










Youthful curiosity as a predictor of substance use among students

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ABSTRACT

Introduction: Notwithstanding, the reasons that make the youth consume substances at young age are very complex, and many studies conclude that youthful curiosity is a major determining factor that drives them into such behavior. This current study investigated curiosity as a predictor of substance use among senior high school students in Gomoa West District and Effutu Municipality. The study was guided by three research questions.

Method: It adopted the quantitative descriptive survey design.

Population: A sample of 260 senior high school students were selected using a probability sampling technique for the study.

Instruments: It adopted questionnaires on curiosity, substance use risk profile and substances and choices to collect data from respondents.

Data analysis: Data gathered were analyzed descriptively using frequencies, percentages and Pearson product-moment correlation.

Results: The study found that students were having low levels of alcohol and substance use curiosity. Also, the study revealed that the students' substance use risk level was moderate. Furthermore, the study revealed a moderate relationship between alcohol and drug use curiosity and substance use risk among students.

Recommendations: It was recommended that among other things the management of senior high schools in Gomoa West District and Effutu Municipality should provide guidance and counselling services on substance use and its effects on the youth.

Keywords: abuse, curiosity, dependence, drug use, substance use, youth

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INTRODUCTION

An alarming percentage of substance use among the youth in the high school is a reality that, if unchecked, might harm the youth who are in their formative years. The effects of substance use include school dropouts, accidents, fatalities, property damage, moral decadence, improper resource allocation, indiscipline, and worse academic standards.

In general, using drugs that alter a person's mood, thinking, or mental processes is referred to as using substances (WHO, 2019). Psychotic drugs have the potential to cause dependency syndrome, which is a collection of behavioral and physiological symptoms that develop over time. WHO (2020) defines a drug as a chemical that, when smoked, injected, consumed, sipped, or inhaled as powder or vapor, alters a person's mood, perception, and cognitive behavior. WHO

(2014) classifies drugs namely alcohol, tobacco (cigarettes), cannabis, and opioids as illegal drugs.

According to WHO (2014), the negative impact of substance use among the youth, particularly in developing countries is a worldwide health issue. WHO estimates that there are two billion regular drinkers, 1.3 billion marijuana and cigarette smokers, and 185 million illicit drug users worldwide. The Joint United Nations Program on HIV/AIDS (UNAIDS), the World Bank, and WHO all have positions on the issue of injecting drug users (WHO, 2014), drawing on the most recent data available, jointly estimated that those who inject substances is close to 12.7 million. This corresponds to a prevalence of 0.27% of the population from 15 to 64 years. Based on the most recent information available, it is estimated that 12.7 million persons inject drugs worldwide. This is equivalent to Eastern and South-Eastern Europe, where the prevalence is much high and severe, with the rate of drug use

by injection hovering around 4.6 times greater than the worldwide average. Africa has a substantially higher rate of cannabis use than the rest of the world (5.2%-13.5% of those between the ages of 15 and 64). In most of Sub-Saharan Africa's nations, cannabis usage has become a common occurrence, especially among adolescents in South Africa, Kenya, Zimbabwe, and Ghana (WHO, 2019).

In Ghana, statistical data from the Ghana Narcotic Control Board showed that 35,000 out of the country's 50,000 substance users are adolescents (NACOB, 2017). This position agrees with a study conducted by Doku (2012), which shows that the prevalence of substance use in Ghana is high among adolescents. WHO (2019) report on substance abuse in Africa showed that negative repercussions of drug and other substances are common traits of substance use. This includes sexual assault, for instance, rape, physical assault, criminal activity, disregard for social obligations, sicknesses, harm, and fatality. It has been demonstrated that the young people of Africa are at risk from using marijuana, tramadol, alcohol, and cigarettes. There are 12.7 million substance users worldwide.

Ghana, like many other developing countries, is bedeviled with substance use among adolescents as a consequence of social change. A study conducted in Serenity Place, a rehabilitation center in Ghana on inmates revealed that psychological and socio-economic factors were the causes of substance use (Olurische, 2019). Another study conducted among university students in the Greater Kumasi Area, showed that peer influence was the major contributor of cannabis use among the students, which mostly occurs while in the second cycle schools. As much as 64% of the respondents admitted that they obtained their supply from outside the school, and 66% of users of marijuana claimed that its use has a positive effect on their studies. This claim provides a good ground for peer pressure as well as peer influence (Olurische, 2019). The study conducted by Olurische (2019) in Cape Coast, Ghana, revealed that curiosity and peer influence were the most likely reasons why adolescents engaged in substance use. The work of Ganu (2013) among 554 adolescents in Ghana revealed that 80% never used any illicit substance. While nine in ten of the sample were familiar with the position of their church or religion regarding substance use such as alcohol and the use of tobacco. However, a fifth of the students (20%) admitted using illicit substances- a mixture of alcohol and or with cannabis as the most abused substances.

Using the most recent information available, it was collectively assessed that the number, for instance, rape, physical violence, criminal activity, and social neglect are all examples of sexual violence. According to Ganu (2013), the majority of conventional drugs are frequently abused because there is no dose information available to show how much the users actually need. Additionally, the expiration date is not specified. Drugs that are used today were once derived from plants, animals, minerals, and other natural sources. Adu-Mireku (2019) stated that substance use has both positive and negative effects on the user. In the view of Adu-Mireku (2019), when a substance is properly used or taken into a living organism's system, it produces the desired results and allows the organism to function effectively. He however argued that the use of un-prescribed substances, as well as the misuse or overdose of prescribed substances, can have negative effects on the organism. Some of the negative effects of substance use include loss of intelligent quotient (IQ), irreparable, school dropout, unplanned sexual activities, accidents, domestic violence, increased

sexually transmitted infections (STIs), high level of crime and unemployment, which in turn affect the economy of Ghana.

In view of what the literature presents, it is difficult to ascertain the particular cause of substance use among adolescents because various causes or possible reasons have been catalogued by numerous scholars. However, it is possible to attribute substance use behaviors of adolescents to their acts of exploration in this golden period of development (adolescence). The act of exploration among the youth is nothing but an aspect of curiosity.

Curiosity is made of cognition and internal motivation that is inherent in the information processing in a person (Stupple et al., 2017). Generally, curiosity is an intense desire to explore new and challenging events, that motivates people to get into, behave and think in new ways.

"Curiosity is a state of increased arousal response promoted by a stimulus high in uncertainty and lacking in information. When compared to existing knowledge, the novel, uncertain, conflicting, or complex properties of external stimuli create a conceptual conflict that arouses the internal state of arousal called curiosity" (Berlyne, 1966).

According to Loewenstein (1994), curiosity is a crucial motivational force that influences people's behavior, especially among the youth. Some studies have related that curiosity increases the brand recognition of a person at critical moments in a person's social and other aspects of life, at times, it prompts people's experimentation with substance use such as alcohol, drug, sex, and street violence (Fazio et al., 1992; Green, 1990).

Curiosity is identified as one of the critical factors that influences behaviors in a dual relationship, positive and negative ways, at different stages of the developmental cycle. In addition, curiosity seen as a driving force in exploratory behaviors, scientific discovery, economic gain, academic success and substance use (Kwofie, 2018; Loewenstein, 1994). Curiosity is undoubtedly one of the reasons why adolescents engage in substance use.

Statement of the Problem

Substance use is a social problem that appears to be constantly increasing at an alarming rate in Ghana. Substance use has many negative effects on the nation's economy. Socially, it leads to increase in crime rate and school dropout. Health wise, it leads to STIs, lungs and liver problems. Economically, it increases government expenditure on rehabilitation of victims of substance use and reduces productivity. Substance use leads to the death and destruction of many people in the Ghanaian society.

A study conducted by Nkyi (2014) among senior high school students in Cape Coast indicated that students in the senior high school are the majority when it comes to substance use. Another study by Kwofie (2018) in the Kwahu East District using senior high school students as respondents, also concluded that substance use in the senior high school is increasing at exponential rate. Several factors such as availability of substances, peer group pressure, child abuse, neglect, and curiosity contribute to the use of substances in the youth in the second cycle schools. Spooner cited by Braunstein et al. (2014) identified genetics, gender, family, economy, tribe or ethnicity, traumatic life events, environment, level of knowledge of substances, psychological health, peer pressure, and the school as some of the elements that lead to adolescent substance use in the school system, that collaborates other

works such as Kwofie's (2018) findings. A research conducted by Mission of Hope Society (a non-governmental Organization) in the Brong Ahafo Region of Ghana (cited by Fosu, 2018), outlined the following as some of the reasons why adolescents engage in substance use; low self-esteem, stress, poor coping skills, pressure, poor communication, and poverty.

However, in Ghana, the role of curiosity in adolescents' substance use is less reported in literature, thereby creating a gap in literature. In view of this, the researchers explored the predictive ability of curiosity on substance use among adolescents in senior high schools in Gomoa West District and Effutu Municipality in the Central Region of Ghana.

Objectives

To explore the problem further, these objectives were formulated to guide the study:

1. The level of curiosity of alcohol and substance use among the youth,
2. Substance use risk among the youth,
3. Relationship between alcohol, drug curiosity and substance use risk.

METHOD

Before the data collection, approval from the university's Institutional Review Board was acquired. A day prior to giving the questionnaire, the researchers received approval from the lecturers whose students were chosen for the study.

The researchers adopted the descriptive survey design in surveying a sample of 260 respondents out of a total of 1,376 students. A descriptive study establishes the range and distribution of some social and psychological characteristics such as education and training, location, curiosity, occupation, and intelligence and to discover how these characteristics may be related to other behavioral patterns and attitudes (Saru, 2019). The researchers settled on a descriptive survey design because it provides a good opportunity for measuring participants' opinions, attitudes and behaviors concerning the two variables (curiosity and substance use). The sample size was based on G-power calculation, G-power is a broad power analysis program for determining the sample size and analyzing power for scientific studies, (Verma & Verma, 2020). The proportionate stratified sampling technique was used because the population had varied numbers therefore there was the need for fair representation of the sample size, hence, the choice of proportionate stratified technique suited the current study. Proportionate stratified technique gives the researchers the opportunity to select the sample size that is proportionate to the accessible population of each school. Selection of individual respondents was based on a systemic sampling procedure, where the K^{th} term was calculated by dividing accessible population by sample size.

Instruments

The substance and choice scale (SACS) is a four point Likert scale used for gathering the data for the study has 23 items, developed by Christie et al. (2001). The scale is in three sections, section A (12 items), section B (10 items), and section C (one item). Sections A and C measures the level of agreement and disagreement thus did not use=1, once a week or less=2, more than once a week=3, and most days or

Table 1. Gender distribution of respondents

Gender	Frequency	Percent
Male	157	60.4
Female	103	39.6
Total	260	100.0

Table 2. District distribution of respondents

District	Frequency	Percent
Gomoa West	218	83.8
Effutu Municipality	42	16.2
Total	260	100.0

more=4. In case of section B, not true=1, somewhat true=2, and certainly true=3.

To assess the substance use behavior of the participants, the researchers adopted the substance use risk profile scale (SURPS) a four point Likert scale, developed by Woicik et al. (2009). The SURPS contained 23 items with four dimensions such as introversion/hopelessness (H)=7 items, anxiety sensitivity (AS)=5 items, impulsiveness (IMP)=5 items, and sensation seeking (SS)=5 items and it is also a Likert type, that is scored as none of the time=1, a little of the time=2, most of the time=3, and all of the time=4.

Finally, to assess the respondent's curiosity on substance use, the researchers adapted the adolescent substance curiosity scale (ASCOS) developed by Khalil et al. (2018). The scale contains seven items that are scored based on agreement and disagreement, where strongly disagree=1, disagree=2, somewhat agree=3, agree=4, and strongly agree=5.

Data Analysis

Data from the research questions were answered quantitatively. Research question one was answered using Pearson-product moment correlation because the aim was to establish a relationship between the independent and the dependent variables. Research question two was answered using frequencies and percentages because the aim was to establish the prevalence of substance use in the youth in senior high school. Research question three was also answered with frequencies and percentages because the researchers wanted to know the level of curiosity in the youth in senior high schools.

RESULTS

Presentation of Demographic Results

Part of the questionnaires collected the demographic characteristics of the respondents in terms of their gender. **Table 1** presents the information on the demographic variables of the respondents, which indicates that the majority of the respondents were males (n=157, 64.4%) and the remaining were females (n=103, 39.6%).

Table 2 shows that 218 (83.8%) representing the majority of the respondents were senior high schools students in Gomoa West District while 42 (16.2%) respondents were senior high school students in Effutu Municipality.

Research Question One

This question sought to determine the levels of alcohol and drug curiosity among senior high school students in Gomoa West District

Table 3. Levels of alcohol and drug curiosity among students

Level	Frequency	Percent
Low curiosity	91	35.0
Somewhat low/high	85	32.7
High	84	32.3
Total	260	100.0

Table 4. Levels of substance use risk among students

Level	Frequency	Percent
Low substance use	86	33.1
Moderate substance use	90	34.6
High substance	84	32.3
Total	260	100.0

Table 5. Relationship between alcohol & drug curiosity (ADC) & substance use risk (SUR) among students

Variables	ADC	SUR
Pearson correlation	1	.396**
ADC Sig. (2-tailed)		.000
n	260	260
Pearson correlation	.396**	1
SUR Sig. (2-tailed)	.000	
n	260	260

and Effutu Municipal District. In answering the question, 7-items on the questionnaire were used. **Table 3** presents the findings.

The findings indicated that 91 respondents (35%) reported a low level of alcohol and drug curiosity whereas 85 respondents (32.7%) of the respondents reported their level of alcohol and drug curiosity to be moderate. High levels of alcohol and drug curiosity was reported among 84 respondents, which represent 32.3% of the total respondents. This implies that alcohol and drug curiosity levels among senior high school students in the two selected districts is low, therefore they are likely not to experiment with substances such as cannabis, cocaine and tramadol as a result of curiosity.

Research Question Two

The question sought to determine the levels of substance use risk among senior high school Students in Gomoa West District and Effutu Municipal. In answering the question, 22 items on the questionnaire were used. **Table 4** presents findings on substance use risk among senior high school students in Gomoa West District and Effutu Municipal.

The findings indicated that 86 respondents representing 33.1% reported being at low risk of substance use with 34.6% constituting 90 respondents reporting moderate substance use. High substance use was reported among 84 respondents, which represents 32.3% of the total respondents. This implies that the majority of the senior high school students in the selected districts moderately engaged in the use of substances such as marijuana, shisha, amphetamine, heroin and ecstasy.

Research Question Three

This question sought to determine the relationship between alcohol and drug curiosity and substance use risk among senior high school students in Gomoa West District and Effutu Municipal. The Pearson Product-Moment Correlation was computed to find the relationship between alcohol and drug curiosity and substance use risk among students. **Table 5** presents findings on the relationship between alcohol

and drug curiosity substance use risk among senior high school students in Gomoa West District and Effutu Municipal.

Table 5 shows that there is a significant, positive and moderate relation between alcohol and drug curiosity and substance use risk among students ($r=.396$, $p<.05$). This means that as alcohol and drug curiosity increase, the risk of substance use among students also increases. This implies that a surge in substance use curiosity leads to a corresponding surge in the risk of substance use among adolescents. In other words, the higher an adolescent's curiosity about substances, the higher the likelihood of his or her substance uses explorative behaviors.

DISCUSSION

Research Question One

The focus of research question one was to find the levels of alcohol and drug curiosity among Senior High Students in the Effutu Municipality and Gomoa West District. The result of the study indicated that the majority of adolescent students in Effutu municipality and Gomoa West district were having low levels of alcohol and drug curiosity. This result disagreed with an earlier finding by Pascal, Evans, and Sylvester as cited by Held (1989), which indicated that high curiosity was the most widely reported reason for the use of alcohol and other drugs among senior high school students.

Research Question Two

The question aimed at finding out the levels of substance use risk among senior high school students in Gomoa West and Effutu Municipality. The result indicated that most of the senior high school students in Gomoa West and Effutu Municipality were moderately involved in substance use. They are moderately involved in the use of substances such as cannabis, amphetamines, cocaine, heroin, shisha, alcohol, and ecstasy. These students stood the chance to use new substances or increase their current use of substances as their curiosity levels increased. This finding was not in agreement with an earlier finding by Nkyi (2104), which indicated that the use of psychoactive substances and other drugs in senior high schools appears to be widespread and varying across African countries. In Ghana, for instance, senior high school students' substance use behaviors were found to be at a lower level than what pertains in other parts of West Africa and the African continent at large (Nkyi, 2014). The finding also contradicted an earlier finding by Rudatsikira et al. (2009), which showed there was a high level of substance use among senior high school students with 57.9% had consumed substances. The finding again refuted a study conducted by Adelekan (1989) and Peltzer cited by Nkyi (2014), which indicated that the use of alcohol and other substances such as cannabis, opioid, tramadol and inhalation of glue among senior high school students are at low level than the level reported by students in some of the other African countries.

Research Question Three

The focus of this question was to determine the relationship between alcohol and drug curiosity and substance use risk among senior high school Students in Gomoa West District and Effutu Municipal. The study revealed a noteworthy and unequivocal moderate relation between alcohol and drug curiosity and substance use risk among students in Gomoa West District and Effutu Municipal. This finding supports the argument of Kelso (2020), that many adolescents engaged

in substance use because they are curious about what they were told concerning the sensation (high) associated with substance use.

This finding further confirmed the position of Fazio et al. (1992), Green (1990), and Loewenstein (1994) that curiosity is a crucial motivational force in influencing human exploratory behaviors such as sexual activities, substance use, learning and increased brand recognition.

CONCLUSION

The following inferences were made in light of the results: Senior high school students have low levels of alcohol and drug curiosity. This could mean that these students are not very exposed to some of the substances stated on the questionnaire. With such behaviors, students stand the chance not to engage in substance use. The students are moderately engaged in substance use. This moderately engaged substance use level could be as a result of the fact that students are exposed to substances such as alcohol, cigarette and cannabis at home or at school.

The high school students exhibited moderate relation between alcohol and drug curiosity and substance use risk behavior. This is as a result of the fact that some of the youth are eager to explore the feeling associated with substance use. It could also be the fact that these students engaged in substance use to confirm the stories they might have heard from their peers as far as substance use is concerned.

Recommendations

Based on the findings, the following recommendations are proposed:

1. Management of senior high schools should provide guidance and counselling services on substance use and its effects on the youth. This could be implemented as part of the annual orientation program for freshmen and final year students. To help the students to be aware of the consequences of substance use and the youth must choose good friends who will help them to further good course to achieve their aims in life.
2. The management of senior high schools in the country should ensure strict enforcement of school rules and regulations that prohibit the use of substances by students and stiffer penalties given to those caught in the act to deter others not to engage in drug or substance use.
3. A multi-dimensional preventive activities encouraging anti-substance use behaviors in the youth, peers, parents, should be activated in pre-tertiary schools and in the catchment areas in the school comprising of the Ministry of Education, religious leaders and other stakeholders to stop or reduce substance use.
4. Alcohol and other hard substances must not be advertised in the media during prime time (from 6 to 9 pm) when children are likely to be near the sets.
5. The Ministry of Health and its allied agencies must increase their surveillance of drug and substance use, abuse, sales and the distribution channels or routes to prevent the involvement of the youth in the distribution chain.
6. Parents must not introduce the youth to the use nor sale of hard drugs as children copy from their parents. Parents must also set

good examples to the youth by avoiding the use of substances while children are around.

7. Alcoholic beverages must be kept away from the youth and stored under locks at home.
8. Clubs and societies must be formed at all levels of the school system to educate on the youth on ill practices of drug use. Such clubs can pay visits to rehabilitation centers and prisons for them to have first-hand knowledge of drug abusers at the centers.

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Declaration of interest: Authors declare no competing interest.

Data availability: Data generated or analyzed during this study are available from the authors on request.

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