. In a study conducted in Spain, investigated the relationship between substance use and depression among the adolescents. The study analyzed the consumption of cannabis, tobacco and alcohol in relation to the existence of depressive symptoms in a sample of school going adolescents. The study findings showed that high scores in depressive symptoms had an association with the consumption of alcohol and tobacco. However, there was no association to the use of cannabis. Examined the relationships between substance use, anxiety, depression and stress by public university workers. The study was carried out among 345 workers from a public higher education institution, located in a city in the interior of the state of Rio Grande do Sul, Brazil. These authors found that the use of alcohol in the binge pattern (monthly) and heavy episodic drinking (weekly) were higher among workers with higher levels of anxiety, depression and stress. Examined the effect of substance abuse on depression, anxiety, and stress among epileptic patients in Iran. The study sample comprised of seventy-nine epileptic patients with a history of substance abuse who are referred

to Farabi Medical Center in Kermanshah in Iran during 2018–2019, and 41 epileptic patients with no history of substance abuse. The findings showed that psychological symptoms had an important role in the development of addiction among epileptic patients. Symptoms of depression, anxiety and stress had significant effect in the tendency of epileptic patients to use and abuse drugs.

4.3 Hypotheses

The following hypotheses were tested in this study:

H1: Social anxiety will significantly predict substance use among undergraduate students of Adekunle Ajasin University.

H2: Depression will significantly predict substance use among undergraduate students of Adekunle Ajasin University.

H3: Social anxiety and depression will jointly predict substance use among undergraduate students of Adekunle Ajasin University.

5.0 METHOD

5.1 Research Design

A survey design was used for the study. A survey is proposed for this study, because a structured questionnaire will be used to gather information from the participants. The dependent variable is substance use. The independent variables are social anxiety and depression.

5.2 Participants

Using purposive and convenience sampling techniques, a total of two hundred and fifty (273) students comprised of 142 males (51.4%) and 131 females (47.5%) were sampled from the study population in Adekunle Ajasin University, Akungba Akoko, Ondo State. Participants' age as at the time of data collection ranged between 15 to 32 years (Mean =21.18; SD = 3.19). Also, the faculties indices of the participants showed that 47(17.0%) were from Sciences, 55(20.3%) belonged to Education, 63 (22.8%) Social Sciences, 19(6.0%) Agriculture, 50(18.1%) Art, 19(6.9%) Law, 16(5.8%) Management and Administration, and 3(1.1%) Environment. The academic level of the participants was; 100 level; 81 (29.3%), 200 level; 75 (27.2%), 300 level; 54 (19.6%), 400 level; 42 (15.2%), and 500 level; 21 (7.6%).

5.3 Instruments

The instruments used in gathering information in this study are questionnaires. The questionnaires comprised of five sections: section A, B, C, and D. The section A consisted of socio-demographic to gather information, which will include age, gender, level, and faculty. Substance Use Scale: Substance use was measured using Drug Use Scale (DAST-20), developed by [36]. It consists of 20 items. The instrument is rated on Yes or No scale (1=Yes, 2= No). Sample items on the scale include: “have you used drugs other than those required for

medical reasons? “. “Do you ever feel bad or guilty about your drug use?” High score of the scale indicate high substance use while low score implies low substance use. The Cronbach alpha obtained in this study is .88

Social Anxiety Scale: Social anxiety was measured using Liebowitz Social Anxiety Scale developed by Liebowitz, et al., (2003). It consists of 24 items scale. The instrument is rated on 4-point Likert scale: 0= Never 1= Occasionally 2= Often 3= Usually. Sample of items include: “Eating in public places”. “Expressing a disagreement or disapproval to people you don’t know very well. High score indicate high social anxiety while low score indicates low social anxiety. The Cronbach alpha obtained in this study is .83

Depression Scale: Depression was measured using Zung Self-Rating Depression Scale developed by Zung, (1965). It consists of 20 items scale. The instrument is rated on 4-point Likert scale: 1=A little of time, 2= Some of the time, 3= Good part of the time 4= Most part of the time. Sample items on the scale include: “I feel down-hearted and blue.” “My heart beat faster than usual”. High score indicate high depression, while low score indicates low depression. The Cronbach alpha obtained in this study is .76

5.4 Procedure

The researcher sought permission from lecturers of the targeted sample by making her intention of coming known to them, and the purpose of the study was also explained to the participants. Questions about the study and why their participation is important were entertained and convincing responds was given which gave the researcher the approval to administer the questionnaires. In addition, the respondents were informed that there is no right or wrong answers, and as such should try to be honest as possible in their responses as they were also given assurance of confidentiality and anonymity of their identities and responses. Purposive sampling technique was used to select departments, while accidental sampling technique was used in selecting the students that participated in the study. The process of data collection took about two weeks. 300 copies of questionnaires were carefully administered to the participants, and 273 were retrieved and found usable for the analysis. This yielded 91% response rate from the participants.

5.5 Data Analysis

In order to determine the extent and direction of relationship among the study variables, Pearson Product Moment Correlation (PPMC) was used while Multiple Regressions Analysis was used to test the study hypotheses.

6.0 RESULTS

6.1 Test of Relationships

To test the extent and direction of the relationship that exist among the study variables Correlation Analysis was used. The results are presented in the table below.

Table 1: Summary of Correlation Analysis Showing the Relationship among the Study Variables

Variables	1	2	3	4	5
1. Age	1				
2. Gender	-.15*	1			
3. Social Anxiety	.17**	.10	1		
4. Depression	.08	-.13*	.23**	1	
5. Substance Use	-.11	-.14*	.10	.31**	1
Mean	21.18	-	28.34	48.32	47.41
SD	3.19	-	10.21	8.51	12.03

** $p < 0.01$, * $p < 0.05$, $N = 273$

The results in Table 4.1 showed that there was no significant relationship between age and substance use [$r(273) = -.11$, $p > .05$], meaning that substance use is not influenced by age. However, there was a significant negative relationship between gender and substance use [$r(273) = -.14$, $p < .05$]. This implies that substance use is determined by gender. Also, social anxiety had no significant relationship with substance use [$r(273) = .10$, $p > .05$]. This implies that social anxiety is not connected with substance use. Furthermore, depression had a significant relationship with substance use [$r(273) = .31$, $p < .05$]. This implies that depression is a determinant of substance abuse.

Test of Hypotheses

Table 2: Summary of Multiple Regression Analysis Showing the Prediction of Social Anxiety and Depression on Substance Use

Criterion Variable	Predictors	β	t	R	R ²	df	F
				.31	.10	2,273	14.60**
Substance Use	Social Anxiety	.03	.53				
	Depression	.30	5.11**				

The result in Table 2 showed that social anxiety had no significant prediction on substance use [$r(2,273) \beta = .03$, $p > .01$]. This implies that substance use is not determined by social anxiety of undergraduates. The result negates the hypothesis 1 and it was rejected.

Also, the result in the table 2 showed that depression had a significant positive prediction on substance use [$r(2,273) \beta = .30$, $p < .01$]. This implies that highly depressed individuals are more likely to engage in substance use. The result is in support of hypothesis 2 and it was accepted. Furthermore, the joint prediction of social anxiety and depression on substance use was significant [$F(2, 273) = 14.60$, $p < .01$]. This shows that social anxiety and depression jointly contributed 10% changes to substance use. The R value of .31 shows a positive relationship between the independent variables (social anxiety and depression) and substance use. This result confirmed hypothesis 3 and the hypothesis was therefore, accepted.

7.0 DISCUSSION

This study examined the predictions of social anxiety and depression on substance use among university undergraduates of Adekunle Ajasin University, Akungba-Akoko Ondo state. Hypothesis one which stated that social anxiety will significantly predict substance use among undergraduate students of Adekunle Ajasin University was not confirmed. This implies that social anxiety is not a determinant of substance use among undergraduates. The result negated the previous finding carried out in America by on predictive ability of social anxiety and cannabis use expectancies on cannabis use among college students in American states. The researcher found that social anxiety symptoms and positive cannabis use expectancies predicted cannabis use among college students. Fear of negative evaluation and fear of positive evaluation which are components of social anxiety were also found to be significant predictors of alcohol use, but their influence did not extend to cannabis use among college students. Similarly, the study negates the findings of on the relationship between social interaction anxiety, Alexithymia, and drinking motives among Australian university students. The findings indicated that social interaction anxiety was positively related with problematic drinking and coping motives for drinking. Also, alexithymia mediated the relationship of social interaction anxiety with coping motives. One explanation for this contrasting finding could be the legalization of substance use in many countries. The current study only used data from participants who lived in a state where some substances are considered illegal for consumption. Individuals living in these countries may have more accessibility to drugs and may engage in greater substance use to cope with symptoms of social anxiety.

Hypothesis two which stated that depression will significantly predict substance use among undergraduate students of Adekunle Ajasin University was confirmed. This implies that substance use is determined by depression among undergraduates. The result concurred with the findings of a similar study carried out in Nigeria among students in Calabar, Cross River State in Nigeria on relationship between depression and drug abuse. Their findings revealed that there was an increased prevalence of depression and abuse of drugs among the students. Further analysis revealed that there was a statistically significant relationship between depression and drug abuse. The result also concurred with the findings of on the association between anxiety, depression, and substance experimentation in childhood. The findings revealed that children with either depressive or anxiety disorders were significantly more likely to experiment with alcohol or tobacco. However, children with both depressive and anxiety diagnoses were not more likely to experiment than children without a diagnosis.

Hypothesis three which stated that social anxiety and depression will jointly predict substance use among undergraduate students of Adekunle Ajasin University was confirmed. This implied that social anxiety and depression jointly contributed to substance use among undergraduates. The result is in support of findings on the prevalence and predictors of depressive and anxiety symptoms in a sample of women who use drugs in Tanzania. Their findings indicated that depressive and anxiety symptoms were high among the study sample, with higher reports of symptoms of depression than anxiety. Also, there was a significant connection between the symptoms of depression and anxiety on drug use. The result also concurred with the findings of the effect of loneliness and drug craving between anxiety and depression among substance abusers in China. The findings showed that loneliness had a significant positive correlation with anxiety and depression. Drug craving had a significant positive correlation with anxiety

and depression. Also, there was a significant positive correlation between substance abusers in male's anxiety, loneliness, drug craving, and depression. Loneliness and drug craving had a significant mediating effect on the relationship between anxiety and depression.

8.0 CONCLUSION

The findings of this study showed that social anxiety did not predict substance use among undergraduates. However, depression significantly predicted substance use among undergraduates. Also, social anxiety and depression jointly predicted substance use among undergraduates.

8.1 Recommendations

Based on the findings of this study, it therefore suggested that:

- i. The availability and accessibility of mental health services should be put in place by the university management, and should be made mandatory for students to regularly go for mental checkup.
- ii. Also, sanction and punishment should be enforced by the management against any students found using substance.
- iii. Sensitization programs should also be carried out to educate students on positive ways of coping with life stress that may likely affect their mental health, and the danger of engaging in substance use to cope.
- iv. Likewise, students need to be educated on helping their fellow who may be going through depression by reporting to the appropriate channel in the school for quick intervention.

8.2 Limitations

The limitation observed in this research is common to all other research work. The sample size used for this work is too small and this might affect the strength of the result to be generalized. It is therefore suggested that, for the purpose of future study, a large number of participants should be considered to arrive at a better result for the purpose of generalization. More so, undergraduates of other universities could be considered.

REFERENCE

- Gordon, K. Kutwayo, A. & Frade, S. (2021). Socio-demographic and social support factors related to substance use in South African in-school adolescents: Insights from the Girls Achieve Power (GAP Year) trial in three peri-urban settings [version 1; peer review: 2 approved] Gates Open Research, 5(154), 1-12.
<https://doi.org/10.12688/gatesopenres.13422.1>.
- Marshall, B. & Spencer, J. (2018). Defining substance use, misuse, and abuse: examining the continuum. In B. Marshall, & J. Spencer, Fast facts about substance use disorders. New York: Springer Publishing Company. 3-18.
<https://doi.org/10.1891/9780826161239>.

- Motyka, M.A. & Al-Imam, A. (2022). Causes of drug initiation among adolescents. *Canadian Journal of Family & Youth*, 14(1), 63-81. <https://journals.library.ualberta.ca/cjfy/index.php/cjfy/article/download/29755/21690/78436>
- Adamson, T.A. Onifade, P.O. & Ogunwale, A. (2019). Trends in sociodemographic and drug abuse variables in patients with alcohol and drug use disorders in a Nigerian treatment facility. *West African Journal of Medicine*, 29(1), 12–18. <https://www.ajol.info/index.php/wajm/article/view/55947>
- American Psychiatric Association (2016). The diagnostic and statistical manual of mental disorders (DSM-5). American Psychiatric Publishing, San Francisco, CA. retrieved from: [https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20%20DSM-5%20\(%20PDFDrive.com%20\).pdf](https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20%20DSM-5%20(%20PDFDrive.com%20).pdf)
- Shau, S. & Zhou, R. (2021). The relationship between drug addiction and adolescent cognitive development. *Advances in Social Science, Education & Humanities Research*, 638. <https://doi.org/10.2991/assehr.k.220110.218>
- Commonly Used Drugs Charts, (2020, August 20). National Institute on Drug Abuse. Retrieved on 8th November, 2023 from: <https://www.drugabuse.gov/drugtopics/commonly-used-drugs-charts>
- World Health Organization (2018). Harmful use of alcohol kills more than 3 million people each year, most of them men. Retrieved from: <https://www.who.int/news/item/21-09-2018-harmful-use-of-alcohol-kills-more-than-3-million-people-each-year--most-of-them-men>
- Manu, E. & Maluleke, X.T. (2017). Learners substance abuse at school in selected high schools in East London of South Africa. *International Journal of Educational Science*, 19(1), 15–23. [http://krepublishers.com/02-Journals/IJES/IJES-19-0-000-17-Web/IJES-19-1-000-17-Abst-PDF/IJES-19-01-015-17-1017-Manu-E/IJES-19-01-015-17-1017-Manu-E-Tx\[4\].pmd.pdf](http://krepublishers.com/02-Journals/IJES/IJES-19-0-000-17-Web/IJES-19-1-000-17-Abst-PDF/IJES-19-01-015-17-1017-Manu-E/IJES-19-01-015-17-1017-Manu-E-Tx[4].pmd.pdf)
- Mohale, D. & Mokwena, K.E. (2020). Substance use amongst high school learners in the south of Johannesburg: Is this the new norm? *South African Family Practice*, 62(1): e1–e6. <https://doi.org/10.4102/safp.v62i1.5122>
- Mulligan, E.J. George, A.M. & Brown, P.M. (2016). Social anxiety and drinking game participation among university students: The moderating role of drinking to cope. *Amercian Journal of Drug & Alcohol Abuse*, 42(6), 726-734. <https://doi.org/10.1080/00952990.2016.1188934>.
- Aderka, I. M., Haker, A., Marom, S., Hermesh, H., & Gilboa-Schechtman, E. (2013). Information-seeking bias in social anxiety disorder. *Journal of Abnormal Psychology*, 122(1), 7–12. <https://doi.org/10.1037/a0029555>.

- Jefferies, P., & Ungar, M. (2020). Social anxiety in young people: A prevalence study in seven countries. *PLoS ONE*, 15(9), 1–18. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239133>
- National Collaborating Centre for Mental Health (UK) (2013). *Social Anxiety Disorder: Recognition, Assessment and Treatment*. Leicester (UK): British Psychological Society (UK). <https://pubmed.ncbi.nlm.nih.gov/25577940/>
- Al-Khair, F.A. (2023). Substance abuse, depression, and social anxiety: Case study and application of cognitive psychotherapy. *Hindawi Case Reports in Psychiatry*, 3(5), 1-5. <https://doi.org/10.1155/2023/3430636>
- Vos, T., Abajobir, A.A., Abbas, K.M., & Abd-Allah, F. (2017). Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the global burden of disease study 2016. *The Lancet*, 390(10100), 1211–1259. [https://doi.org/10.1016/S0140-6736\(17\)32154-2](https://doi.org/10.1016/S0140-6736(17)32154-2).
- American Psychiatric Association (APA) (2013). *Diagnostic and statistical manual of mental disorders*. Fifth Edition. Arlington, VA: American Psychiatric Association. Retrieved from: [https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20%20DSM-5%20\(%20PDFDrive.com%20\).pdf](https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20%20DSM-5%20(%20PDFDrive.com%20).pdf)
- Wang, Y., Tian, L., Guo, L., & Huebner, E. S. (2020). Family dysfunction and adolescents' anxiety and depression: A multiple mediation model. *Journal of Applied Developmental Psychology*, 66, Article 101090. <https://doi.org/10.1016/j.appdev.2019.101090>
- Salik, I., & Marwaha, R. (2022). *Electroconvulsive Therapy*. 2022 Sep 19. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan–. PMID: 30855854. <https://www.ncbi.nlm.nih.gov/books/NBK538266/>
- Jatau, A., I., Sha'aban, A., Gulma K. A., Shitu, Z., Khalid, G. M., Isa, A., Wada A., S., & Mustapha, M. (2021). The burden of drug abuse in Nigeria: A scoping review of epidemiological studies and drug laws. *Public Health Reviews*, 42. <https://www.ssphejournal.org/journals/public-health-reviews/articles/10.3389/phrs.2021.1603960>
- Makanjuola, A. B., Daramola, T. O., & Obembe, A. O. (2007). Psychoactive substance use among medical students in a Nigerian university. *World Psychiatry*, 6(2):112-4. <https://pmc.ncbi.nlm.nih.gov/articles/PMC2219911/>
- United Nations Office on Drugs and Crime (2018). *Substance abuse in Nigeria*. retrieved from: https://www.unodc.org/documents/data-and-analysis/statistics/Drugs/Drug_Use_Survey_Nigeria_2019_BOOK.pdf

- NIDA. (2020). Drug misuse and addiction. Retrieved from <https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drug-misuse-addiction>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A., & National Inst of Mental Health. (1986). Social foundations of thought and action: A social cognitive theory. Prentice-Hall, Inc. <https://www.scirp.org/reference/referencespapers?referenceid=1536371>
- Pant, D. (2023). Social anxiety and substance use in college students: Understanding the potential role of substance use expectancies and fear of evaluation. Masters Theses, 5000 <https://thekeep.eiu.edu/theses/5000>
- Villarosa-Hurlocker, M. C., Whitley, R. B., Capron, D. W., & Madson, M. B. (2018). Thinking while drinking: Fear of negative evaluation predicts drinking behaviors of students with social anxiety. *Addictive Behaviors*, 78, 160–165. <https://doi.org/10.1016/j.addbeh.2017.10.021>
- Howell, A. N., Buckner, J. D., & Weeks, J. W. (2016). Fear of positive evaluation and alcohol use problems among college students: the unique impact of drinking motives. *Anxiety, Stress, & Coping*, 29(3), 274–286. <https://doi.org/10.1080/10615806.2015.1048509>.
- Terlecki, M. A., Ecker, A. H., & Buckner, J. D. (2014). College drinking problems and social anxiety: The importance of drinking context. *Psychology of Addictive Behaviors*, 28(2), 545–552. <https://doi.org/10.1037/a0035770>
- Schry, A., & White, S. (2013). Understanding the relationship between social anxiety and alcohol use in college students: A meta-analysis. *Addictive Behaviors*, 38, 2690-2706. <https://doi.org/10.1016/j.addbeh.2013.06.014>
- Kedzior, K. K., & Laeber, L. T. (2014). A positive association between anxiety disorders and cannabis use or cannabis use disorders in the general population: A meta-analysis of 31 studies. *BMC Psychiatry*, 14:136. <https://doi.org/10.1186/1471-244X-14-136>.
- Njoku, J. N. & Obogo, G. O. (2017). Prevalence of depression and its relationship with drug abuse among senior secondary school students in Calabar, Calabar Cross River state, Nigeria. *Global Journal of Educational Research*, 16(2), 15-17. <https://doi.org/10.4314/gjedr.v16i2.10>
- Espada, J. P., Sussman, S., Medina, T. B., & Alfonso, J. P. (2011). Relation between substance use and depression among Spanish adolescents. *International Journal of Psychology & Psychological Therapy*, 11(1), 79-90. <https://www.ijpsy.com/volumen11/num1/283.html>
- Carmo, D. R., Siqueira, D. F., Mello, A. L., Freitas, E. O., Terra, M. G., Cattani, A. N., & Pillon, S. C. (2020). Relationships between substance use, anxiety, depression and

- stress by public university workers. *Rev Bras Enferm*, 19;73 Suppl 1(Suppl 1): e20190839. English, Portuguese. <https://doi.org/10.1590/0034-7167-2019-0839>.
- Farnia, V., Afshari, D., Abdoli, N., Farnaz, R., Moradinazar, M., Alikhani, M., Behrouz, B., Khodamoradi, M., & Farhadian, N. (2021). The effect of substance abuse on depression, anxiety, and stress (DASS-21) in epileptic patients. *Clinical Epidemiology and Global Health*, 9, 128-131. <https://doi.org/10.1016/j.cegh.2020.08.001>.
- Skinner, H. (2001). Assessment of substance abuse: Drug abuse screening test (DAST). *Encyclopedia of Drugs, Alcohol, and Addictive Behaviors*. 147-148. https://odh.ohio.gov/wps/wcm/connect/gov/db243c91-5fcc-4b6e-b421-2ff8d64b30b7/Substance+Abuse+Screen+%28DAST-20%29.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-db243c91-5fcc-4b6e-b421-2ff8d64b30b7-n5rNH7M
- Beard, C., Rodriguez, B. F., Moitra, E., Sibrava, N. J., Bjornsson A, Weisberg RB, Keller MB. Psychometric properties of the Liebowitz Social Anxiety Scale (LSAS) in a longitudinal study of African Americans with anxiety disorders. *Journal of Anxiety Disorder*, 25(5):722-6. <https://doi.org/10.1016/j.janxdis.2011.03.009>.
- Lyvers, M., McCann, K., Coundouris, S., Edwards, M. S., & Thorberg, F. A. (2018). Alexithymia in relation to alcohol use, emotion recognition, and empathy: The role of externally oriented thinking. *The American Journal of Psychology*, 131(1), 41–51. <https://doi.org/10.5406/amerjpsyc.131.1.0041>
- Klein RJ, Gyorda JA, Jacobson NC (2022) Anxiety, depression, and substance experimentation in childhood. *PLoS ONE* 17(5): e0265239. <https://doi.org/10.1371/journal.pone.0265239>
- Saleem, H.T. West, N.S. & Likindikoki, S. (2023). Prevalence and predictors of depressive and anxiety symptoms in a sample of women who use drugs in Tanzania: the key role of drug use stigma. *BMC Psychiatry*, 23(517), 1-9.