DYNAMICS OF DRUG USE AND EXPERIENCE OF STRESS AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NIGERIA

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ABSTRACT

This study was carried out to investigate drug use dynamics and its role on stress experience among students of tertiary institutions in Akwa Ibom State, Nigeria. A sample of 280 drug users in a student population (175 male and 105 female) with mean age of 23.06 and standard deviation of 3.62 were purposively selected as participants for this study. To achieve this purpose, appropriate self-report instruments were used to collect data for drug use and experience of stress respectively. Descriptive analysis revealed that 180 (64%) of students reported use of drugs other than alcohol while 162 (57.86%) reported harmful use of drugs. A hierarchical linear regression analysis showed positive influence of drug use on stress levels among students, to the extent that 41% of variance in experience of stress was accounted for by the combined effects of drug use, gender and age; with drug use being the best predictor, accounting for 40% of the variance in the experience of stress among students. Based on the findings, implications and limitations were outlined while recommendations were made to the effect that drug abuse counseling is urgently needed as an integral part of tertiary institutions curriculum by focusing on high levels of stress experience arising from the use of drugs.

Keywords: Drug use, Undergraduates, Tertiary institution, Stress experience, Nigeria

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Stress is a term frequently used in a variety of social and academic settings and everyone needs certain amount of pressure to perform at their best. However, when pressure exceeds a person's ability to cope, stress ensues. Stress is a concept that cannot be explained using a static definition thus it is important to be aware that different descriptions exist in both recent and seminal literature. Delahaij, Dam, Gaillard and Soeters (2011) explained stress using a bio-psychosocial approach, suggesting that stressful reactions affect the emotional, physiological and cognitive state of an individual. This definition describes stress as a reaction.

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Alternatively, Caltabiano, Sarafino and Byrne (2008) viewed stress as a discrepancy. They stated that stress occurs when there is a perceived discrepancy between the demands of a situation and an individual's resources available to deal with that demand (Caltabiano, Sarafino, & Byrne, 2008). Studies indicate that stress is part of daily life and shows further that university students experience increased stress due to the complexity of college life; especially as observed by Craig (2004), vulnerability to using alcohol and drugs increases with an increase in risk factors dominating a person's life. This seems to be particularly true for university students.

It is commonplace today that people use drugs or alcohol to relax, feel good, have fun with close ones around them, or just out of curiosity or to see what it's like. But for people who have experienced a stressful or traumatic event, drugs and alcohol can become more than just a way to relax, and have fun. Instead, using drugs or alcohol becomes a way to turn off the brain from stressful experiences and secondly, to numb painful memories and reactions – the latter being area of interest for the present study. For a while, it may even seem to work; but in the long run, alcohol and drugs just cause a lot of new problems, some of which may be even worse than the original traumatic event.

In today's education systems right from elementary to the tertiary level, students are faced with several challengers. University students have come to realize that the university can be demanding because of the amount of homework that is due in a short amount of time and therefore, it is easy to become overwhelmed. University system bombards students with assignments, quizzes, tests, papers, exams, and project/dissertations etc. If time is not managed correctly to insure that all of these tasks are completed, many students will experience stress. Students also face multiple stressors such as academic overload, constant pressure to succeed, competition with peers and in some countries (especially Nigeria) financial burden as well as concerns about the future (Vaez, Ponce de Leon, & Laflamme, 2006). In our contemporary ultra competitive environment, students face more stress than ever, be it related to studying, examinations, peer, teacher or parental pressure (Sreeramareddy, Shankar, Binu, Mujhopadhyay, Ray, &Menezes, 2007). University students more often than not experience undue amounts of stress, which can have negative academic, emotional and health outcomes (Dahlin, Joneborg, & Runeson, 2005).

Ford (2007) observed that the university presents a significant transition period in a young adult's life. It is a time when students are often no longer under direct parental monitoring, and are faced with new social and academic pressures. It is also a time when they enter an environment where the use of drugs is normative. They are introduced to a new environment where they must navigate many unfamiliar social situations. During this time, they look to their new social groups (peer group) to help them determine what new attitudes and behaviors are expected or appropriate. Due to numerous pressures of the 21st century, students are having difficulty in coping, and are requesting for educational programs in tertiary institutions to help teach them how to cope with such stressors (Frydenberg et al., 2004).

This is because, it is really dangerous to let stress become student's way of living in

the university, because some stress levels can lead to a terrible effect that changes student's life completely and it may result to academic failure. Stress levels among university students are higher than those of people at any other stage of life, a poll has found. In addition, the poll found that university students have a higher predisposition toward experiencing depression sometime during their four years at the university (David, 2009).

According to Macmillan Social Sciences library research, 70% of university students say that their grades have a direct effect on their level of stress. Study conducted by Aasra (www.aasra.info/articlesandstatistics.html) reported that depression among youth has increased from 2 to 12% in the last five years. Globally, 3 out of every 5 visits to the doctor are for stress related problems. Seventy-six percent people under stress say that they have sleeping disorders and 58% suffer headaches. Further study results indicates that there is high level of use of psychoactive substances among young people and that that substance use is major risk factors for the development of psychiatric illnesses (Abiama, Abasiubong, Usen & Alexander, 2014).

As all this may lead to psychopathology, stress should therefore not be considered on its own, but rather should be associated with potential risk behaviors which drug use is a common one today. The onset risk of substance use and related problems is heightened during the university period and the most common substances used by young adults are alcohol, tobacco and cannabis (Caamano-Isorna, Mota, Crego, Corral, & Holguin, 2011; Underwood, Fox, & Manogue, 2010; Witkiewitz, et al., 2011). According to many reports, exposure to stress in young people is sig-

nificantly associated with the use of alcohol and drugs (Hoffmann, Cerbone, & Su, 2000; Shahtahmasebi & Berridge, 2009).

Concomitantly, cannabis intoxication impairs learning, driving and operation of machinery and chronic use is associated with cancer, immune system dysfunction, and respiratory and cardiovascular dysfunctions (Obot, 2012). The use of two or more of these substances simultaneously, known as poly-drug use, has received growing attention in the literature due to an increase in prevalence in early adulthood (Caamano-Isorna, Mota, Crego, Corral, & Holguin 2010). Furthermore, substance use is associated with immediate health problems such as academic difficulties, injuries, interpersonal violence (Hingson, Zha, & Weitzman, 2009), high-risk sexual behavior (Parks, Collins, & Derrick, 2012), depression and mental disorders (Squeglia, Pulido, Wetherill, Jacobus, Brown, & Tapert, 2012).

Stress in young adults is also often associated with the occurrence of substance-free addictions (also called behavioral addictions), such as cyber addiction, addiction to sex, workaholics, and addiction to shopping (Semaille, 2009; MacLaren & Best, 2010). Events that induce a stress response usually produce one or more conditioned or unconditioned emotional reactions, such as fear, anxiety, anger, excitement, pleasure and sadness. In so much as these reactions depend on the specific features of the situation, an appraisal of the event, available coping resources, and the prior emotional state of the individual; exposure to acute behavioral stress facilitates self administration of amphetamines (Piazza et al., 1990; Piazza & Le Moal 1996), morphine (Shaham & Stewart 1994) and cocaine (Miczek & Mutschler, 1996).

Previous study concludes that people take drugs when they are stressed out (Perkins, 1999; Okasaka, Morita, Nakatani, & Fujisawa, 2008) but in view of the foregone, no study takes into account the theory that people experience stress when they take drugs or after taking drugs coupled with the role drug use plays in experiencing stress among students.Most theories of drug dependence assume that stress plays an important role in increasing drug use and also in triggering relapse (Campbell, Szumlinski, & Kippin, 2009; Ungless, Argilli, & Bonci, 2010) but no study have considered the role drug use play in experience of stress. Hence, the purpose of this study was to determine the dynamics of drug use and experience of stress among students in selected universities of AkwaIbom State, Nigeria in order to stimulate appropriate interventions to foster public health benefits. It was hypothesized that the level of stress experienced by students will be higher for those with harmful drug use/dependence than for students without harmful drug use.

METHOD

The study employed ex-post facto cross-sectional survey method to investigate the dynamics of drug use and experience of stress among students. The research scoping and assessment phase was conducted in Akwa Ibom State, Nigeria. Akwa Ibom State is one of the nine Niger Delta states in the country with a population of 3,902,025 and a land area of 7, 081Km². Akwa Ibom State comprises of 31 Local Government Areas (LGAs) with Uyo, a rapidly growing urban area, as its capital (Federal Republic of Nigeria

Official Gazette, 2007; National Bureau of Statistics) and surrounded by several equally fast growing LGAs. Three tertiary institutions were selected; namely, University of Uyo, Uyo-Town Campus; Akwa Ibom State Polytechnic-Ikot Osurua and Akwa Ibom State College of Education - Afaha Nsit, Etinan.

Measures

Drug use was assessed using the Drug Use Disorders Identification Test (DUDIT) developed by Berman, Bergman, Palmstierna, and Schlyter (2003) which consists of 11 items. The purpose of the DUDIT items is to identify use patterns and various drug-related problems. Items 1-9 are scored 0, 1, 2, 3, and 4; while items10-11 are scored 0, 2, and 4. Maximum score for the DUDIT items is 44 points and the minimum score is 0. In the present study, a Cronbach Alpha Coefficient of .85 was obtained, indicating a good and high internal consistency.

In order to measure stress, Depression, Anxiety, and Stress Scale (DASS) developed by Lovibond & Lovibond (1995) was employed. The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three subscales contains 14 items. The present study however adopted the stress sub-scale (14-items) which is sensitive to levels of chronic non-specific arousal. It assesses difficulty in relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores of stress are calculated by summing the scores for

the relevant items. For the main study, Cronbach Alpha Coefficient of 0.85 was realized, again showing an impressive reliability.

Results

The participants were two hundred and eighty (280) respondents drawn from three universities in Akwa Ibom state; with the student population of the three universities unknown, sample size was determined by choosing a 95% confidence level, 0.5 standard deviation, and a margin of error (confidence interval) of +/- 6% and employing the formula = (Z-score)² * StdDev*(1-StdDev) / (margin of error)² a sample size of 266.77 was obtained. However, the researcher in order to be on a safe zone, overestimated and distributed 310 questionnaires, retrieved 295; whereas only 280 were properly filled representing 90% response rate.

The 280 respondents consist of 175 (62.5%) males and 105 (37.5%) females. Their ages ranged from 18–49 years with the mean age of 23.1 years (SD = 3.62). Participants were predominantly Chris-

tians, 256 (91.4%), 17 (6.1%) were Muslims, and 7(2.5%) belonged to other religions. Gender descriptive of stress analysis indicated that males suffered more stress than females as a result of drug use. Out of the 175 male, 33 had a normal stress experience, 37 had mild stress, 46 had moderate stress, 30 had severe stress and 29 had extremely severe stress. From the 105 female students, 33 were also in the normal stress category, 29 had mild stress, 29 had moderate stress, 12 had severe stress and only 2 female students had extremely severe stress.

In table 1 & 2, there was a trend toward a higher proportion of harmful drug users/drug dependency [182 (65%) harmful drug users/drug dependents] among respondents as compared to normal users 98 (35%) who were jointly categorized under stress severity rating such that out of 66 students under normal stress, 41 used drugs normally while 25 reported harmful use/drug dependence. Of the 66 mild stress category, 26 reported a normal use drugs while 40 reported otherwise. Out of the 75 under moderate stress,

Table 1. Differences Reported in Categorized Experience of Stress associated with Drug Use

Stress Severity Rating	N	Mean	SD	% of Total N	% of Total Sample
Normal Stress	66	1.38	0.49	23.6	19.7
Mild Stress	66	1.61	0.49	23.6	22.9
Moderate Stress	75	1.79	0.41	26.8	29.0
Severe Stress	42	1.71	0.46	15.0	15.6
Extremely Severe	31	1.90	0.30	11.1	12.8

Table 2. Differences Reported in Diagnosis of Drug Use among students

Diagnosis of Drug Use	N	Mean	SD	% of Total N	% of Total Sample
Normal Use	98	2.08	1.16	35.0	27.3
Harmful use/Drug dependence	182	2.98	1.25	65.0	72.7
Total	280	5.06	2.41	100.0	100.0

16 reported normal drug use while 59 used drugs harmfully. For the 42 severely stressed, 12 used drugs normally while 30 used drugs harmfully. Lastly, of the 31 extremely severe stressed students, only 3 reported having used drugs normally, while 28 did not. Non-drug users were excluded in the analysis as non-drug use was not in the purview of the current study.

Highlights in the manifestations of stress across participants (i.e., Table 3) indicates that 229 (81.0%) found it difficult to relax, while 201 (71.3%) were in a state of nervous tension, and 180 (64.3%) were agitated. Extensive descriptive analysis indicates that 25.7% of participants were drug dependent while 14.3% reported harmful use over the past year. To a great extent therefore, there is high prevalence of drug use problems among students.

Regression analysis under the ANOVA summary indicated that a significant model exists; that is, drug use, gender, and age jointly influenced experience of stress, but did not fare so independently. Although the R^2 showed that the

Table 3. Item Analysis and Manifestations of Stress across participants as a result of Drug Use (N=280)

S/N	Experience of stress Items	X	SD	Did not apply to me at all N (%)	Applied to me to some degreeN (%)	Applied to me to a considerable degree N (%)	Applied to me very much N (%)
1	I found myself getting upset by quite trivial things	2.06	1.03	104(37.1%)	92(32.9%)	47 (16.8%)	37(13.2%)
2	I tended to over-react to situations	1.33	1.09	79 (28.1%)	86(30.7%)	60 (21.4%)	55(19.6%)
3	I found it difficult to relax	1.67	1.06	51 (18.2%)	65(23.2%)	89 (31.8%)	75(26.8%)
4	I found myself getting upset rather easily	1.77	1.12	45 (16.1%)	79(28.2%)	51 (18.2%)	105(37.5%)
5	I felt that I was using a lot of nervous energy	1.37	1.10	71 (25.4%)	98(35.0%)	47 (16.8%)	64(22.9%)
6	I found myself getting impatient when I was delayed in anyway (e.g., lifts, traffic lights, being kept waiting)	1.59	1.12	66 (23.6%)	60(21.4%)	78 (27.9%)	76(27.1%)
7	I felt that I was rather touchy	1.33	1.07	76 (27.1%)	88(31.4%)	63 (22.5%)	53(18.9%)
8	I found it hard to wind down	1.25	1.13	96 (34.3%)	72(25.7%)	57 (20.4%)	55(19.6%)
9	I found that I was very irritable	1.27	1.01	83 (29.6%)	72(25.7%)	92 (32.9%)	33(11.8%)
10	I found it hard to calm down after something upset me	1.43	1.09	68 (24.3%)	88(31.4%)	60 (21.4%)	64(22.9%)
11	I found it difficult to tolerate interruptions to what I was doing	1.79	1.06	44 (15.7%)	60(21.4%)	87 (31.1%)	89(31.8%)
12	I was in a state of nervous tension	1.55	1.81	79 (28.2%)	49(17.5%)	71 (25.4%)	81(28.9%)
13	I was intolerant of anything that kept me from getting on with what I was doing	1.38	1.11	79 (28.2%)	75(26.8%)	66 (23.6%)	60(21.4%)
14	I found myself getting agitated	1.11	1.03	100(35.7%)	85(30.4%)	60 (21.4%)	35(12.5%)

predictor variables contributed to 41% of the explanation of stress experience, only drug use and gender were significant predictors of stress experience while age did not predict stress experience. Further regression analysis using the 'Enter Method' revealed that drug use was the best predictor of stress accounting for 40% of the variance.

DISCUSSION

The major aim of this study was to investigate the dynamics of drug use and experience of stress among tertiary students of selected tertiary institution in Akwa Ibom State, Nigeria. The generated data were carefully processed and analyzed; subsequently, the results revealed that there is a significant influence of illicit drug use on stress experience of students. The research finding agrees with the study of Campbell, Szumlinski, & Kippin, (2009) who posited that stress plays an important role in increasing drug use. Findings were also in consonance with David (2009) who found that university students have a higher predisposition toward experiencing stress and depression sometime during their four years at the university.

Finding further tilted towards the studies of Hoffmann, Cerbone, & Su, (2000) and Shahtahmasebi & Berridge, (2009) who separately found that exposure to stress in young people is significantly associated with the use of drugs. Possible and plausible explanation of the finding is hinged on the fact that students resort to drugs to reduce academic and social stress the school environment portends, but still finds themselves in more stress due to the adverse or negative effects of such

drug(s). Hence, the predominant findings in literature that stress predisposes students to take drugs is incomplete from the novel findings of this study which shows that taking of drugs to reduce stress is as good as treating the symptom or effect of a disease rather addressing the cause and eradicating the disease for good; in so doing, the stress gets even worse for such an individual. To further buttress this finding, additional analysis revealed that students with harmful drug use/dependence experienced more stress than students without harmful drug use. In other words, virtually all students had one form of stress or the other no doubt; however, more stress was observed among students with excessive drug use.

From all indication, drug use has a detrimental effect on human behavior which can cause severe emotional breakdown to the person involved. It endangers the academic pursuit of the students, increasing their tendency to be depressed and experience severe stress which affects their study habit and their potential of being responsible members of the society. It has gone a long way to create several psychological health problems. Students are the leaders of tomorrow and they deserve proper direction, adequate social support and a drug-free quality education. To this end, drug abuse counseling is urgently needed as an integral part of tertiary institutions curriculum as a preventive tool and by focusing on high levels of stress experience arising from the use of drugs.

This study had some clear limitations. Because the sample was relatively small; other limitations were related to the available variables. The survey did not include measures of diet, personality, body image, or exercise—factors that have been proposed to be important in

predicting stress experience and other psychosomatic diseases. Also, the issue of masking undesirable responses and revealing desirable behaviors could have played a role in confounding the findings. Therefore, generalization should be done with caution. These results, if replicated, have implications for the manner in which the effects of stress experience are communicated to the public. They suggest that usual stress (sometimes, eustress) are necessary for optimal performance and should not be suppressed by the use of drugs which only presents a significant risk for severe stress inimical to the psychological well-being of students who represents the young population of our nation – our hope and future leaders.

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