

## Effects of Substance Use on Students' Academic Performance in Selected Health Training Institutions

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**Abstract:Background** Substance use is believed to be on the increase in many parts of the world and stakeholders have expressed their concerns on how this can adversely affect the users. Students in various institutions have taken up this action which is causing school authorities to implement rules to curb the menace.

**Aim** This study sought to investigate effect of substance use on students' academic performance. **Materials and Methods**A quantitative and a cross sectional design was employed. Data was taken over a period of three months. Data was from February to May 2017. Samples under study were the Health Trainees from 2 health institutions. Microsoft excel was used to randomly select 325 samples from a population of 3300 using their index numbers. The schools' administrative management assisted by giving out the names that owned the selected numbers. Questionnaires were administered and same collected. Introductory letter was collected from the University of Cape Coast's Directorate of Research and Innovation Center for the Institutions selected for the study. **Results**The study found that some trainees engage in the use of substances such as alcohol, marijuana and cigarette. Few use substances such as heroin, cocaine, diazepam and ecstasy but not as much as the use of alcohol, marijuana and cigarette. Based on the use of these substances, those trainees were found to be truant in class, they have health-related problems such as weakness in heart muscles, frequent sickness among others. They also have low motivation to learn due to poor perception, anxiety, and poor judgment among others.

**Keywords:** Health Institutions, students, substance use, truancy

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### I. Introduction

Substance use has been on the increase in many parts of the world for quite some time now and many stakeholders have expressed their concerns on how this can adversely affect the users<sup>1</sup>. According to them, students in various institutions have also taken up this act which is causing school authorities to implement rules to curb the menace. Substances commonly used are hard drugs and alcohol. These drugs are classified as depressants (heroin, barbiturates), stimulants (cocaine, crack, amphetamines) and hallucinogens (marijuana (weed) and ecstasy)<sup>1</sup>. They added that these drugs are ingested, inhaled, smoked, injected or snorted while alcohol comes in different brands and in forms of hard liquor. There are about one hundred and ninety million illicit substance users around the world and most of them are under the age of thirty. Ghana, a developing country, is no exception to the problems of drug use, which is an outcome of rapid social change<sup>2</sup>. The reasons for the use of these drugs are varied and complicated, and societies pay significant costs. Jails and prison services daily tally shows strong connection between crime, drug dependence and abuse<sup>3</sup>. The document further added that use of some drugs such as cocaine has declined but use of other drugs such as heroin and "club drugs" has increased. Numerous studies have documented negative association between substance use and educational outcomes. This association is alarming because society benefits when its members are informed and educated<sup>4</sup>. Substance use could conceivably affect a student's quality of learning and academic performance regardless of its effects on school completion<sup>5</sup>.

### II. Material And Methods

The cross-sectional design was used for the study, the researchers collected data on effects of substance use on students' performance at one point in time. Data was however collected over a period of 3months that is from January – March 2016.

**Study Design:**Cross-sectional study

**Study Location Data collection:** Two health institutions in Ghana

The accessible population comprised health trainees from 1<sup>st</sup> year to 3<sup>rd</sup> year from two Health Training Institutions. The selection of population was justified by the assumption that, in every class, there is the likelihood that, a student is using a substance therefore, all the students will be able to provide relevant data on effects of substance use on students' academic performance. Out of the overall population of 3300 from the two Health Training Institutions, the sample comprised 325 health trainees. The random sampling procedure through the use of computer-generated random numbers was used to select students for the study. This was done by entering the index numbers of all the students of the two Institutions into the computer using computer software Microsoft Excel enabling each student to have a unique index number. This was followed by giving the command to the computer to select the required sample size (325) with their index numbers. The researchers identified these students by their names and index numbers with active support from the school management and questionnaires administered to them accordingly. For the issues concerning ethics, the researchers took an introductory letter from the University of Cape Coast Directorate of Research Innovation and Consultancy which introduced them as students of the University conducting this research for academic purposes. This letter was first sent to the selected Nursing Training Institutions for access to the respondents. The researchers further sort for the consent of the respondents verbally. Those who consented were assured of confidentiality and anonymity and the purpose of the study also explained to them.

### Research Instrument

The data collection instrument was a Self – Designed Questionnaire which was divided into four (A-D) sections with each section gathering relevant data to answer each of the research questions. Section A collected data on the socio – demographics of respondents. Section B instructed the respondents to rank seven substances commonly used by students as reported in literature. Section C collected data on effects of substance use and truancy with nine items. Section D collected data on effects of substance use on students' motivation towards learning with eight items. However, Section C and D used a 5-point Likert's scale with Strongly Agree = 5, Agree = 4, Non – decisive = 3, Disagree = 2, Strongly Disagree = 1 as the options. **Data Collection Procedure**Data was collected through self and direct administration of the questionnaire to the respondents who were given one day to respond to items. In order to ensure that data gathered were of high quality, data collectors ensured that all items had been responded to by the respondents. **Data Analysis**The preliminary data such as demographics were analysed using frequency and percentage tables and charts. Research questions one, two and three were analysed using descriptive statistics.

## III. Result

### Biographic Characteristics of Respondents

This part of the study helped to ascertain whether data was collected from the targeted population and it was done by tabulating from the questionnaire. These items include age, gender, religious affiliation, level and school type. Results obtained are presented in Table 1. Observation from Table 1 revealed that majority of the respondents fell within the ages of 18 to 29 years. From this, 146 (44.9%) of the respondents were between 18 to 23 years of age while 126 (38.8%) were between 24 to 29 years. Moreover, few trainees also fall with higher ages making 44 (13.5%) of the respondents were those who fell between 30 to 35 years of age and 9 (2.8%) were between the ages of 36 and 41 years. In addition, the table revealed that majority of the respondents were females. Up to 212 (65.2%) of the respondents were females and the rest 113 (34.8%) were males.

**Table 1- Biographic Characteristics of Respondents (N = 325)**

Statements	Frequency	Percentage
<b>Age Group</b>		
18 to 23 years	146	44.9
24 to 29 years	126	38.8
30 to 35 years	44	13.5
36 to 41 years	9	2.8
<b>Gender</b>		
Male	113	34.8
Female	212	65.2
<b>Religious affiliation</b>		
Christianity	294	90.5
Islam	25	7.7
Traditional	6	1.8
<b>Year in School</b>		
First year	102	31.4
Second year	157	48.3
Third year	66	20.3
<b>Type of School</b>		
RMN	165	50.7
HAC	73	22.5

RGN	53	16.3
Allied Health	34	10.5

Source: Field data, (2017)

The results again, showed that data was collected from all the three categories of trainees and 102 (31.4%) of these respondents were in their first year, 157 (48.3%) were in their second year, and 66 (20.3%) were in their third year. Among the programme trainees the most was the Registered Mental Nursing (RMN) with 165 respondents representing 50.8% of the total number of respondents who took part in the study. This was followed by 73(22.5%), 53(16.3%) and 34(10.5%) who offered Health Assistant Clinical (HAC), Registered General Nursing (RGN), and Allied Health respectively.

### Substances Commonly Used by Students

Researchers were interested in the commonly used substances by respondents; these were ranked according their availability to students. The degree of substance use is presented in Table 2.

**Table 2- Degree of Substance Use by Trainees (N = 325)**

Items	Mean	Std. Deviation
Alcohol	1.83	1.710
Marijuana (wee)	2.57	1.721
Cigarette	3.28	1.813
Heroin	4.86	1.672
Cocaine	4.97	1.809
Diazepam	5.02	1.882
Ecstasy	5.79	1.850

Source: Field data, (2017)

On a scale of 7 with 1 being mostly used and 7 being least used, Table 2 showed that the most abused substance by trainees was alcohol. It recorded the lowest value of 1.83. This implies that majority of those who abuse substance in these two health institutions used alcohol. Marijuana (wee) has also been identified by the trainees as another substance that is readily available to students hence its use by some trainees. Marijuana was ranked at 2.57 on the scale which implies that it is also commonly used substance. In addition, cigarette was also added to be somehow commonly used substance with the record of 3.28 on the scale of 7. However, substances such as heroin, cocaine, diazepam and ecstasy were given records of 4.86, 4.97, 5.02 and 5.79 respectively from data collected.

### Effects of Substance Use on Truancy

Research question two sought investigate the effects of substance abuse on the truancy level of trainees in the selected health training institutions. To achieve this, the researchers used items from section C which were designed to answer this research question. These items were used to elicit responses from the trainees. The results obtained from these items are presented in Table 3 together with the discussion. From Table 3, it was shown that, majority of the trainees agreed to all the statements given to them. To all the statements, respondents agreed that substance use leads students being absent from school due to various negative health effects associated with the substance. The lowest item on the scale scored 3.5 which also meant that respondents have agreed to the statement. "Students who use substances frequently fall sick which could affect attendance" with a standard deviation of 1.124. Despite this standard deviation which states that the responses are plus or minus 1.124 away from the normal, there is no doubt that students who abuse substance might fall sick frequently which will affect contact hours.

**Table 3- Effect of Substance Use on Truancy (N = 325)**

Statements	Mean	Std. Deviation
Substance use could make the user drowsy which leads to absenteeism	4.42	.781
Substance use weakens the heart muscles leading to general body weakness which contribute to absenteeism	4.13	.883
Substance use could lead to addiction which can affect the person's well-being leading to truancy	4.39	.845
Substance use interferes with normal sleeping cycle which could affect the contact hours	4.14	.854
Students who use substances frequently fall sick which could affect attendance	3.50	1.124
Students who use substances often have problems with their family leading to poor attendance to class	3.94	.992
Students who use substances sometimes chase the use substance leading to absenteeism	4.07	.879
Students who use substance may have problems with the law leading to poor class attendance	4.03	1.033
Students who use substance sometimes avoid academic activities due to scent of some	3.98	1.081

Source: Field data, (2017)

### Effects of Substance Use on Students' Motivation to Learn

Research question three was intended to find out how substance use affects students' motivation to learn. Anecdotally, it is perceived that some substances help students to learn their lessons well. For this reason, the researchers of this study sought to find out how substance use affect the motivation level of trainees to learn and results obtained are presented in Table 4. From Table 4 majority of the respondents agreed to the items presented to them. Apart from one of the statements where students remained non-decisive, respondents agreed to all the statements presented in this section. The highest record obtained was 4.12 which means that respondents agreed to the statement; substance use leads to poor perception and motivation to study. Notwithstanding, respondents also agreed (3.90) that substance use leads to poor judgment which also leads to poor motivation to learn. In addition, 3.87 was obtained for the statement "Substance use leads to irritability leading to poor motivation towards learning," 3.86 for the statement "Students who use substances have poor concentration thus affecting their motivation to learn" among others.

**Table 4-** *Effect of Substance Use on Students' Motivation to Learn (N = 325)*

	Mean	Std. Deviation
Substance use leads to poor perception and motivation to study	4.12	1.005
It leads to decreases in energy levels leading to poor motivation	3.50	1.188
Students who use substances often have memory problems leading to poor motivation towards learning	3.82	1.085
Anxiety accompanies substance use limiting motivation to learn	3.71	1.072
Substance use leads to irritability leading to poor motivation towards learning	3.87	.932
Students who use substances are often lazy to learn	3.33	1.227
Substance use leads to poor judgment leading to poor motivation to learn	3.90	1.020
Students who use substances have poor concentration leading affecting their motivation to learn	3.86	1.101

Source: Field data, (2017)

## IV. Discussion

Respondents for this study were students in their youthful age and can spend more energy to acquire the skills needed for their future jobs. The findings are in line with the general perception that nursing, midwifery and most healthcare jobs are reserve for females. The school type of the respondents coincided with a study which found out that the most commonly abused drugs where cigarette and hookah, followed by alcohol<sup>6</sup>. It could be said that cigarette, marijuana and alcohol are mostly used by students. This might be happening because of the social construct, their availability or the setting in which these students find themselves. Better still, it could be that these students were not placed under serious supervision to always check their actions and religious values. There are other substances that were also found to be used in this study. Even though cigarette, hookah and alcohol are being used in the health training institutions selected, cocaine and heroin are rarely or least used. Similarly, substances such as ecstasy, hashish and heroin were also being abused in their study<sup>6</sup>. Another study<sup>7</sup> found that those substance used among students was 47.9% of a total student population of 651. Anecdotally, it is imperative to say that substance abuse have been with students for the past decades and will continue to be with students until students are monitored as prisoners. However, if students are monitored as prisoners, it will not give room for social life development which is a core point of education. The findings obtained from this study on truancy are in line with those obtained from the literature. For instance, in a study<sup>8</sup> conducted among 971 students in the United Kingdom, it was found that, truant youth engaged in more substance use. In support, the onset of substance use in students brings about conduct disorders, juvenile offences, severe truancy, school dropout, anxiety among others<sup>9</sup>. Simply put, substance use does not only result in truancy in school attendance but also other immoral acts that may end up destroying the future that the users could have prepare for themselves. The trend presented by the respondents indicate that trainees who are found to indulge themselves in substance use are not often motivated to learn which will eventually lead to poor class performances. Even though the daily use of cannabis does not impair motivation in medical users, continuous use of it will affect the wellbeing of individuals involved in it leading to increase ill health<sup>10</sup>. When substance users are ill, they cannot be actively involved in the learning process. This could mean that their motivation to learn will also decrease.

## V. Conclusion

In conclusion, the researchers of the study noted that, the use of substance by trainees and individuals leads to unproductivity in one's life. Thus, based on the findings of the study where trainees indicated that the use of substance causes health problems that results in truancy and low motivation towards learning, it is imperative to conclude that those who indulged themselves in this practice cannot acquire the required skills and knowledge needed to effectively discharge their duties if they graduate from the health training institutions. Therefore, this action of trainees needs to be checked vigorously to help them achieve total development which the educational institution is set to achieve.

**Conflict of interest-** the authors declare that they have no conflicting interest in this manuscript.

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**Contributions:** IKA developed the manuscript after the final draft of the report came out. GKA supervised the study from its conception, data collection, analysis and report writing, IA, BMM, AO and GEO conceptualized the study under the supervision of GKA, collected data and came up with the draft of the report on the study.

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### APPENDIX

#### DATA COLLECTION INSTRUMENT UNIVERSITY OF CAPE COAST DEPARTMENT OF HEALTH SCIENCES EDUCATION RESEARCH QUESTIONNAIRE

#### Introduction and Consent

This research is an academic work and it is meant to enable the researchers obtain a degree in B.Ed. Health Science Education. Result of the study would help the Ministry of Education and other relevant stakeholders adopt and restructure its policies on substance among students. Confidentiality and use of the information for its purpose is assured. Your participation is completely voluntary and agreeing to partake in the study means you will be made to respond to the items on the questionnaire. There is no wrong or correct response with regards to this research and the researchers do not anticipate any risks or discomfort arising from responding to the items on the questionnaire. However, in the event of any discomfort arising from responding to the items, you are at liberty to opt out.

#### SECTION A: SOCIO – DEMOGRAPHIC DATA

**Instruction:** Please, tick (✓) or fill in the empty spaces provided after each option.

Age Groups (years): 18 – 23 [ ] 24 – 29 [ ] 30 – 35 [ ] 36 – 39 [ ]

Gender: Male [ ] Female [ ]

Religious Affiliation: Christianity [ ] Islam [ ] Traditional [ ]

Other (specify) .....

Year in School: First Year [ ] Second Year [ ] Third Year [ ]

School Type: RGN [ ] RMN [ ] CHN [ ] HAC [ ] Allied Health [ ] Other (specify) .....

#### SECTION B: SUBSTANCES COMMONLY USED BY STUDENTS

**Instruction:** Please, rank the following substances according to the frequency of use by students.

Indicate (1 or 2 or 3 or 4 or 5 or 6 or 7) in the space after each substance. 1 for the highest (most commonly used) and 7 for the lowest (least commonly used).

Alcohol [ ]

Marijuana (wee) [ ]

Cigarette [ ]

Heroin [ ]

Cocaine [ ]

Diazepam [ ]

Ecstasy [ ]

**SECTION C: EFFECT OF SUBSTANCE USE ON TRUANCY**

**Instruction: Please tick (√) in one of the spaces after each statement.**

**SA: Strongly Agree A: Agree N: Non – decisive D: Disagree SD: Strongly Disagree**

Q. No.	Statement	SA	A		D	SD
7.	Substance use could make the user drowsy which leads to absenteeism.					
8.	Substance use weakens the heart muscles leading to general body weakness which contribute to absenteeism.					
9.	Substance use could lead to addiction which can affect the person's well – being leading to truancy.					
10.	Substance use interferes with normal sleeping cycle which could affect the contact hours.					
11.	Students who use substances frequently fall sick which could affect class attendance.					
12.	Students who use substances often have problems with their family leading to poor attendance to class.					
13.	Students who use substances sometimes chase the used substance leading to absenteeism.					
14.	Students who use substance may have problems with the law leading to poor class attendance.					
15.	Students who use substances sometimes avoid academic activities (classes, group assignments etc.) due to the scent of some of the substances.					

**SECTION D: EFFECTS OF SUBSTANCE USE ON STUDENTS' MOTIVATION TO LEARN**

**Instruction: Please tick (√) in one of the spaces after each statement.**

**SA: Strongly Agree A: Agree N: Non – decisive D: Disagree SD: Strongly Disagree**

Q. No.	Statement	SA	A		D	SD
16.	Substance use leads to poor perception (poor interpretation of information) leading to poor motivation to study.					
17.	Substance use decreases energy levels leading to poor motivation towards learning.					
18.	Students who use substances often have memory problems leading to poor motivation towards learning.					
19.	Anxiety accompanies substance use limiting motivation to learn.					
20.	Substance use leads to irritability leading to poor motivation towards learning.					
21.	Students who use substances are often lazy to learn.					
22.	Substance use leads to poor judgment leading to poor motivation to learn.					
23.	Students who use substances have poor concentration leading affecting their motivation to learn.					

*Thank you for your time and responses; we are very grateful!*

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