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Associations between Emotional Dysregulation and Psychoactive Substance Use among Selected University Undergraduates in Osun State, Nigeria

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Abstract

The use of opioids and other psychoactive substances on the university campus is a major concern. Despite its obvious negative consequences, the prevalence of opioid misuse and its association with emotional dysregulation has not been given adequate research attention. However, different universities have policies on the use of psychoactive substances. This study was set out to bridge the above gap in knowledge. 332 male and female undergraduates responded to the Difficulty in Emotional Regulation Scale (DERS), Current Opioid Misuse Measure (COMM) and Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) through Google form. The prevalence of current opioid misuse was 2.0%, and that of other psychoactive substances ranged from 1.8% (cannabis) to 16.9% (alcohol). Emotional dysregulation significantly predicted current opioid misuse among participants (R^2=.197, p<0.001). Specifically, of the six components of emotional dysregulation, only lack of emotional clarity, difficulty in impulse control and limited emotional regulation strategy independently significantly predicated opioid misuse. Also, age significantly predicted opioid misuse (R^2 =.039) among the participant. Poor emotion regulation is a risk factor for opioid misuse among undergraduates. The reported prevalence of psychoactive substance use (PSU) among the participants is a causefor concern taking into cognizance the negative consequences drug dependence on their health and the burden of caring for them. Hence well-equipped and adequately staffed psychological services centers should be in established in all tertiary institutions to provide psychological first aid to students.

Keywords: Emotional dysregulation, psychoactive substance use, opioids misuse, undergraduates, Nigeria.

Introduction

The burden of psychoactive substance use is huge globally[2]. High estimates of usage among the general population from age 15 to 64 years have also been reported[3] . According to the World Health Organisation (WHO), about 5.4%

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[2]United Nations office on Drug and Control (UNODC).*Executive summary conclusions and policy implications 1 world drug report*. (2018). https://www.unodc.org/wdr2018/prelaunch/WDR18_Booklet_1_EXSUM.pdf
[3] UNODC *Executive summary conclusions and policy implications 1 world drug report*. (2018)

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global disease burden has been attributed to illicit drug use[4]. Among others is the high prevalence of consumption of cannabis and the nonmedical use of prescription opioids (especially tramadol and codeine)[5].

Globally the rate of PSU among the youth is reported as high[6][7][8]. However, according to the UNODC[9], the level of drug use in Nigeria is high compared to the global annual prevalence of 5.6 percent in 2016. Some African studies report that tobacco, alcohol, cannabis, inhalants, tranquillizers, heroin, and cocaine are commonly used in secondary schools and some higher education institutions[10][11][12][13]. Research findings also report a sharp increase in psychoactive substance use (PSU) in developing countries [14][15][16]. In Nigeria, high levels of psychoactive substances have been consistently reported[17][18][19][20].Several research studies also show that PSU is common among

[4]World Health Organization WHO S*ubstance Abuse*.WHO Regional Office for Africa.https://www.afro.who.int/health-topics/substance-abuse Wkly. Rep. 2019, 68, 737–744
[5] UNODC *Executive summary conclusions and policy implications 1 world drug report*. (2018)
[6]Makanjuola A.B., Abiodun O.A. Sajo S. F. *Alcohol and psychoactive substance use among medical students of the University of Ilorin, Nigeria*. (European Scientific Journal 2014) edition vol.10, No.8 ISSN: 1857 – 7881
[7]Babalola, EO Ogunwale, A.andAkinhanmi, A. *Pattern of psychoactive substance use among university students in South-Western Nigeria*, (Journal of Behavioral Health, 2013), vol. 2, no. 4, pp. 334–342,.
[8] UNODC *Executive summary conclusions and policy implications 1 world drug report*. 2018
[9] ibid
[10]Osman, T., Victor, C., Abdulmoneim, A., Mohammed, H., Abdalla, F., Ahmed, A., Ali, E., & Mohammed, W. *Epidemiology of Substance Use among University Students in Sudan*. (Journal of Addiction, 2016) https://www.hindawi.com/journals/jad/2016/2476164/
[11]Akinnawo, EO, Akpunne BC and Ikeotuonye, A. *Drug and alcohol consumption as predictors of vulnerability to sexual victimisation among female students of a federal polytechnic*. In E. A. Abikoye and IS Obot (Ed) Perspectives on Drugs, alcohol and society in Africa. Center for Research and Information On Substance Abuse. (CRISA Publications, 2017) Vol. 4, Pp 67 -77
[12] Akpunne, BC Substance usage among secondary school adolescents in Ife metropolis: Implications for effective school counseling. In IS Obot and E. A. Abikoye (Ed) *Perspectives on Drugs, alcohol and society in Africa*. Center for Research and Information On Substance Abuse. CRISA publications, 2016 Vol. 3 pp71-82
[13]Atwoli, L. Mungla, PA.Ndung'u, MN. Kinoti, KC. and Ogot, EM. *Prevalence of substance use among college students in Eldoret, western Kenya*, (BMC Psychiatry 2011), vol. 11, 34.
[14]Babalola, EO Ogunwale, A. &Akinhanmi, A. *Pattern of psychoactive substance use among university students in South-Western Nigeria*, (Journal of Behavioral Health, 2013), vol. 2, no. 4, pp. 334–342,.
[15]Deressa, W and Azazh, A. *Substance use and its predictors among undergraduate medical students of Addis Ababa University in Ethiopia*, (BMC Public Health, 2011) vol. 11, article 660, 2011.drugoverdose/data/analysis.html
[16]Gebreslassie, M. Feleke, A. and Melese, T. (2013). *Psychoactive substances use and associated factors among Axum University students, Axum Town, North Ethiopia*, (BMC Public Health, 2013), vol. 13, no. 1, article 693.
[17]Akinnawo, E. O, Onisile D. F, Alakija O. A, Akpunne B. C .(2021). Self-Medication with Over-the-Counter and Prescription Drugs and Illness Behavior in Nigerian Artisans, Int J High Risk Behav Addict. doi: 10.5812/ijhrba.107221
[18]Onisile, DO., Akpunne, BC., and Alakija, OA.*Psychoactive Substance and Psychopathological Symptoms among Nigerian Secondary Schools Adolescents*. (International Neuropsychiatric Disease Journal, 2020), *13*(3-4), 1-10. https://doi.org/10.9734/indj/2019/v13i3-430114
[19]UNODC *Executive summary conclusions and policy implications 1 world drug report*. 2018

undergraduates[21][22][23]. Specifically, some studies report that the rate of PSU among Nigerian undergraduates was higher than that reported among the general public[24][25][26][27][28][29].

Misuse of prescription drugs is reported in the literature[30]. Prescription drug misuse is defined as using prescription medications without a valid prescription or in ways other than prescribed. Nonmedical use, medical misuse, the use of another person's prescription medication, or the misuse of one's own prescription are all examples of misuse[31][32]. Nonmedical use of prescription opioids (NMPO) is a major concern due to the potentially harmful health outcomes associated with its misuse, as well as its proclivity to transition to the use of illicit opioids[33]. Opioids of all classes have high rates of use, overdose, and

[20]Makanjuola A.B., Abiodun O.A. Sajo S. F. *Alcohol and psychoactive substance use among medical students of the University of Ilorin, Nigeria*. (European Scientific Journal, 2014)
[21]Akinnawo, EO, Akpunne BC and Ikeotuonye, A. *Drug and alcohol consumption as predictors of vulnerability to sexual victimisation among female students of a federal polytechnic*. In E. A. Abikoye and IS Obot (Ed) Perspectives on Drugs, alcohol and society in Africa. Center for Research and Information On Substance Abuse
[22] Akpunne, BC Substance usage among secondary school adolescents in Ife metropolis: Implications for effective school counseling. In IS Obot and E. A. Abikoye (Ed) *Perspectives on Drugs, alcohol and society in Africa*. Center for Research and Information On Substance Abuse.
[23]Makanjuola A.B., Abiodun O.A. Sajo S. F. *Alcohol and psychoactive substance use among medical students of the University of Ilorin, Nigeria*. (European Scientific Journal 2014)
[24]Aguocha, CM., and Nwefoh, E. *Prevalence and correlates of substance use among undergraduates in a developing country*. (African health sciences, 2021), 21(2), 875–883.https://doi.org/10.4314/ahs.v21i2.49
[25]Akpunne, BC, Akinnawo EO, Bello IB, Olajire OO.*Psychoactive Substance Use, Sexual Harassment, and Self-Esteem Among Female Nigerian Undergraduates: Prevalence, Patterns, and Associations,* (Int J High Risk Behav Addict., 2020); 9(2):e100111. doi: 10.5812/ijhrba.100111
[26]Adamson, TA, Ogunlesi AO, Morakinyo O, Akinhanmi AO, Onifade PO, Erinosho O, et al. *Descriptive national survey of substance use in Nigeria.* (Journal of Addiction Research and Therapy,2015). 6:234. doi: 10.4172/2155-6105.1000234.
[27]Babalola, EO, Akinhanmi A, Ogunwale A. *Who guards the guards: Drug use pattern among medical students in a Nigerian university*. (Annals of Medical and Health Sciences Research, 2014). 4(3):397–403. doi: 10.4103/2141-9248.133467.
[28]Owoaje, ET, and Bello, J. Psychoactive substance use among undergraduate students of the university of Ibadan, Nigeria. (Tropical Journal of Health Sciences, 2014).17:2.
[29]Adeyemo, FO, Ohaeri B, Okpala PU, and Ogodo O. *Prevalence of Drug Abuse Amongst University Students in Benin City, Nigeria*. (Public Health Research2016) . 6(2):31–37. doi: 10.5923/j.phr.20160602.01.
[30] UNODC *Executive summary conclusions and policy implications 1 world drug report*. 2018
[31]Castaldelli-Maia, JM., Nicastri, S, Cerdá, M, Kim, JH, de Oliviera, LG, de Andrade, AG, and Martins, SS. *In-transition culture of experimentation with cannabis in Latin American college students: A new role within a potential drug use sequencing pattern.*(Drug Alcohol.Rev, 2018). 37, 273–281.
[32]Weyandt, LL.,Marraccini, ME., Gudmundsdottir, BG, Martinez Zavras, B, Turcotte, K.D, Monro, BA., & Amoroso, AJ. *Misuse of prescription stimulants among college students: A review of the literature and implications for morphological and cognitive effects on brain functioning*. (Exp. Clin. Psychopharmacol, 2013), 21, 385–407.
[33] Victor, GA., Walker, R., Cole, J, and Logan, TK. *Opioid analgesics and heroin: Examining drug misuse trends among a sample of drug treatment clients in Kentucky*. (Int. J. Drug. Policy, 2017). 46, 1–6.

addiction[34][35], which is one of the reasons they are reported as problematic prescriptions. According to studies, there has been a significant increase in the misuse of opioids, as well as an increase in opioid-related overdoses[36] and deaths[37].

Longitudinal studies show that opioid misuse and related negative health outcomes have risen in the last decade[38][39][40][41][42].Since the early2010s prescription and synthetic opioid misuse have remained a significant concern among university students due to the increased risk of developing opioid use disorder and overdose associated with these drugs[43][44].Factors associated with an increased likelihood of opioid misuse include physical pain, anxiety, depression, executive functioning deficits, and other comorbid substance misuses[45][46][47][48]. Again a primary drive for the use of prescription opioids among the general adult population is both physical and emotional pain relief[49].

[34] Wilson, N, Kariisa, M, Seth, P., Smith, H., and Davis, NL. *Drug and opioid-involved overdose deaths—United States, 2017-2018*.(MMWR Morb. Mortal Wkly. Rep. 2020) 69, 290–297.
[35] Webster, LR. *Risk factors for opioid-use disorder and overdose*.(Anesth.Analg.2017), 125, 1741–1748.
[36]Gladden, RM, O'Donnell, J, Mattson, CL, Seth, P. *Changes in opioid-involved overdose deaths by opioid type and presence of benzodiazepines, cocaine, and methamphetamine—25 states, July-December 2017 to January–June 2018*.(MMWR Morb.Mortal, 2019).
[37]Scholl, L, Seth, P, Kariisa, M, Wilson, N, and Baldwin, G. *Drug and opioid-involved overdose deaths- United States, 2013-2017*.(MMWR Morb.Mortal. Wkly. Rep., 2019) 67, 1419–1427.
[38]National Institute on Drug Abuse. Opioid Overdose Crisis; National Institutes of Health: Bethesda, MD, USA, 2020. online: https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis (accessed on 20 September 2020)
[39]Center for Behavioral Health Statistics and Quality.*2017 National Survey on Drug Use and Health: Detailed Tables; Substance Abuse and Mental Health Services Administration*: (Rockville, MD, USA, 2018). Available online: https://www.samhsa.gov/data/sites/
[40]Gladden, RM, O'Donnell, J, Mattson, CL, Seth, P. *Changes in opioid-involved overdose deaths by opioid type and presence of benzodiazepines, cocaine, and methamphetamine—25 states, July-December 2017 to January–June 2018*.
[41] Scholl, L, Seth, P, Kariisa, M, Wilson, N, and Baldwin, G. *Drug and opioid-involved overdose deaths- United States, 2013-2017*
[42]Centers for Disease Control and Prevention (CDC).*Drug Overdose Deaths up 4.6% in 2019*; American Hospital Association: Chicago, IL, USA, 2020; Available online: https://www.aha.org/news/headline/2020-07-16-cdc-drug-overdose-deaths-46-2019#:~{}:text=Drug%20overdose%20deaths%20in%20the,by%20drug%20category%20and%20state.
[43] Wilson, N, Kariisa, M, Seth, P., Smith, H., and Davis, NL. *Drug and opioid-involved overdose deaths—United States, 2017-2018*.(MMWR Morb. Mortal Wkly. Rep. 2020) 69, 290–297.
[44] CDC. *Drug Overdose Deaths up 4.6% in 2019*; American Hospital Association: Chicago, IL, USA, 2020
[45]Arteta, J, Cobos, B, Hu, Y, Jordan, K, Howard, K. *Evaluation of how depression and anxiety mediate the relationship between pain catastrophising and prescription opioid misuse in a chronic pain population*. (Pain Med 2016). 17, 295–303.
[46] Reynolds, BW, Basso, MR, Miller, AK., Whiteside, DM., and Combs, D. *Executive function, impulsivity, and risky behaviors in young adults*. (Neuropsychology 2019), 33, 212–221.
[47] Martel, MO Edwards, RR., and Jamison, RN. *The relative contribution of pain and psychological factors to opioid misuse: A 6-month observational study*. (Am. Psychol. 2020), 75, 772–783.

Research has found that shortfalls in emotional regulation can increase a person's risk of developing a substance abuse disorder[50].Emotional dysregulation has been conceptualised as a multidimensional construct encompassing maladaptive ways of responding to negative affective states, including a lack of awareness and understanding of emotions, non acceptance or avoidance of emotions, an unwillingness to experience negative affective states as part of pursuing desired goals, difficulties controlling behaviours in the face of emotional distress, and deficits in the modulation of emotional arousal [5152].

Emotional Dysregulation (ED) refers to a poor ability to manage emotional responses or to keep them within an acceptable range of typical emotional reactions. This can refer to a wide range of emotions, including sadness, anger, irritability, and frustration. While emotional dysregulation is typically thought of as a childhood problem that usually resolves itself as a child learns proper emotional regulation skills and strategies, ED may continue into adulthood. Emotional dysregulation can lead to a lifetime of struggles, including problems with interpersonal relationships, trouble with school performance, and the inability to function effectively in a job or at work[53].Research shows a connection between ED and psychoactive substance use[54]. Individuals with emotional dysregulation have difficulty coping with their emotions in a healthy way, and this overwhelming emotion might drive them to use psychoactive substances to cope. A research study on associations between emotional dysregulation and suicidality has been carried out on Nigerian samples[55]. There is, however, a shortage of literature on the link between ED and opioid misuse among Nigerian undergraduates. Hence this study seeks to fill this gap. To this end, this study aims to observe the prevalence of current opioid misuse and

[48]Pielech, M, Lunde, CE, Becker, SJ, Vowles, K.E., and Sieberg, CB. *Comorbid chronic pain and opioid misuse in youth: Knowns, unknowns, and implications for behavioral treatment*. (Am. Psychol. 2020), 75, 811–824.
[49]Arteta, J, Cobos, B, Hu, Y, Jordan, K, Howard, K. *Evaluation of how depression and anxiety mediate the relationship between pain catastrophising and prescription opioid misuse in a chronic pain population*. (Pain Med 2016)
[50]Garke, MÅ, Isacsson, NH, Sörman, K, Bjureberg, J, Hellner, C, Gratz, KL., Berghoff, C. R, Sinha, R, Tull, MT., and Jayaram-Lindström, N. *Emotion dysregulation across levels of substance use*. (Psychiatry Research, 2021), *296*, 113662.https://doi.org/10.1016/j.psychres.2020.113662
[51]Glenn, C. R, and Klonsky, E. D. *A multimethod analysis of impulsivity in nonsuicidal self-injury*.(Personality disorders, 2010) *1*(1), 67–75.https://doi.org/10.1037/a0017427
[52]Gratz, KL., and Roemer, L. *Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale*. (Journal of Psychopathology and Behavioral Assessment, 2004) *26*(1), 41–54. https://doi.org/10.1023/B:JOBA.0000007455.08539.94
[53]Akpunne, BC, Akinnawo, EO., Akpunne, SI., and Kumuyi, DO. *Suicidal BehaviourAmong Nigerian Undergraduates: Associations with Gambling Disorder and Emotional Dysregulation*. (Health Scope, 2022) *11*(2).https://doi.org/10.5812/jhealthscope-121797
[54]Garke, MÅ, Isacsson, NH, Sörman, K, Bjureberg, J, Hellner, C, Gratz, KL., Berghoff, C. R, Sinha, R, Tull, MT., and Jayaram-Lindström, N. *Emotion dysregulation across levels of substance use*. (Psychiatry Research, 2021),
[55]Akpunne, BC, Akinnawo, EO., Akpunne, SI., and Kumuyi, DO. *Suicidal BehaviourAmong Nigerian Undergraduates: Associations with Gambling Disorder and Emotional Dysregulation*. (Health Scope, 2022)

determine the predictive influence of ED and age on current opioid misuse among Nigerian undergraduates.

Materials and Methods

Design

The cross-sectional descriptive survey research design was adopted for this study. The snowballing sampling method was used. The research instruments were entered into Google Form and circulated using online links to the participants on social media handles (Facebook, WhatsApp and email). Data were collected between June 1st and 15th, 2022. The participants were also requested to send out the online link to university undergraduates in their contacts who may be willing to participate in the study.

Participants

Three hundred and thirty-two undergraduates made up of 78 (23.5%) and 254 (76.5%) females participated in this study. The mean age of the participants was 18.3 ± 1.8 years of age. Only data of undergraduates from universities in Osun state Nigeria were included in the study.

Research Instruments

Three research instruments were used for the data collection of this study. These are: the Difficulties in Emotion Regulation Scale (DERS)[56]: The DERS [57] measures emotional dysregulation with 36 items rated 1–5 (almost never – almost always), yielding six sub-scales and one Total scale (range 36–180). The sub-scales of the DERS are non-acceptance (non-accepting attitude towards emotional distress; range 6–36), goals (difficulties engaging in goal-directed behaviours when upset; range 6–30), impulse (difficulties in controlling one's behaviour when upset; range 6–36), awareness (inability to pay attention and be conscious about one's emotional responses; range 6–36), strategies (limited access to functional emotion regulation strategies when upset; range 6–42), and clarity (lack of emotional understanding and clarity; range 6–30). Internal consistency in this sample was excellent for goals and impulse (mean Cronbach αs = .90 and .91, respectively) and good for the remaining four subscales (αs = .81–.90). Higher scores indicate greater difficulty with emotion regulation. DERS has been validated among Nigeria studies[58].

Current Opioid Misuse Measure (COMM)[59]: COMM is a 17-item questionnaire that measures the misuse of opioids. The items are measured on a five-point Likert scale of 0 = never, 1 = seldom, 2= sometimes, 3 = often and 4 = very often. Scores ≥ 9 suggest that opioid use might be causing significant problems.

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[56]Gratz, KL., and Roemer, L. *Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale*. (Journal of Psychopathology and Behavioral Assessment, 2004)
[57] Ibid.
[58]Akinnawo, EO, Akpunne, BC, Akpunne, SI., Bello, IB., Onisile, DF, and Akpunne, EN. *Psychometric Properties of Difficulties in Emotion Regulation Scale (DERS) on Young Nigerian People*. (Psychology, 2022) *13*(03), 361–374. https://doi.org/10.4236/psych.2022.133023
[59]National Institutes of Health.*Current Opioid Misuse Measure (COMM).* (2008) Assessed from https://tapmipain.ca/assets/pdfs/Current%20Opioid%20Misuse%20Measures.pdf

The Alcohol, Smoking and Substance Involvement Screening Test(ASSIST)[60]:The World Health Organization developed the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) as a technical tool to aid in the early identification of substance use-related health risks and substance use disorders in primary health care, general medical care, and other settings. This study adapted the second question, which assessed the prevalence of psychoactive substances among the general population.

Results

Demographic characteristics of participants

The result of the demographic characteristics of the participants by sex showed that male was 78 (23.5%) while female was 254 (76.5%). The mean age of the participants was 18.3 ± 1.8 years of age. Distribution by educational background showed that all the participants were university undergraduates.

Prevalence of Psychoactive substance use

Table 1: Prevalence of substance use among the participants

Substance	**Prevalence (%)**
Tobacco	1.2
Cannabis	2.0
Opioids	2.0
Cocaine	2.4
Amphetamine	3.0
Inhalants	3.0
Sedatives	7.2
Hallucinogens	7.2
Alcohol	16.9

***Source**: Researcher's fieldwork*

Table 1 summarises the reported prevalence of psychoactive substance use among the participants. These include 16.9% (alcohol), 7.2% (sedatives), 7.2% (hallucinogens), 3.0% (inhalants), 3.0% (amphetamines), 2.4% (cocaine), 2.0% (cannabis), 2.0% (opioid) and 1.2% (tobacco).

Table 2:

Regression analysis of emotional dysregulation on current opioid misuse.

						N = 332	
Predictor	**β**	**t**	**p**	**R**	**R^2**	**F**	***P***
(Constant)		-1.644	.101				
Emotional	.444	9.009	.000	.444	.197	81.165	.000

[60]World Health Organisation.*The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)*. (WHO 2010)Www.who.int. https://www.who.int/publications/i/item/978924159938-2

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Dysregulation

Source: *Researcher's fieldwork*

A regression analysis was employed to test the first hypothesis with a level of significance of 0.05%. The result summarised in Table 2 shows that emotional dysregulation (t=9.01, p=.000) significantly predicted opioid misuse among the participants. Further analysis showed an R^2 of .197, suggesting that 19.7% variance of opioid misuse is explained by emotional dysregulation among the participants. This result indicates that undergraduates who have difficulty regulating their emotions would have morepropensitytoopioid use and misuse.

Table 3: Regression analysis of factors of emotional dysregulation (ED) on current opioid misuse.

						N = 332	
Predictor	**β**	**t**	**p**	**R**	**R^2**	**F**	**P**
(Constant)		-1.196	.233				
Lack of emotional Awareness	.056	1.038	.300				
Lack of emotional Clarity	.214	3.689	.000				
Difficulties engaging in goal-directed behaviours	-.039	-.653	.514	.486	.238	16.744	.000
Difficulty in Impulse control	.195	3.362	.001				
Nonacceptance of emotional responses	.069	1.290	.198				
Limited emotional regulation Strategies	.208	3.411	.001				

Source*: Researcher's fieldwork*

A regression analysis was employed to test the contributions of the factors of ED in predicting opioid misuse among undergraduates. The result summarized in Table 3 shows that of the six components of emotional dysregulation, only lack of emotional clarity (β = .214, p= .000), difficulty in impulse control (β = .195, p= .001) and limited emotional regulation strategy (β = .208, p= .001) independently significantly predicated opioid misuse. Lack of emotional awareness (β = .056, p= .300), Difficulties engaging in goal-directed behaviours (β = -.039, p= .514) and nonaceptance of emotional responses (β = .069, p= .198) had no significant independent beta contributions in the predictions of opioid misuse among the participants.

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Table 4: Regression analysis of age on current opioid misuse.

						N = 332	
Predictor	**β**	**t**	**p**	**R**	**R^2**	**F**	***P***
Constant		-1.013	.312				
Age	.198	3.678	.000	.198	.039	13.526	.000

***Source**: Researcher's fieldwork*

A regression analysis was employed to test the second hypothesis with a level of significance of 0.05%. The result summarised in Table 4 shows that age (t=3.68, p=.000) significantly predicted opioid misuse among the participants. Further analysis showed an R^2 of .039, suggesting that the age of the participants explains the 3.9% variance of opioid misuse.

Discussion

This study was carried out to assess the prevalence of psychoactive substance use and the predictive influence of emotional dysregulation on current opioid use among young Nigerian people. The results showed a high prevalence of psychoactive substances, including alcohol, sedatives, hallucinogens, inhalants, amphetamines, cocaine, cannabis, opioid and tobacco products. This finding agrees with the literature on psychoactive substance use among young people in Nigerian educational institutions[61][62][63][64][65]. As reported in the literature, the burden of psychoactive substance use in Nigeria is described as huge [66][67][68][69]. Some literature report that the rate of psychoactive substance use among Nigerian undergraduates was higher than that reported among the general

[61]Onisile, DO., Akpunne, BC., and Alakija, OA.*Psychoactive Substance and Psychopathological Symptoms among Nigerian Secondary Schools Adolescents*. (International Neuropsychiatric Disease Journal, 2020)

[62]Adamson, TA, Ogunlesi AO, Morakinyo O, Akinhanmi AO, Onifade PO, Erinosho O, et al. *Descriptive national survey of substance use in Nigeria.* (Journal of Addiction Research and Therapy,2015)

[63]Babalola, EO, Akinhanmi A, Ogunwale A. *Who guards the guards: Drug use pattern among medical students in a Nigerian university*. (Annals of Medical and Health Sciences Research, 2014).

[64]Owoaje, ET, and Bello, J. Psychoactive substance use among undergraduate students of the university of Ibadan, Nigeria. (Tropical Journal of Health Sciences, 2014).17:2.

[65]Adeyemo, FO, Ohaeri B, Okpala PU, and Ogodo O. *Prevalence of Drug Abuse Amongst University Students in Benin City, Nigeria*. (Public Health Research, 2016) . 6(2):31–37. doi: 10.5923/j.phr.20160602.01.

[66]Omokhodion, F, and Faseru B. *Perception of cigarette smoking and advertisement among senior secondary school students in Ibadan, Southwestern Nigeria*.(West African Journal of Medicine, 2007). 26(3): 206–209.

[67]Igwe, WC, Ojinnaka N, Ejiofor, SO, Emechebe, GO, and Ibe BC. *Socio demographic correlates of psychoactive substance abuse among secondary School students in Enugu, Nigeria*. (Europe Journal of Social Science, 2009) ;12(2):277.

[68]Oshodi, OY, Aina OF, and Onajole AT.*Substance use among secondary school students in an urban setting in Nigeria: Prevalence and associated factors*. (African Journal Psychiatry 2010) (Johannesbg).13 (1):52–57.

[69]Aguocha, CM., and Nwefoh, E. *Prevalence and correlates of substance use among undergraduates in a developing country*. (African health sciences2021), 21(2), 875–883.https://doi.org/10.4314/ahs.v21i2.49

public. For instance, in a literature review,Aguocha and Nwefoh[70] observed that 58.4% to 65.0% of Nigerian undergraduates had consumed some form of psychoactive substance at least once in their lifetime. The observed high prevalence of lifetime psychoactive use cut across different geopolitical regions in Nigeria, including 77% in the North Central[71], 50.2% to 78.4% in the South East[72][73]. Also, in the Southwest, a range of 13.6%–63.4%) was reported[74][75], while 46.6% was reported in South-South Nigeria[76].

The significant opioid misuse rate reported in this study underscores related research findings that reported worrisome use of opioids among young people. For instance, the United Nations Office on Drugs and Crime (UNODC) reported around 35 million opioid users worldwide[77]. University undergraduates with high rates of substance use, including alcohol and cannabis, have also been found to engage in misuse of opioids[78][79]. According to studies conducted in Nigeria, the use of Tramadol and Codeine is widespread throughout the country[80][81]. In a related study,Akinnawo et al.,[82] reported a 26.5% prevalence of tramadol use among apprentices in Ede Osun state in southwestern Nigeria, most of whom were emerging adults. According to a recent UNODC study on drug use in Nigeria, 4.7% of the population (about 4.6 million Nigerians) reported using opioids (tramadol, codeine, or morphine) for nonmedical purposes in the previous year[83]. Outside of Nigeria, there is evidence of an

[70] Ibid.
[71]Makanjuola, AB, Daramola TO, andObembe AO. *Psychoactive substance use among medical students in a Nigerian university*. (World Psychiatry. 2007), 6(2):112–114.
[72]Ebirim, I, and Morakinyo OM. *Prevalence and perceived health effect of alcohol use among male undergraduate students in Owerri, South-East Nigeria: A descriptive cross-sectional study*. (BMC Public Health, 2011). 11:118. doi: 10.1186/1471-2458-11-118.
[73]Ekwueme, OE, and Chukwuneke FN. *Prevalence and behaviour effects of psychoactive substance use among university students in south-eastern Nigeria*. (Ebonyi Medical Journal, 2010). 9:1. doi: 10.4314/ebomed.v9i1.62466.
[74]Owoaje, ET, and Bello, J. Psychoactive substance use among undergraduate students of the university of Ibadan, Nigeria. (Tropical Journal of Health Sciences, 2014)
[75]Babalola, EO, Akinhanmi A, Ogunwale A. *Who guards the guards: Drug use pattern among medical students in a Nigerian university*. (Annals of Medical and Health Sciences Research, 2014).
[76]Adeyemo, FO, Ohaeri B, Okpala PU, and Ogodo O. *Prevalence of Drug Abuse Amongst University Students in Benin City, Nigeria*. (Public Health Research2016)
[77] UNODC 2018
[78]Schepis, TS, Acheson, S, Zapp, D, and Swartzwelder, H.S. *Alcohol use and consequences in matriculating US college students by prescription stimulant/opioid nonmedical misuse status*. (Addict. Behav.,2019), 98, 106026.
[79]Weyandt, LL, Gudmundsdottir, BG., Holding, EZ., Marraccini, ME, Keith, M, May, SE., Shepard, E, Francis, A, Wilson, ED, Channell, I. et al. *Prescription opioid misuse among university students: A systematic review*. (J. Am. Coll. Health. 2020), 1–19.
[80]Yunusa, U, Bello UL, Idris M, Haddad, MM, and Adamu, D *Determinants of substance abuse among commercial bus drivers in Kano Metropolis, Kano State, Nigeria*. (Ajns. 2017) 6 (2), 125–130. 10.11648/j.ajns.20170602.16
[81]Duru, C, Oluoha, U, Okafor, C, Diwe, K., and Iwu, A. *Socio-demographic determinants of psychoactive substance use among students of tertiary institutions in Imo State, Nigeria*. (Journal of Addiction Research & Therapy, 2017), 8(345), 2.
[82]Akinnawo, E. O, Onisile D. F, Alakija O. A, Akpunne B. C .(2021). Self-Medication with Over-the-Counter and Prescription Drugs and Illness Behavior in Nigerian Artisans, Int J High Risk Behav Addict.
[83]UNODC 2018.

increase in the misuse of prescription opioids. For instance, in a United States of America studies, Gladden et al.,[84] reported a 90% increase in opioid-related overdoses from 2013 to 2017, while the CDC [85] reported a 10.6% increase in deaths specifically involving prescription opioid overdose between 2015 and 2016.

Our study revealed that emotional dysregulation significantly predicted opioid misuse among Nigerian students. Emotional Dysregulation (ED) has been described as the failure to use healthy strategies to disseminate or moderate negative emotions on an ongoing basis. Although everybody sometimes uses less than ideal strategies to regulate emotions, people who regularly feel overwhelmed and experience intense negative emotions are far more likely to depend on unsanitary strategies, such as self-injury[86]. This result supports Garke and his colleagues, who reported that high psychoactive substance use severity and frequency were significantly linked with high scores of emotional dysregulation[87]. In a related study, Aaron et al.,[88] reported that emotional dysregulation was a significant factor that underlined the co-occurrence of chronic pain and problematic opioid use. In a clinical study, Lutz et al., [89] found that difficulties in emotion regulation were associated with poorer functioning anda greater risk of opioid misuse among patients with appalachian chronic pain. In another clinical study, Hudak et al.,[90] found associations between opioid misuse and emotional dysregulation among people with chronic pain. Bakhshaie et al.,[91] reported in a related study that emotion dysregulation partially explained the association between negative affectivity and nonmedical

[84]Gladden, RM, O'Donnell, J, Mattson, CL, Seth, P. *Changes in opioid-involved overdose deaths by opioid type and presence of benzodiazepines, cocaine, and methamphetamine—25 states, July-December 2017 to January–June 2018*.(MMWR Morb.Mortal, 2019).

[85]Centers for Disease Control and Prevention (CDC).*Drug Overdose Deaths up 4.6% in 2019*; American Hospital Association: Chicago, IL, USA, 2020; Available online: https://www.aha.org/news/headline/2020-07-16-cdc-drug-overdose-deaths-46-2019#:~{}:text=Drug%20overdose%20deaths%20in%20the,by%20drug%20category%20and%20state.

[86]Rolston A., and Lloyd-Richardson, E.*What is emotion regulation and how do we do it? Cornell research program on self-injury and recovery*. Retrieved from https://selfinjury.bctr.cornell.edu/perch/resources/what-is-emotion-regulationsinfo-brief.pdf 2018

[87]Garke, MÅ, Isacsson, NH, Sörman, K, Bjureberg, J, Hellner, C, Gratz, KL., Berghoff, C. R, Sinha, R, Tull, MT., and Jayaram-Lindström, N. *Emotion dysregulation across levels of substance use*. (Psychiatry Research, 2021), *296*, 113662.https://doi.org/10.1016/j.psychres.2020.113662

[88]Aaron, RV, Finan, PH., Wegener, ST., Keefe, FJ., and Lumley, MA. Emotion regulation as a transdiagnostic factor underlying co-occurring chronic pain and problematic opioid use. (*American Psychologist, 2020)75*(6), 796–810. https://doi.org/10.1037/amp0000678

[89]Lutz, J, Gross, RT, and Vargovich, AM. *Difficulties in emotion regulation and chronic pain-related disability and opioid misuse*. (Addictive Behaviors, 2018) *87*, 200–205. https://doi.org/10.1016/j.addbeh.2018.07.018

[90]Hudak, J, Prince, KC.,Marchand, WR., Nakamura, Y, Hanley, AW, Bryan, CJ., Froeliger, B., and Garland, EL. The temporal dynamics of emotion dysregulation in prescription opioid misuse. (Progress in Neuro-Psychopharmacology and Biological Psychiatry2021), *104*, 110024.https://doi.org/10.1016/j.pnpbp.2020.110024

[91]Bakhshaie, J, Rogers, AH., Kauffman, BY, Tran, N, Buckner, JD, Ditre, JW, and Zvolensky, MJ. *Emotion dysregulation as an explanatory factor in the relation between negative affectivity and nonmedical use of opioid in a diverse young adult sample*. (Addictive Behaviors, 2019) *95*, 103–109. https://doi.org/10.1016/j.addbeh.2019.02.025

opioid-related variables such as self-reported opioid addiction, denial of opioid prescription by a healthcare provider, and family concerns about participant's opioid use among young adults.

Finally, our study found that age was a significant predictor of opioid misuse among the undergraduates. While our study did not include age group differencesin opioid use, studies show that age was a risk factor in the demographic distribution of opioid misuse, with higher severity and frequency of opioid misuse highest among individuals under 50 years of age[92]. In another CDC[93]research, emerging adults (ages 18 to 25 years) were reported as the group with the greater past-year nonmedical opioid use. The Substance Abuse and Mental Health Services Administration (SAMHSA) observed that most people who reported prescription opioid misuse initiated use in their early to late 20s [94]. Literature on age-related demographics regarding the current use of heroin and the increase in death resulting from heroin and synthetic opioid use among people aged 15 years and older[95], also laid credence to the fact that being within the age range of adolescence and young adulthood was a risk factor to opioid misuse. According to Beaudoin et al.,[96] and Henderson et al.,[97] (2015), misuse and abnormal opioid use behaviours could manifest differently in older adults compared to younger people. This report could explain the relationship between age and opioid misuse among different age categories.

Conclusions and Recommendations

There is a high prevalence of psychoactive substance use among undergraduates in Nigeria. Emotional dysregulation is a significant predictor of current opioid misuse among participants. Of the six components of emotional dysregulation, only lack of emotional clarity, difficulty in impulse control and limited emotional regulation strategy are independent predictors of opioid misuse among undergraduates. Finally, age is a significant predictor of opioid misuse among the participants. Well-equipped and adequately staffed mental health care facilities should be established in all tertiary institutions to provide psychological first aid to students.

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[92]CDC. *National Center for Health Statistics. Multiple cause of death 1999-2014 on CDC WONDER online database, released 2015. Data are from the Multiple Cause of Death Files, 1999-2014, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.* 2015a. http://wonder.cdc.gov/mcd-icd10.html.

[93]CDC. *Prescription opioid overdose data*. 2016. https://www.cdc.gov/drugoverdose /data/overdose.html.

[94]SAMHSA *Results from the 2012 National Survey on Drug Use and Health: Summary of national findings*. Rockville, MD: SAMHSA; 2013a. (NSDUH Series H-46). (HHS Publication SMA 2013) 13-4795.

[95]Rudd RA, Seth, P, David F, and Scholl, L. *Increases in drug and opioid-involved overdose deaths—United States, 2010–2015*. (Morbidity and Mortality Weekly Report. 2016b) ;65:1445–1452.

[96]Beaudoin, FL, Merchant RC, and Clark, MA.*Prevalence and detection of prescription opioid misuse and prescription opioid use disorder among emergency department patients 50 years of age and older: Performance of the Prescription Drug Use Questionnaire, patient version*. (American Journal of Geriatric Psychiatry. 2016) 24(8):627–636.

[97]Henderson, AW, Babu, KM, Merchant, RC, and Beaudoin, FL. *Prescription opioid use and misuse among older adult Rhode Island hospital emergency department patients*. (Rhode Island Medical Journal, 2015).98(3):28–31.

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