UNIVERSITY OF CAPE COAST

PREVALENCE OF CIGARETTE, ALCOHOL, MARIJUANA AND TRAMADOL USE AMONG SENIOR HIGH SCHOOL STUDENTS IN THE BEKWAI MUNICIPALITY, GHANA

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BY

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Thesis submitted to the Department of Guidance and Counselling, Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Guidance and Counselling

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature..... Date.....

Name: .....

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down in the University of Cape Coast.

Principal Supervisor's Signature..... Date.....

Name: .....

Co-Supervisor's Signature.....…… Date.....

Name: .....

ABSTRACT

The study investigated substance use (alcohol, cigarette, marijuana and tramadol) in terms of prevalence among senior high school students in the Bekwai Municipality. A descriptive survey design espousing the quantitative approach was used with a sample of 475 respondents. Respondents were selected using the multistage sampling procedure (census, stratified and systematic). An adapted Youth Risk Behaviour (1999) questionnaire with a reliability coefficient of 0.91 was used to collect the data. The data was analysed using frequencies and percentages, Mann-Whitney U test, and One-Way ANOVA. The study results revealed that alcohol, cigarette, tramadol, and marijuana were prevalent but low among the respondents. The study showed no statistical significant difference in substance use on the basis of gender and age of respondents. It is recommended that community based outreach programmes such as substance use disorder management be brought to educate the youth. This could be organized by Ghana Health Service with support from interested stakeholders such as Non-Governmental Organizations and counsellors to sensitize students on the best attitudes towards eradication of substance use among them. The success of programme will help them understand how negatively substance may be to their lives generally.

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I am highly indebted to Rev. Fr. Dr. Anthony K. Nkyi and Prof. Eric Nyarko-Sampson; my supervisors for their patience, understanding and their immense support.

DEDICATION

To my Mom, Madam Comfort Osei and my best friend Ms. Benedicta Sarfo Arthur

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CHAPTER ONE

INTRODUCTION

Background to the Study

Substance use is a global problem that poses a great danger to the lives of individuals, society, political stability and security in many countries (World Health Organization, 1999). Substance use is defined by Gelder Mayou and Cowen (as cited in Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif, & Chughtai, 2015) as a maladaptive pattern of substance use leading to clinically significant impairment or distress, wherein the person may also suffer from tolerance and withdrawal. Substance use is not limited to mood altering or psychoactive substances. Activity is equally considered substance use when inappropriately used (as in steroids for performance enhancement in sports) mood altering and psychoactive substances are not the substances of use (Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif & Chughtai, 2015). Substance use is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress, wherein the person may also suffer from tolerance and withdrawal. Substance use is a patterned use of a substance in which the user consumes the substance in amounts or with methods which are harmful to themselves or others, and is a form of substance-related disorder (Ksir, 2002). Widely differing definitions of substance use are used in public health, medical and criminal justice contexts. In some cases, criminal or anti-social behaviour occurs when the person is under the influence of a substance, and long term personality changes in

individuals may occur as well. Substance use is when you take substances that are not legal. It is also when you use alcohol, prescription medicine, and other legal substances too much or in the wrong way. According to the Public Health Approach (2017), practitioners have attempted to look at substance use from a broader perspective than the individual, emphasizing the role of society, culture, and availability. Some health professionals choose to avoid the terms alcohol or substance use in favour of language they consider more objective, such as substance and alcohol type problems or harmful/problematic use of substances.

Substance use refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit substances. Psychoactive substance use can lead to dependence syndrome such as a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the substance, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to substance use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state (WHO, 2018). To WHO (2018), substance use is the misuse of alcohol, cigarette, illegal substances, prescription substances, and other substances (such as paint thinners or aerosol gasses) that change how the mind and body work. It is possible to use some substances without becoming physically, emotionally, or psychologically dependent on them, but continued use does tend to make people dependent. Dependency on some substances happens very quickly and is difficult to reverse People who use substances can get sick, ruin their

relationships with other people, destroy their lives and the lives of family members, and even die.

According to American Psychiatric Association (1994), substance use means essentially the same as substance use, except that the term "substance" (shortened form of psychoactive substance) avoids any misunderstanding about the meaning of "substance". The best general definition of substance use is the use of any substance in a manner that deviates from the approved medical or social patterns within a given culture at a given time. This is probably the concept underlying the official acceptance of the term use in such instances as the names of the National Institute on Substance use (USA) and the Canadian Centre on Substance use.

To Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif and Chughtai (2015), some of the substance most often associated with this term includes alcohol, amphetamine, barbiturates, benzodiazepines, cocaine, methaqualone, and opioids. Substance use refers to the use of a substance for purposes for which it was not intended or using a substance in excessive quantities. All sorts of different substances can be used including illegal substances (such as heroin and marijuana), prescription medicines (painkillers) and the other medicines that can be bought off the super market shelves [cough mixers]. According to Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif and Chughtai (2015), the use of these substances may lead to criminal penalty in addition to possible Physical, Social, and Psychological harm. Substance use is a common problem worldwide. Alcohol is widely consumed by various sections of the society, most notably by the very tributary and the impoverished. To Emmanuel, Akhtar and Rahbar (as cited in Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif &

Chughtai, 2015) the epidemiology of substance addiction in a given society seems to be dependent on cultural values, beliefs and attitudes to substance use, which are quite variable across cultures and geographical regions.

According to the Tomas-Rossello et al. (2010), the use of illicit substances has increased throughout the world and the major world trend is the increasing availability of many kinds of substances among ever widening spectrum of consumers. The major concern is that children seem to be targeted as the new market for the substance industry globally. Substance use has become the focus of research and preventive activities in the developed countries for decades (Muyabo, 1996). It is believed that the concern is due to the potential short- and long-term adverse effects associated with the use of substances such as cigarettes, substances, marijuana, marijuana, tramadol, etc., on individual well-being (Moodley, Matjila & Moosa, 2012).

Tshitangano and Tosin (2016) note that various studies have revealed that substance use amongst adolescents may lead to poorer health and negative social consequences. For instance, substance use is associated with unintentional injuries, cancer, homicides and suicides, depression, personality disorder, unplanned sexual activity and increased sexually transmitted diseases (Tshitangano & Tosin, 2016). Moreover, substance use has also been documented to contribute to the high rate of school dropout, unemployment, high level of crime as well as poverty, which in turn affects the economy of a country (Griffin, Lowe, Acevedo & Botvin, 2015). According to the United Nations (as cited in Tshitangano & Tosin, 2016), globally marijuana (marijuana or ganja) is a widely consumed illicit substance. Although it is not the primary substance of use in most nations such as Europe, America,

Australia or Asia, it has been found to be the primary substance of use in Africa, especially amongst young people (United Nations, 2014).

A study carried out by the London School of Economics in 1980 on students learning behaviour revealed a relationship between substance use and poor academic results (Otieno, Balswick & Norland as cited in Muoti, 2014). Africa has not been spared from the use of substances by the youth. The continent, over recent years has experienced an upsurge in the production, distribution and consumption of substances with the youth and young adults being most affected (Asuni & Pela, 1986).

Africa has huge young and vulnerable populations which has become the target market for the illicit substance industry. This constitutes 56% of the population aged between 14-19 years, which constitutes secondary school students. In Ethiopia, it is reported that 82% of the street children in Addis Ababa use some kind of a substance (Helander, Bäckberg, Hultén, Al-Saffar, & Beck, 2014). Gerra et al. (2008) the chief of substance and preventive health branch at the United Nations office on substances and crime pointed out that West Africa is completely weak in terms of boarder control, undermanned ports and the big substance cartels from Colombia and Latin America have chosen Africa as a way to reach Europe. Gerra et al. (2008) added that when a country becomes a transit point it immediately becomes a consumption country.

According to Helander, Bäckberg, Hultén, Al-Saffar, and Beck (2014), the United Nations (UN) statistics 2013, 37,000 people in Africa die annually from diseases associated with substance use. The UN estimates that there are 28 million substance users in Africa (Helander, Bäckberg, Hultén, Al-Saffar,

& Beck, 2014). An International conference on substance use in Kampala, Uganda, reported that young people in consumption countries were the most vulnerable section of the population, especially those in the period of early and late adolescence who are mostly unable to resist peer pressure and start experimenting with substances in schools or even outside school. The international conference on substance use in Kampala advocated for an immediate strong invention to reverse the trend (Helander, Bäckberg, Hultén, Al-Saffar, & Beck, 2014).

Substance use contributes to accidents, crime, violence within the family, and lost productivity at work. Substance use is the use of any substance for an unintended purpose or in an excessive amount. All substances, whether legal or illegal, have an impact on health when used in the wrong way. Substance such alcohol, substances and the likes are used by many including students. Students are keen to fit in, prove themselves, and often overjoyed with their newfound freedom. These freedoms are often taken too far, however, as school campuses tend toward a higher frequency of partying and illegal usage of substances. Therefore, students in schools of the 21st Century are believed to engage in substance usage along their study period. This for the fact that going to school can be a major source of social anxiety for many students. The temptation to do substances is strong because school students often find they make socializing easier or help them study harder. According to To, Neirynck, Vanderplasschen, Vanheule, and Vandevelde (2014), trends in substance use change over time and no college is immune to substances, particularly the latest ones. Notwithstanding this fact, students' use a few substances consistently over time and these are alcohol,

marijuana, hallucinogens, and prescription pills, of which Adderall is most prominent. It is noted that he most used substance by students is alcohol.

The substances under consideration for the study are alcohol, cigarette, marijuana and tramadol. In terms of alcohol, Alcohol use among adolescence and young adulthood remain a public health problem all over the world. According to the global status report on alcohol and health by WHO 2014 about 3.3 million death in 2012 are estimated to have been caused by alcohol consumption (WHO, 2014). This corresponds to 5.9 % of all deaths or 1 in every 20 deaths in the world. About 5.1 % of global burden of diseases and injury was attributable to alcohol. Globally 38.3% consumes alcohol. On an average, an individual over 15 years of age consumes 6.2 liters of alcohol annually (Mini, Anuja, Shaheer & Shameel, 2017).

Global status report on alcohol health by WHO 2014 also reveals that alcohol consumption has raised in India between the periods of 2008-2012. Based on the statistics, around 30% of total population of India consumes alcohol. The per capita consumption in the country increased from 1.6 litres in 2003-2005 to 2.2 litres in the period 2010-2012. The most alarming trend is that people are beginning to drink at younger ages over the last few decades. The average age of initiation of alcohol use has reduced from 28 years during 1980s to 17 years in 2007 (Lim et al., 2012).

According to NACADA (2011), about 200,000,000 people worldwide use alcohol. On one of the studies carried out on alcohol use, it indicates that globally university students have a higher prevalence of alcohol use (Karama, Kypros & Salamounc, 2007). Dantzer et al. (2006) indicated that in USA 60% use alcohol while in Asia 48.9% of University students' use alcohol, 24%

being 1st years while 75.6% are final years and that Ireland had higher proportions of male and female who used alcohol. The prevalence of risky alcohol use is greater in other continents, but is lesser in Africa and Asia (Karama, Kypros & Salamounc, 2007). A research article on alcohol use and associated factors among university students in Ethiopia indicated that alcohol was most used by university students at 50.2% (Gezahegn, Andualem & Mitiku, 2014). A South African study shows that alcohol use prevalence rate was 39.1% (Madu & Matla, 2003). Young and De Klerk (2008) studied the patterns of alcohol use on a South African university campus in 2008, and found that on a cut off of 8 on the Alcohol Use Disorder Identification Test (AUDIT) 33.4% were risky drinkers, (AUDIT 8-15) 7.8% were harmful drinkers (AUDIT 16-19) and 9.0% probable alcohol dependent (AUDIT 20-40). In another study on the same university campus two years later using a cut off of 6 for women and 8 for men showed that 57.8% were risky or harmful drinkers (men: 57.9% women: 57.8%), (Young & Mayson, 2010). Atwoli, Mungla, Ndung'u, Kinoti and Ogot (2011) indicated that the prevalence of alcohol use among students in was high and caused major physical and psychosocial complications in that population. The study went on to state that majority of those using alcohol reported serious negative effects, increasing the need for interventions to reduce the risk of dependence and other harmful consequences.

Cigarette use among youth is seen to be in ascendancy. According to the World Health Organization and other studies, the prevalence of smoking among school-age adolescents is high, especially in developing countries, with estimates ranging from 14% to 29% (Al-Mohamed & Amin, 2010). These

figures for adolescents have serious public health implications (Nazary et al., 2010) and efforts to prevent uptake of cigarette use by adolescents requires knowledge of the magnitude and the determinants of their smoking habits (DiNapoli, 2009). A study in Tunisia in 1996 showed that the prevalence of cigarette smoking among adults was high (30.4% for both sexes) and that the age at which people started smoking appeared to be falling (Fakhfakh, 2002). Thus, smoking by adolescents has become a serious concern that demands specific actions such as targeted education campaigns (Alexander & Alexander, 1994).

Cigarette smoking has been associated with multiple health problems and is considered to be a preventable risk factor for six of the eight leading causes of morbidity and mortality at the global level (WHO, 2008). Smoking is a serious and growing public health problem globally, with a large number of cigarette-associated deaths occurring in low- and middle-income countries (WHO, 2008). Future projections suggest that cigarette smoking will kill more than 8 million people each year worldwide by the year 2030, with 80% of these premature deaths occurring in low- and middle-income countries (WHO, 2016). According to the World Health Organization, there are about 1 billion smokers in the world, 80% of whom are in developing countries (Liu & Vivolo-Kantor, 2019).

Cigarette smoking has many detrimental effects on health in general and it is has been estimated that cigarette smokers die 10 years earlier than non-smokers (Jha et al., 2013). Cigarette smoking leads to lung cancer, chronic obstructive lung disease, atherosclerotic cardiovascular diseases, peptic ulcer disease, intrauterine growth retardation, spontaneous abortion,

antepartum hemorrhage, female infertility, sexual dysfunction in men, and many other diseases (Kebede et al., 2005). It has been calculated that nearly a third of the world's population, aged 15 years above, are smokers (Fawibe & Shittu, 2011) and smoking prevalence is on the rise, especially in the developing countries (Ccnter for Disease Control, 2011). Large number of young people are initiating smoking at earlier ages, which is a major public health concern (Koushki & Bustan, 2006).

On the other hand, marijuana use has become a norm for young adults in recent times. Marijuana use may have positive effects such as improved mood and increased overall life satisfaction (Barnwell, Earleywine & Wilcox, 2006), but is also associated with adverse outcomes, including psychosis and concentration problems (Arseneault, Cannon, Witton, & Murray, 2004; Caldeira, Arria, O'Grady, Vincent, & Wish, 2008). The level of impairment is dose-dependent (Volkow, Baler, Compton, & Weiss, 2014). Heavy consumption (several times a day) and regular marijuana use (daily or almost daily) are especially associated with risk (Hall, 2015), but more infrequent use has also been linked to negative effects such as missing classes and concentration problems among college students (Caldeira et al., 2008).

Certain aspects of student life, such as increased autonomy, availability of substances, sociability, and emotional distress from personal and academic problems/pressure have been suggested to increase the use of marijuana (White, Labouvie & Papadaratsakis, 2005). Substance use in college may, to some extent, predict continual use - potentially leading to unfavourable health-related effects (Tucker, Ellickson, Orlando, Martino & Klein, 2005). Further, as students are often considered to be a trendsetting group, their marijuana use

may be imitated by others (Pedersen, 2015). Previous research on marijuana use among students has primarily focused on either lifetime use or regular/heavy use (i.e., daily or almost daily). Regular, albeit not necessarily daily, marijuana use has received less scientific attention. Studies have found the prevalence of marijuana use at least once in the last month to range from 1.5% to 32.6% among South and North.

American students (Allen & Holder, 2014; Hynes, Demarco, Araneda & Cumsille, 2015; Johnston, O'Malley, Bachman, & Schulenberg, 2011). The variance in prevalence estimates across student populations may imply the influence of social and cultural factors on marijuana use. Few studies have investigated the prevalence of recurrent marijuana use among Scandinavian students. In a Norwegian study, 5% of the students reported having used marijuana at least five times in the last six months (Nedregard & Olsen, 2014), which suggests lower rates of use compared to North American students.

Research shows that among students, marijuana is the most commonly used substance after alcohol (Prendergast, 1994). Following a steady decline in use throughout the 1980s, marijuana use among young people rose during the first part of the 1990s (Bachman, Johnston & O'Malley, 1998; Johnston, O'Malley & Bachman, 1996). The age group with the highest rate of marijuana use in the past year and past month are 18 to 25year olds (Hanson & Venturelli, 1998). Results from the National Household Surveys on Substance Use from 1991 to 1993 showed that 12.3% of college students reported using marijuana in the past month (Gfroerer, Greenblatt & Wright, 1997). A slightly higher percent of students nationwide reported marijuana use in the previous 30 days in the National College Health Risk Behavior Survey.

Tramadol, classified as a weak opioid, with an analgesic effect similar to that of codeine, has evoked increasing concern for the risk of developing tramadol dependence (Babalonis et al., 2013) and a risk of serious adverse reactions, including epileptic seizures and fatal intoxications (Randall & Crane, 2014). Data from the UK have associated tramadol misuse with risk-taking behavior rather than with marginalization and other addictive disorders (Winstock, Borschmann & Bell, 2014). In Sweden, Richert and Johnson (2013) investigated the illicit use of buprenorphine and methadone among adolescents and young adults and concluded that benzodiazepines and tramadol were used by adolescents to a far greater extent, indicating that tramadol misuse may have increased during the past few years. Data from police authorities in Sweden have shown that tramadol is the second most common seized pharmaceutical substance on the substance scene nationwide in Sweden (Tjaderborn et al., 2016) which lends support to the assumption that the tramadol used in this milieu comes from other sources than prescription. In addition, Tjaderborn et al. (2016) found that tramadol was the third most common pharmaceutical substance among young substance-impaired drivers with mixed substance use, intoxicated with nonprescribed substances.

According to the National Institute on Alcohol Use and Alcoholism (n d.), it reports that four out of five college students use substances such as drink alcohol. This may not seem like that big of a deal, but keep in mind that three-quarters of this population is under the legal drinking age. Students in most colleges are traditionally between 18 and 22 years old, with 21 being the legal drinking age in America. Even more important, half of these drinkers engage

in binge drinking, which is consuming more than three or four drinks in a sitting in an attempt to get drunk. Synonymously, the age brackets concerning substance users is not far from that of students in the senior high schools in Ghana, especially Bekwai Municipality.

According to Muoti (2014), substance use threatens and tends to derail these noble strides by demotivating the students in learning and subsequently ruining these school going children that the government intends to rely on in driving the economy to the next level. Substance use menace should therefore be given the attention it deserves if the intentions of this hefty investment in education are to bear fruits. The fact that there is no known study in the region that has ever sought to investigate substance use in secondary schools forms a justification of the current study that seeks to establish the prevalence, causes, effects solutions and counselling implications of substance use among students.

Researchers such as Obot (2004) and Odejide (2006) surveys among schools in countries across Africa indicated that substance use by students is manifested with the usage of alcohol and cigarettes. According to Onya, Tessera, Myers, and Flisher (2012), studies addressing alcohol, cigarette and other substances use from Africa have focused on questions such as prevalence rates, opinions, influence of the media on use and interventions such as impact of peer led education. Some of these studies have demonstrated a change in drinking pattern in that traditional and socio-culturally integrated modes of drinking have been replaced by socially disruptive drinking, and rates have increased substantially among adolescents and women (Onya, Tessera, Myers, & Flisher, 2012). In Limpopo Province of South Africa,

Peltzer (as cited in Onya, Tessera, Myers, & Flisher, 2012) found that among urban secondary school students, majority of them first used any substance at the age of 16 years or less. Use of cigarette and inhalants was particularly likely to commence at such an early age. One other study in the area that provided data on substance use by adolescents in Limpopo was that conducted by Madu and Malta in 2003. The study reported prevalence rates of 12.0%, for substance use, (cigarette smoking 10.6%, and alcohol use 39.1%). Marijuana was the most used substance and the mean age for first time users was 14.89 years, 14.54 years, 15.25 years for substance, cigarette and alcohol respectively (Onya, Tessera, Myers, & Flisher, 2012).

A study conducted by Atwoli, Mungla, Ndungu, Kinoti, and Ogot (2011) in Kenya among students found a lifetime substance use prevalence rate (69.8%) that is significantly higher than the 41% rate found among high school students in Kenya. This implies that substance use rates, in general, increase with age and transition through the education system. This has major policy implications, including the need to focus substance use interventions on younger age-groups such as primary and high school students. Preventing early substance-related problems will reduce the risk of these problems in later adulthood when the magnitude of life stresses is greater (Atwoli, Mungla, Ndungu, Kinoti & Ogot, 2011).

Adu-Mireku (as cited in Nkyi, 2015) reported in a study of 894 senior secondary students in Accra (56.9% female and 43.1% male; mean age of 17.4 years), using a modified version of the Youth Risk Behaviour Survey questionnaire, that the prevalence rate of lifetime alcohol use was 25.1%. Among lifetime users, 46.2% were using alcohol. A study by Peltzer (as cited

in Nkyi, 2014) on substance use among school-going adolescents in six African countries (Kenya, Namibia, Swaziland, Uganda, Zambia, Zimbabwe) indicates 6.6% of students surveyed engaged in risky alcohol use (two or more per day for at least 20 days or more in the past month) and 10.5% engaged in illicit substance use. Peltzer (as cited in Nkyi, 2014) further reported that school truancy, loneliness, sleeping problems, sadness, suicidal ideation, suicide plans, mental distress, lack of parental, peer pressure and poverty were associated with substance use, while school attendance, parental supervision, and connectedness were protective factors for substance use. It is undoubtedly clear that substance use among youth especially students is in ascendancy based the above information, so therefore, it is appropriate to investigate the prevalence of these substance usage among senior high schools in the Bekwai Municipality.

Statement of the Problem

Substance use is a major problem worldwide (Catalano, White, Fleming, & Haggerty, 2011). Although the extent of substance use and its characteristics conversely differentiate by regional blocks, the trend among the young generation has begun to increase in recent years (Catalano, White, Fleming, & Haggerty, 2011). Commonly used substances today include marijuana, tramadol and alcohol. Alcohol and other related problems have equally remained a public health concern for many years. According to Dennis-Antwi, Adjei, Asare, and Twene (2003), the misuse of alcohol and substances represent one of the leading causes of preventable death, illness and injury. The intake of any substance type has consequence on the user as well as the environment the user may find him or herself. Sussman and Ames

(2001) using economic strain-type terminology to explain the diverse effect of substance use indicate that the annual economic cost of "substance use" has been estimated to be approximately $6OO billion worldwide and $200 billion in the United States. Approximately 70% of the costs are related to decreased productivity (illness, premature death, and incarceration), 10% are due to the costs related to health care (prevention, treatment, and hospitalization), and 20% of the costs are related to property damage and enforcement efforts (Sussman & Ames, 2001).

Guided by this, it is important to note that substance use consequences seem to be widespread spanning from the individual to the nation. What motivates students to engage in such attitudes is yet to be unraveled as the situation seem pathetic and could jeopardise the fortunes of the nations in terms of development. A report by Abu-Baidoo and Nii-Lartey (2018) on behalf of *Citi News* revealed substance use seems to continuously escalate day-by-day in Ghana and those engaged in substance use are mostly among school dropouts.

Again, investigations conducted by Narcotic Control Board (NACOB) have revealed that about 50,000 people in Ghana, particularly the youth are into substance use. Though the country's laws criminalize marijuana indiscriminate substance use, the practice of substances like marijuana and cocaine by the youth particularly in the Junior/Senior High Schools and tertiary institutions is on ascendency. It is estimated that these substance users can be found in the 260 administrative districts in all the 15 regions of Ghana. Out of the total number of 50,000 substance users in Ghana, 35,000 were students from basic, high school and tertiary institutions aged between 12 and

35 years while 15, 000 (males=9, 000, female=6,000) were adults. (Abu-Baidoo, & Nii-Lartey, 2018).

The situation of substance use is not different among students in senior high schools in the Bekwai Municipality. Personal observation of the trend in the Bekwai Municipality indicates that substance use is on ascendancy as many students seem to care less about how dangerous the sporadic usage of substances such as alcohol, cigarette, marijuana, tramadol etc. are on their lives and well-being. There are instances where students are seen mixing tramadol with the other caffeine related drinks just to increase the pleasure or euphoria on whatever they may be engaged in. The situation might not be different from other jurisdictions, however, it is difficult to indicate how this actually became a problem in Ghanaian schools. Investigation into substance use is usually skewed (Peltzer, 2009) and such investigations leave more to be desired because empirical studies about a particular population use of substances are lacking. With respect to the Bekwai Municipality, it also appears there is no empirical study on substance use among Senior High Schools students. Again, in the Bekwai Municipality, though the situation is observed, it appears no empirical study has been conducted to ascertain the trend of substance use among students. These inconsistent catalogue has therefore created a knowledge gap in the literature concerning prevalence of substance use and hence the need in the Bekwai Municipality.

Purpose of the Study

The study investigated substance use among students in the Bekwai Municipality. Specifically, the study sought to:

1. find out the prevalence of substance use (alcohol, cigarette, marijuana

and tramadol) among S.H.S students in the Bekwai Municipality,

2. determine gender difference in substance use among S.H.S students in the Bekwai Municipality,
3. establish age difference in substance use among S.H.S students in the Bekwai Municipality.

Research Questions

1. What is the prevalence of substance use (alcohol, cigarette, marijuana and tramadol) among S.H.S students in the Bekwai Municipality?

Research Hypotheses

1. H_0: There is no statistical significant gender difference in terms of substance use among S.H.S students in the Bekwai Municipality.

   H1: There is statistical significant gender difference in terms of substance use among S.H.S students in the Bekwai Municipality.
2. H0: There is no statistical significant age difference in terms of substance use among S.H.S students in the Bekwai Municipality.

   H1: There is statistical significant age difference in terms of substance use among S.H.S students in the Bekwai Municipality.

Significance of the Study

The findings of the study are expected to yield significant empirical data and information on the prevalence of substance and substance use on students. The findings of the study are expected to help the officials of ministry of education, Ghana, in understanding the causes of substance use amongst secondary school students hence help them develop intervention strategies. The study is likely to add to the body of knowledge in the area of substance and substance use in Ghanaian Senior High Schools and may be

utilized by other researchers. The study will help to inform policy in tackling the problem of substance use among the youth. It will also serve as reference point for other studies and add to existing literature.

Definition of Terms

Alcohol: World Health Organization (2018) defines Alcohol as a depressant drug found in most drinks, that when taken slows down the various sections of the brain and nervous system due to the ethanol chemical present in it.

Cigarette: It could be define as a cylindrical roll of shredded or ground tobacco (a psychoactive substance) in a paper for smoking Eagle, M. N. (2011).

Marijuana: According to United Nations, 2014, Marijuana is a psychoactive drug from cannabis plant use for medicinal or recreation purposes. The main psychoactive part of the cannabis plant is the Tetrahydrocannabinol which is a mind-altering chemical in marijuana

Tramadol: Tramadol is an opioid which is used to treat moderate to moderately-severe pain. It can be taken by mouth or by injection. (United Nations, 2014).

Delimitations

The study was delimited to the Bekwai Municipality and its environs and not any other Municipality in Ghana. The study was delimited senior high schools and not any other academic level of education. The variables understudy was delimited to only alcohol, cigarette, marijuana and tramadol and not any other substance.

Limitations

Like other related studies, this one anticipated methodological errors like the difficulty in assuring and achieving total confidentiality and anonymity of responses. This is possible because respondents might have influenced colleagues in their responses. Again, based on the use of human subjects and more especially students, some information may be hibernated. Despite these expectations, care was taken to curtail any uncalled situation during the study period.

Organisation of the Study

The study was in five sections as chapters. Chapter 1 was about the background, problem statement, purpose, questions, delimitations and limitations. Chapter 2 embraced reviewed literature based on conceptual, theoretical and empirical. Chapter 3 encompassed research design, population, sampling procedures, data collection instruments, data collection procedures, ethical issues and data analysis procedures. Chapter 4 contained analysis and discussions and Chapter 5 covered summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

Overview

This chapter reviewed relevant literature related to the study. It identified research studies that have been conducted in relation to substance use and are relevant to this study. The chapter was divided into theoretical perspective, conceptual perspectives and empirical perspective.

Theoretical Review

Skinner's Operant Conditioning and Substance use

Skinner Operant Conditioning (active behaviour based on environment to produce consequences). Skinner was a student of the father of behaviourism, Watson and took inspiration from him. By the 1920s, Watson had left academic psychology, and other behaviourists were becoming influential, proposing new forms of learning other than classical conditioning. Perhaps the most important of these was Skinner (McLeod, 2018). The work of Skinner was rooted in a view that classical conditioning was too simplistic to be a complete explanation of complex human behaviour. He believed that the best way to understand behaviour is to look at the causes of an action and its consequences, which served as a ground breaking to the proposition of operant conditioning. In his view, Skinner claimed that psychology should only study what can be measured descriptively rather than theoretical science.

Operant conditioning is a method of learning that occurs through rewards and punishments for behaviour. Through operant conditioning, an

individual makes an association between a particular behaviour and a consequence (Skinner, 1938). Operant conditioning (instrumental conditioning) is a learning process through which the strength of a behaviour is improved by reinforcement or punishment (Crowley, 1972). Skinner's theory has many applications in real life situations including substance use.

American Psychiatric Association (as cited in Miguel, Yamauchi, Simoes, Silva, & Laranjeira, 2015) indicates that majority of researchers who have studied substance use from an evidence-based approach have represented it as a mental disorder in which individuals engage in compulsive, uncontrolled substance use despite the destructive social, economic and health effects that such use has on them, their families and their communities. From a behavioral perspective, however, this view is inappropriate (Miguel, Yamauchi, Simoes, Silva, & Laranjeira, 2015).

Addictive behaviours are unfortunate and demeaning, potentially resulting in severe losses to the individual and society. However, such behaviors are not unreasonable, as most medical guidelines suggest. All addictive behaviors follow the general principles of normal operant behaviors and, consequently, are controlled by the functional relationships among contingencies present in the environment (Silva, Guerra, Gonalves, & Mijares, 2001). Substance use is a behavior that can be considered compulsive, and by this, it is characterized by a high frequency of response (Silva et al., 2001), but not uncontrolled. To the contrary, it is strongly controlled by the immediate reinforcer (the effect of the substance), as well as by other, less immediate, and less-easily observed, conditioned reinforcers (Miguel, Yamauchi, Simoes, Silva, & Laranjeira, 2015). According to Miguel, Yamauchi, Simoes, Silva,

and Laranjeira (2015), a substantial body of research provides the empirical bases for an operant conditioning perspective on use, in which substance use can be considered a normal, learned behavior set along a continuum ranging from limited substance use, with few or no related problems, to excessive substance consumption, accompanied by numerous unwanted and destructive effects (Higgins, Heil & Lussier, 2004).

According to the operant conditioning perspective, substance use, use and use are learned responses that are sensitive to their own consequences and can therefore be understood as operant behaviors (Cahoon & Crosby, 1972). As an operant behavior, the acquisition and maintenance of substance use is controlled by contingencies of reinforcement (Crowley, 1972). In general, these contingencies include the following: unconditioned immediate positive reinforcement provided by the pharmacological effect of a substance; conditioned positive reinforcement associated with the social environment of substance use; negative reinforcement related to substance withdrawal; and negative reinforcement related to aversive aspects of the environment. In general, one or more of these contingencies are present in substance acquisition and maintenance, and it is likely that all of them are active after use has been established.

Empirically, it can be demonstrated that animals will voluntarily consume most substances that are considered addictive in humans when caged in a laboratory (Griffiths, Bigelow, & Henningfield, 1980), as well as learning and maintaining new behaviors in order to achieve continued rewarding of such substances. Although tolerance and withdrawal responses can affect the frequency and probability of substance use behaviors, voluntary substance use

can occur even in their absence (Deneau, Yanagita & Seevers, 1969). In fact, without any prior exposure, animals will voluntarily consume large quantities of addictive substances, even reaching levels that risk overdose (Aigner & Balster 1978). Such findings suggest that, for these species, addictive substances act as unconditioned positive reinforcers (Higgins & Petry, 1999). As an unconditioned positive reinforcer, the substance effect will also lead to the reinforcement of any behavior that gives access to it (Catania, 1979). Hence, substance use related behaviors are controlled according to their success in providing access to the reinforcer (substance effect) and are therefore considered operant behaviors.

After just a few instances of exposure to an addictive substance, some animals will begin to consume large quantities of that substance (Aigner & Balster, 1978). When a pattern of heavy consumption is established (high frequency of substance use responses) animals will choose to engage in high-frequency responses and abstain from primary reinforcers, such as consumption of food and water, in order to increase access to the addictive substance (Aigner & Balster, 1978; Petry & Heyman, 1995). Experimental studies demonstrate that substance effects are therefore not only powerful reinforcers but can also effectively compete with other major unconditioned and conditioned reinforcers.

Research shows that environmental factors unrelated to substance reinforcers can influence the likelihood and intensity of substance consumption (Higgins & Petry, 1999). Aversive stimuli, such as foot shock, social aggression, social isolation or reduced availability of food, liquid or exercise opportunities, all appear to increase the incidence of substance use

and heavy substance use among experimental animals (Goeder & Guerin, 1991; Wolffgramm & Heyne, 1995). However, when animals are exposed to alternative sources of non-substance-related reinforcers, the frequency of substance consumption will decrease significantly even among the heavy substance users. This is true regardless of whether or not the alternative reinforcers are contingent on the non-use of substances (Higgins, 1997; 1996). Levels and frequency of substance use also decline substantially in animals exposed to direct or indirect losses of non-substance-related reinforcers contingent upon substance use. Increases in the intensity, number or difficulty of the responses needed in order to gain access to substances will also diminish consumption (Bickel et al., 1991, 1995).

The results of laboratory and clinical studies involving human volunteers show that humans are quite similar to other species in terms of their reaction to the unconditioned positive reinforcing effect of substances. Humans will learn and maintain new responses in order to achieve substance access, arrive at high levels of consumption, increase the frequency of substance use in the presence of aversive environmental stimuli and diminish that frequency if positive reinforcers are present in the environment (Higgins et al., 2008; Higgins & Silverman, 1999; Vuchinich & Tucker, 1996). These findings suggest that substance use is controlled by the principles and processes of operant conditioning, in humans and non-human animals alike.

In substance use, the theoretical framework of operant behaviour has been upheld by a substantial number of methodologically, rigorous empirical research studies in humans and non-human animals, in laboratory and clinical settings. The framework maintains that substance use by humans and non-

human animals is strongly influenced by the immediate reinforcing effects of a substance and by other, less immediate, social reinforcers (Bigelow et al., 1998). Substance use is controlled by their ability to produce certain consequences with a certain probability, and hence are operant behaviours (Cahoon & Crosby, 1972).

Synonymous to human beings, operant conditioning and substance use are equally possible in human beings, most especially students. Per the theory, behaviours that are followed by positive consequences or reinforcement are likely to be repeated while those behaviours that are followed negative consequences are likely not to be repeated. So in substance use, if students happen to exert positive rewards they will continue use to be addicted while at the same time if they exert negative rewards they are likely not to use to use them.

Gottfredson and Hirschi's Self-Control Theory

The general theory of crime, also known as self-control theory, emerged through the evolution of social control theory. Just as Hirschi had built upon previous control theories with his introduction of social control theory, Gottfredson and Hirschi (1990) further developed their conception of the causes of crime and captured it within a new theory known as the general theory of crime. While control theory emphasizes the importance of social bonds as a protecting factor against criminal involvement, the general theory of crime posits that low self-control is a key factor underlying criminality (Piquero, MacDonald, Dobrin, Daigle & Cullen, 2005). Gottfredson and Hirschi integrated aspects of other theories to form the general theory of crime, borrowing notions from routine activities theory, rational choice

theory, and other psychological and biologically based social theories of crime. The two theories differ in what is believed to be the fundamental propensity towards crime; however, both theories are centered on aspects developed in childhood through effective parenting (Siegel & McCormick, 2006). Although focused on internalized control rather than social control, the general theory of crime shares commonalities with the former theory through its emphasis on the role of parenting in instilling self-control in children.

As Gottfredson and Hirschi (1990) use the term, self-control refers to the ability to forego immediate or near-term pleasures that have some negative consequences and to the ability to act in favor of longer-term interests. It is related to concepts such as self-regulation and impulsivity in psychology (Baumeister & Heatherton, 1996; Moffitt, Poulton & Caspi, 2013). For self-control theory, important negative consequences can include physical harm, legal sanctions, removal from educational institutions, or disappointment or disapproval of family, teachers, and friends. Gottfredson and Hirschi (1990) argued that most crime and delinquency can be seen as the pursuit of relatively immediate and easy benefits or immediate and momentary pleasures, and therefore acts of delinquency and crime tend to be disproportionately undertaken by individuals with relatively low self-control.

Self-control is not regarded as either a predisposition to crime or a personality trait for crime and delinquency. Rather, self-control is understood as an inclination to focus on the short term rather than the long term, on immediate gratification of needs, and on wants and desires (whatever they may be), and not on the longer-term negative consequences of behavior. Self-control theory is a choice theory rather than a deterministic one (Gottfredson,

2017).

The self-control theory of crime, often referred to as the general theory of crime, is a criminological theory about the lack of individual self-control as the main factor behind criminal behavior. The self-control theory of crime suggests that individuals who were ineffectually parented before the age of ten develop less self-control than individuals of approximately the same age who were raised with better parenting (Muraven, Pogarsky & Shmueli, 2006). Research has also found that low levels of self-control are correlated with criminal and impulsive conduct.

Gottfredson and Hirschi's (1990) development of self-control theory, in their publication A General Theory of Crime, has generated considerable academic interest and become one of the most influential theories of the past 30 years (Gibbs & Giever, 1995). Gottfredson and Hirschi (as cited in Ford & Blumenstein, 2013) outline a theory of crime that explains all crime based on the assumption that crime provides immediate gratification and those who engage in crime suffer from low self-control. They argue that low self-control is the product of inadequate socialization, or insufficient parenting styles, and is stable over time once it is developed in childhood. Those characterized by low self-control are impulsive, insensitive, physical (as opposed to mental), risk-taking, shortsighted and non-verbal (Gottfredson & Hirschi, 1990). Individuals who are deemed to have low self-control will be more likely to be unable to resist the immediate gratification of crime because they are unable to be forward-looking and are unable to calculate the costs. Similarly, those lacking in self-control will be more likely to engage in not only criminal activities but also behaviors such as drinking, smoking, and gambling.

Equivalent behaviors and crime offer pleasure in the short term for a minimal amount of effort (Ford & Blumenstein, 2013). According to Gottfredson and Hirschi (as cited in Gottfredson, 2017), those with low self-control are unable to consider the long-term consequences of their actions because they occur in the future, which is beyond their scope. Those who lack self-control are not restrained by considerations of the future, which produces easy, exciting, and immediately gratifying behaviors, such as crime.

Applying the self-control theory on students in the Bekwai Municipality in terms of substance use, it is a crime to use substances and it is possible to believe that these students use substances just because they have no clue to how eventual it will affect in the long-run but usually focus on the pleasure they exert from the substances when taken. Again, it possible to note that students use substances just because they may have no power to control their wishes and instinctual drives due to the way they are nurtured since infancy. Situations where children are denied parental care and love, the likely event is that they may end up choosing the least opportunity (such as substance usage) available to them because they lacked guidance and directions to make wise and informed decisions in life.

According to Ford and Blumenstein (2013), studies have been conducted on the general theory of crime with various populations. Research has found fairly consistent support for the relationship between analogous behaviors, such as substance use and alcohol-related behaviors, and low self-control among a variety of populations (Higgins & Marcum, 2005; Taxman & Piquero, 1998; Tibbetts & Whittimore, 2002; Winfree & Bernat, 1998). There have been several studies that have looked at the population of students and

found support for the relationship between low self-control and deviant behaviors (Gibbs & Giever, 1995; Sun & Longazel, 2008). Specifically, among students, researchers have found a consistent relationship between low self-control and substance use. Gibbs and Giever (1995) found that low self-control was the best predictor of drinking among college students. Piquero et al. (2015) concluded that low self-control was a significant predictor of alcohol-related problems and binge drinking. Another most current study assessing the theory found that students lacking self-control were significantly more likely to engage in drinking and driving, binge drinking, and other negative behaviors (Sun & Longazel, 2008). Previous research has shown widespread empirical support for this theory among various populations and with a variety of behaviors including but not limited to substance use and alcohol-related behaviors (Ford & Blumenstein, 2013).

Freud Psychoanalysis and Substance use

As a member of the psychodynamic family, Freud was credited to be the chief proponent of the psychosexual theory of development in the 1900s. The psychodynamic perspective asserts that people in childhood push certain experiences like sexual desires beyond their awareness (unconscious) because society does not recommend such desires to be expressed openly (McLeod, 2019). These repressed feelings then manifest in such peoples' lives during adulthood and become part of their lives. According to Bornstein (2010), unconscious processes influence our behaviour as the psychodynamic perspective predicts. People perceive and process much more information than they realize, and much of their behaviours are shaped by the feelings and motives of which they are at best only partially aware of. Freud's theory is

considered the most controversial theory in psychology, yet it serves as the most referenced point theory with regards to personality development.

His theory is based on the idea that care givers/parents play a key role in handling their children's sexual and forceful energies/instincts during the first few years of life in order to nurture their proper development. He posited that nothing in human life happens by chance. Ideally, everything has a cause that is linked to the psychic. Freud was of the view that the human personality comprised three (3) parts which are complementary. These are Id, Ego, and Superego (Freud, 1925). According to Freud, these parts become integrated as a child passes through the five (5) stages of psychosexual development. The Id (the monster), being the biggest part of the mind, is tagged to desires and instincts and serve as the main source of basic biological needs of every individual. The Id contains two components called Eros and Thanatos. The Eros is the life instinct while Thanatos is the death instinct.

To Freud, the Eros is stronger than Thanatos as it fights for human survival than destruction. The Ego is tagged to reasoning and is the mindful and balanced part of the personality. It monitors behaviour in order to satisfy basic desires without suffering any negative consequences (Freud, 1923). The *Superego* or conscience develops through interactions with others in the environment who want the child to follow the norms of society. The Superego limits the desires of the Id by applying morals and values from society. Freud believed that a struggle exists among these levels of consciousness, which in turn influences adolescent personality development and psychopathology (McWilliams, 2009; Eagle, 2011).

Freud believed that childhood experiences shape individual personalities and behaviour as they grow to become adults. Freud accepted that every growing individual must pass through series of stages during childhood, and that if children lack proper nurturing and parenting during a particular stage, they may become trapped in, or fixated at that stage. According to Freud, children's pleasure-seeking urges/instincts directed by the Id are manifested on different areas of the body that is termed erogenous zone at each of the five (5) stages of development namely oral, anal, phallic, latency and genital. All the stages of development according to Freud have their respective roles on behaviour and personality development.

Psychoanalysis is considered as a theory, a treatment, and a way of thinking about the human motivation. A psychoanalytic perspective includes conscious, and repressed unconscious motives and desires. Psychoanalysis is traditionally conceived as an opportunity for a motivated person to reflect deeply about everything he or she is feeling and thinking without editing or censoring (Heshmat, 2014). For Freud, the goal of psychoanalysis was to strengthen the ego, and to give it more control over the id and more independence from the superego. He believed that most mental disorders (anxiety) were due to the effect of unrestrained feelings. Increased awareness through psychoanalysis can help the individual to become less self-punitive and be able to tolerate their emotional experiences (Freud, 1953).

According to Freud (1957), psychological growth requires self-acceptance, which is a state of mind that marks the end of the life-consuming struggle to transform oneself (and others) into the person one wishes one were (or wishes they were) . Becoming aware of the unconscious motives helps the

individual to increase the ability to manage and integrate unconscious wishes, and ultimately to self-acceptance. Freud argued that whenever desires (wishes) from the id threaten to emerge in thought or action, anxiety is generated.

The anxiety acts as a signal, causing the ego mobilize repression, along with a broad range of other defenses (withdrawal, denial, projection), in order to block or disguise the anxiety-provoking wish. The intensity of anxiety differs according to the gap between external demands (dangerous situations) and the person's self-protective resources to handle them. Inability to deal with external events (traumas) could lead to feelings of helplessness and powerlessness. Lacking the capability to cope with negative states, patients will erect powerful, sometimes intransigent, defenses in a desperate effort to avoid feeling them. The person using a defense is generally trying to accomplish the management of anxiety and maintenance of self-esteem. For instance, alcoholics insist they have no drinking problem. Keeping the unacceptable feelings out of awareness result in the development of a "false self." The price for this protection is inability to develop resilience (Freud, 1957).

Applying the theory to substance use, the phenomenon is described as a defensive strategy to avoid feeling of helplessness or powerlessness. Substance use is a futile attempt to compensate for inner emptiness without success. The addict tries to compensate via addictive behavior for painful subjective states of low self-esteem, doubts and anxiety. The use of substances supplies a feeling of acceptance and feeling of temporary self-confident. Addict substitutes an imaginary world, where he is in complete control, for the real world, where he feels useless and out of control. Repeated use of

substances to gain relief becomes a way of life. Relief is brief, but in the long-term substance, use becomes an end in itself. The addiction problem prevents the user from understanding about her distress, as well as the development of emotional capacity to self-soothe (Heshmat, 2014).

The psychoanalysis view suggests use is a disorder of self-regulation. For instance, individuals with histories of exposure to adverse childhood environments (physical and sexual use) tend to have diminished capacity to regulate negative emotions and cope effectively with stress. These individuals may be self-medicating anxiety and mood disorders. It is instructive to note that many individuals experiment with substances but few become addicted. The success of therapy and the lasting change require the patients' encounters previously inaccessible aspects of their inner feelings. Helping patients increase the ability for engaging in self-reflection, and identifying alternative ways to manage difficult emotions are part of the psychodynamic approach to addiction treatment (Heshmat, 2014).

Conceptual Review

Substance

A substance, according to Sussman and Ames (2009) is anything that can be taken into the human body and, once taken, alters some processes within the body. Substances can be used in the diagnosis, prevention, or treatment of a disease. Some substances are used to kill bacteria and help the body recover from infections. Some substances assist in reducing headaches and as well, cross the blood-brain barrier and affect neurotransmitter function. Substance use is the use of substances for psychotropic rather than medical purposes. Among the most common psychotropic substances are opiates

(opium, morphine, heroin), hallucinogens (LSD, mescaline, psilocybin), barbiturates, cocaine, alcohol, cigarette amphetamines, tranquilizers, and marijuana (Steiner, 2018).

According to Steiner (2018), there are two terms, namely recreational and causal use, which are generally understood to refer to substance use that is small in amount, infrequent, and without adverse consequences. In the terminology recommended by the World Health Organization (1973), the two terms are synonymous. However, recreational use really refers only to the motive for use, which is to obtain effects that the user regards as pleasurable or rewarding in some way, even if that use also carries some potential risks. Casual use refers to occasional as opposed to regular use, and therefore implies that the user is not dependent or addicted, but it carries no necessary implications with respect to motive for use or the amount used on any occasion. Thus, a casual user might become intoxicated or suffer an acute adverse effect on occasions, even if these are infrequent (Ahmed & Koob, 1998).

In the recreational use, occasional use may also be contingent, if employed to achieve some specific short-term benefit under special circumstances. The use of Amphetamines to increase endurance and postpone fatigue by students studying for examinations, truck drivers on long hauls, athletes competing in endurance events, or military personnel on long missions, are all instances of such utilitarian use. Most observers also consider the first three of these to be use or misuse, but many would not regard the fourth example as use because it is or was prescribed by military authorities

under unusual circumstances, for necessary combat goals (Ahmed & Koob, 1998).

Substance or Substance Use

To Kalant (2018) the word use carries the connotations of improper, perverse, or corrupt use or practice, as in child use, or use of power. As applied to substances, however, the term is difficult to define and carries different meanings in different contexts. In relation to therapeutic agents such as Benzondiazepines or Morphine, the term substance use is applied to their use for other than medical purposes, or in unnecessarily large quantities (Kalant, 2018). With reference to legal but non-therapeutic substances such like alcohol, substance use is understood to mean a level of use that is hazardous or damaging, either to the user or to others. When applied to illegal substances that have no recognised medical applications, such as Phencyclidine (PCP) or Mescaline, any use is generally regarded as use (Kalant, 2018). The term substance uses according to Steiner (2018) is normally applied to excessive and addictive use of substances. Because such substances can have severe physiological and psychological, as well as social, effects, many governments regulate their use.

Misuse of substances by the general public incurs a notable percentage of these costs. For many people, substance misuse appears to be a voluntary, social behavior. There are people who feel reasonably comfortable with themselves and their lives but may misuse some substances (particularly alcohol and cigarette but also other substances, such as over-the-counter medications) on occasion as a part of celebratory rituals or to relieve disease symptoms. These people may have succumbed to social pressures to celebrate

or may lack information on how to use a substance or substances correctly, which could lead to negative consequences (Sussman, Skara, & Ames, 2008).

According to Sussman, Skara and Ames (2008), the misuse of substances can lead to accidents and brief periods of non-productivity. The probability of anyone suffering an accident that causes potential injury (usually minor) nears 100% over the course of many years. Many "normal" people consider "living life" and using a substance as increasing the likelihood of experiencing an accident. Of course, substance misuse may increase the odds of an accident occurring in the near future because of effects that may impair coordination and planning skills. Public campaigns that attempt to make substance misuse a less acceptable behaviour, provide instruction on proper use of non-prescription and prescription substances, or provide means to reconcile the costs of prohibition with the costs to society morale and productivity are quite important to reduce substance use-related costs for a wide audience (Sussman, Skara & Ames, 2008).

For many people, substance cessation also appears to be a voluntary, self-directed effort. Certainly, some of these people may die because they make unwise choices pertaining to their substance misuse. However, deaths among these people demonstrate a pattern of behavior in which substance use is a relatively minor part of their lives, more specifically that they hardly used substances and/or used very little or that they often only used substances on occasions socially deemed as appropriate. We doubt that everyone who is drunk on New Year's Eve or at a rock concert is somehow physiologically abnormal and prone to negative substance consequences (Sussman, Skara, & Ames, 2008). There are also some substance users who experience a more

dramatic and elongated fate. Some people continue to misuse substances even though they routinely experience negative consequences. In other words, they experience recurrent, consequential behavior that bewilders the substance user as well as the observer. A continuum notion of substance misuse helps in the clarification of behavior (Sussman & Ames, 2001).

One may place substance misuse on a continuum of substance involvement, consisting perhaps of frequency or quantity of use, subjective degree of lack of control over frequency or quantity of use, preoccupation with use to the exclusion of other activities, or public consequences of use. People at one end of the continuum may misuse substances as a respondent in an occasional social event (a holiday). They may have subjective control over the occasion and the amount consumed, although they occasionally may overuse substances and suffer the adverse consequences as a "mistake." They may view each decision to use or overuse substances as a conscious decision, not as an impulse over which they have no control (Sussman, Skara & Ames, 2008).

Persons on the other end of the continuum use substances frequently or use too much on most use occasions. They may report a subjective degree of lack of control over frequency or quantity of use, or perhaps they think they are in control; however, others observe their substance use as adversely and repetitively affecting their lives. They suffer numerous public consequences of use that hardly appear to be merely a rare mistake of judgment. They may try to limit their exposure to public settings to reduce the probability of public consequences. They may feel surprised, confused, or frustrated by the changes they experience in their behavior as a result of substance intake. If they try to

reduce or discontinue their substance use, they may find, to their surprise that they are unsuccessful (Sussman, Skara, & Ames, 2008).

Terminologies in Substance Use

Intoxication

This is the state of functional impairment resulting from the actions of a substance. It may be acute, caused by consumption of a high dose of substance on one occasion; it may be chronic caused by repeated use of large enough doses to maintain an excessive substance concentration in the body over a long period of time. The characteristic pattern of intoxication varies from one substance to another, depending upon the mechanisms of action of the different substances (Kalant, 1996). For example, intoxication by alcohol or barbiturates typically includes disturbances of neuromuscular coordination, speech, sensory functions, memory, reaction time, reflexes, judgment of speeds and distances, and appropriate control of emotional expression and behaviour. Conversely, intoxication by amphetamine or cocaine usually includes raised blood pressure and heart rate, elevation of body temperature, intense hyperactivity, mental disturbances such as hallucinations and paranoid delusions, and sometimes convulsions (Kalant, 1973). The term may be considered equivalent to over dosage, in that the signs of intoxication usually arise at higher doses than the pleasurable subjective effects for which the substance is usually taken.

Habit and Habituation

According to Kalant (2018), habit is a customary behaviour, especially one that has become largely automatic or unconscious as a result of frequent repetition of the same act. In itself, the word is simply descriptive, carrying no

fixed connotation of good or bad. As applied to substance use, however, it is somewhat more judgmental. It refers to regular persistent use of a substance, in amounts that may create some risk for the user, and over which the user does not have complete voluntary control. Indeed, an alcohol habit has been defined in terms very similar to those used to define dependence. In older writings, habit strength was used to characterize the degree of an individual's habitual substance use, in terms of the average amount of the substance taken daily. Reference to a substance habit implies that the substance use is the object of some concern on the part of the user or of the observer, but that it may not yet be sufficiently strongly established to make treatment clearly necessary

In its early reports, the World Health Organization Expert Committee on Substance Dependence (2003) used the term habituation to refer to a state arising from repeated substance use, that was less serious than addiction in the sense that it included only psychological and not physical dependence, and that harm, if it occurred, was only to the user and not to others. Substances were classified according to whether they caused habituation or addiction. These distinctions were later recognised to be based on misconception, because psychological (or psychic) dependence is even more important than physical dependence with respect to the genesis of addiction while any substance that can damage the user is also capable of causing harm to others and to society at large and the same substance could cause effects that might be classed as "habituation" in one user and "addiction" in another. The WHO Expert Committee (2003) recommended that both terms be dropped from use, and that dependence be used instead.

Problem Drinking

According to Begleiter and Kissin (1995), problem drinking is alcohol consumption at an average daily level that causes problems, regardless of whether these are of medical, legal, interpersonal, economic, or other nature, to the drinker or to others. The actual level, in milliliters of absolute alcohol per day, will obviously vary with the individual, the type of problem, and the circumstances. The advantage of this term is that a drinker who may not meet the criteria of dependence or who is reluctant to accept a diagnostic label of alcoholism or addiction can often be led to acknowledge that a problem exists and requires intervention.

Craving and Related Concepts

Craving refers to an intense desire for the substance, expressed as constant, obsessive thinking about the substance and its desired effects, a sense of acute deprivation that can be relieved only by taking the substance, and an urgent need to obtain it (Glass, 1991). This state is probably induced by exposure to bodily sensations and external stimuli that have in the past been linked to circumstances and situations in which substance use has been necessary, such as self-treatment of early withdrawal symptoms by taking more substance (Wikler, 2013). Substance hunger according to Wikler (2013) is essentially synonymous with craving, and urge represents the same phenomenon but of lesser intensity. The behavioural consequence of an urge or craving is usually a redirecting of the person's thoughts and activities towards obtaining and using a new supply of substance. All the behaviours directed toward this end, such as searching drawers and cupboards for possible remnants of substance, getting money (whether by legal or illegal means),

contacting the sources of supply, purchasing the substance, and preparing it for use, are included under the term substance-seeking behaviour. The more intense the craving, the more urgent, desperate, or irrational this behavior tends to become (Wikler, 2013).

Tolerance and Sensitisation

The term tolerance, which has long held a prominent place in the literature on substance dependence, has a number of different meanings. All of them relate to the degree of sensitivity or susceptibility of an individual to the effects of a substance (Kalant, 2018). Initial tolerance refers to the degree of sensitivity or resistance displayed on the first exposure to the substance; it is expressed in terms of the degree of effect produced by a given dose of the substance, or by the concentration of substance in the body tissues or fluids resulting from that dose: the smaller the effect produced by that dose or concentration, the greater is the tolerance (Goudie, & Emmett-Oglesby, 1989). Initial tolerance can vary markedly from one individual to another, or from one species to another, as a result of genetic differences, constitutional factors, or environmental circumstances.

Sensitization refers to a change opposite to tolerance, that occurs with respect to certain effects of a few substances (most notably, central stimulant substances such as cocaine and amphetamine, or low doses of alcohol that produce behavioral stimulation rather than sedation) when these are given repeatedly (Robinson & Berridge, 1993). The degree of effect produced by the same dose or concentration grows larger rather than smaller. For example, after repeated administration of amphetamine a dose that initially produced only a slight increase in physical activity can come to elicit very marked

hyperactivity, and a convulsion can be produced by a dose that did not initially do so. This does not apply to all effects of the substance, however; tolerance can occur towards some effects (such as the inhibition of appetite) at the same time that sensitization develops to others and the reason for this difference is not yet known (Robinson, & Berridge, 1993).

Classifications of Substances

Sussman, Skara and Ames (2008) indicate that, various substance type classification systems have been compiled based on chemical structures, pharmacological action, and/or the observable behavioral effects of the substance action. Substances of misuse enter the bloodstream and circulate through the system after being injected, inhaled, swallowed, or absorbed through the skin. Each substance has an "affinity" for specific receptor cell sites and may act as an antagonist or agonist. Antagonist substances block or reduce cell response to natural agonists, usually one's own neurotransmitters (endogenous ligands). Conversely, agonist substances stimulate specific receptors and may increase cellular activities. Substance classifications help clinicians and researchers to understand observable effects and consequences of substance action and addiction potential (Sussman, Skara & Ames, 2008). Generally, the following are the classification or categories of substances as outlined:

Depressants

Balhara (2018) defined depressants as substances that suppress or slow the activity of the brain and nerves, acting directly on the central nervous system to create a calming or sedating effect. This category includes alcohol, and tramadol. Depressants are taken to relieve anxiety, promote sleep and

manage seizure activity. Depressants according to Sussman, Skara, and Ames (2008) are generally taken orally and slow down the central nervous system. Intoxication may include slurred speech, deficient coordination, nystagmus (rapid eye movements), attention or memory impairment, sedation, anxiety reduction, and euphoria, and generally lasts 4 to 5 hours on a single dose.

Stimulants

Balhara (2018) defined stimulants as substances that accelerate the activity of the central nervous system. Stimulants can make you feel energetic, focused, and alert. Stimulants include substances such as cocaine, crack cocaine, amphetamine, and marijuana. According to World Substance Report published by the United Nations Office on Substances and Crime, amphetamine-derived stimulants like ecstasy and methamphetamine are the most commonly used substances around the world after marijuana (Balhara, 2018). According to Sussman, Skara, and Ames (2008), stimulants speed up the central nervous system for as long as 2 to 4 hours on a single dose. Stimulants tend to increase or augment dopaminergic (reward, anticipation) and serotoninergic (self-administration initiation "motive," maintenance of pleasure) neurotransmission (Julien, 2005).

Empirical Review

Prevalence of Substance use Among Students

Global records indicate that different studies have presented evidence of substance use amongst high school learners. For instance, according to the World Substance Report, a survey carried out by the USA government in 2010 amongst high school students showed a prevalence rate of 1.3% of young people who had ever used heroin (United Nations, 2014). Obviously, one of

the ills plaguing Ghana today is the misuse of substances specifically tramadol, and other forms of substances which are either poorly regulated or banned for use in the country (Agbesi, 2018).

Substance (tramadol) use is firmly rooted in the following factors. In other not to "cry the wolf", the limited and difficult access to healthcare delivery in Ghana contribute to the use of the substance of play (Tramadol). Young people, especially, those living in the countryside, have no or little access to the various health facilities across the country. The little available ones are nothing to boast of, due to the poor regulation of the facilities and inefficient accessibility by the use of the National Health Insurance Scheme (which is to regulate medical health-care for the citizens in Ghana. These occurrences make it very difficult for them to have the opportunity to consult a qualified health professional in moments of sickness, trauma or injury (Agbesi, 2018).

A study conducted by the National Institute in the U.S.A. titled "Monitoring the Future survey of substance use and attitudes amongst American high school students" in 2014 indicates positive news about youth substance use, including decreasing use of alcohol, cigarettes, and prescription pain relievers and recorded no increase in use of marijuana, decreasing use of inhalants and synthetic substances, and a general decline over the last two decades in the use of illicit substances.

However, the survey underlined concerns over the high rate of cigarette use and easing attitudes around some types of substance use, particularly decreases in perceived harm and disapproval of marijuana use (National Institute, 2014). Similarly, in Canada, a study conducted in 2008 and

2009 amongst high school learners indicated that 2.3% of these used had used heroin and 1.4% had used it once in the past month. It is documented that, in South Africa, the use of heroin amongst age 13 to 22 years was 6.2%. With regard to marijuana (marijuana or ganja) use, a study conducted in Kenya in 2007 revealed that 1.1% of adolescents of aged 15 to 17 years had used marijuana (marijuana or ganja) (United Nations, 2014).

The World Health Organization (WHO) conducted a survey in Zambia amongst high school students. Findings showed that marijuana (marijuana or ganja) use was 35.5% amongst the learners. Meanwhile, from a survey conducted in South Africa in 2008 amongst young people of age 13 to 22 years, the rate of marijuana use was 12.7%, whilst in the USA marijuana usage by grade 10 pupils in 2010 was 33.4% (United Nations, 2014). According to Gabriel, Muasya, Mwangi, Ewoi and Andati (2016), the UN World Substance Report in 2014 estimated that in 2012, some 243 million people corresponding to some 5.2 percent of the world population aged 15-64 had used an illicit substance, mainly a substance belonging to the marijuana, opioid, cocaine or amphetamine-type stimulant (ATS) group, at least once in the previous year. Similarly, the extent of problem substance use, by regular substance users and those with substance use disorders or dependence, also remains stable, at about 27 million people (range: 16 million-39 million). With respect to the different groups of substances, there has been an increase in opioid and marijuana use since 2009, whereas the use of opiates, cocaine and ATS has either remained stable or followed a decreasing trend.

It is noted according to UNODC World Substance Report (2019) that the use of alcohol is, for the most part, a human cultural universal. The

chewing of cocoa and other psychoactive plants has existed in many societies for millennia. Marijuana and the opium poppy are indigenous to several regions of the world and have been used as intoxicants and in rituals likely since prehistoric times. The explosion of the world trade following the discovery of America by the Europeans, brought local proactive plants-from cigarette and marijuana to cocoa and opium poppy, and related techniques of distillation, refining and crossbreeding-to the attention of world consumers. The American substance experience emerged, evolved and endured within the framework of this worldwide trafficking of what was originally psychopharmacological plants. The situation in Africa is not any different. Africa now occupies second position worldwide in the trafficking and consumption of illegal substances. According to UN statistics 37,000 people in Africa die annually from diseases associated with the consumption of illegal substances (UNODC, 2019).

Bassiony, El-Deen, Yousef, Raya, Abdel-Ghani, El-Gohari and Atwa (2015) conducted a study using a sample of 204 school students, and among them, 18 (8.8%) were using tramadol as shown by urine screen. Among those who were using tramadol, 15 (83.3%) were using tramadol alone while three (16.7%) were using more than one substance (poly-substance) (marijuana, alcohol and tramadol). Two-thirds of the school students started with tramadol as the first substance after cigarette smoking, 22% started with marijuana and the remaining used more than one substance. Within that same study, 6 students denied that they were using substances but their urine screen was positive, so 12 students admitted that they were using and gave the frequencies of use. The majority (75%) of the students used tramadol once a month, 8.3%

used tramadol 2-4 times per month and 16.7% used tramadol more than 4 times per year.

In Egypt for instance, one study found that 20% of Egyptian male students have used substances and among them 25% have continued to do so (Soueif, Yunis, & Taha, 1986). Among secondary school male students, 5.05% used hashish, 0.84% used opiates, 2.72% used tranquilizers, 1.79% used stimulants, and 2.26% used hypnotics (Soueif, Youssuf, Taha, Moneim, Sree, Badr, Salakawi & Younes, 1990). The last National Survey report stated that 9.6% of Egyptians used substances at least once during their lives (Hamdi, Gawad, Khoweiled, Sidrak, Amer, Mamdouh, Fathi, & Loza, 2013). Tramadol use has dramatically increased in Egypt since 2008 and has led to many admissions to addiction treatment centers (Abolmaged, Kodera, Okasha, Gawad & Rawson, 2013).

In terms of prevalence rate of substance use by respondents India, Kotina, Sawant and Kokiwar (2016) study revealed that alcohol intake was high showing prevalence of 48.54%, followed by cigarette smoking (23.36%), then cigarette (8.76%). Prevalence rate of substance use is more in the age group of 13-15 years, (33.34%), followed by 27.78% at 10-12 years of age, followed by 16-17 years (21%). The overall prevalence of substance users among youth urban health centre field practice area was found to be 66%.

A study conducted among adolescent students in Ghana by Nkyi (2014) revealed overwhelming results concerning prevalence of substance use. The results of the descriptive data analysis showed that the mean AADIS scores among the senior high school students were low (N=244; M=13.86; SD=16.436). In the study, 180 students (76.1%) report that they have never

used alcohol or taken any substance while 42.3% (44) and 44.9% students indicated that they drink wine and alcohol respectively. With regard to why they use alcohol, 47% (47) reported because of curiosity, 27.7% (28) reported they got alcohol from friends. It was also surprising that 27% (27) drink with friends, while 27% reported they drink alone. Students who reported they have had only one drink was 52% (51) while 30.3% (40) indicated they had their first drink at ages 14 or 15. With regard to alcohol effects, 52.8% indicated Alcohol has no effect on their life. Thirty percent (30%) of the respondents' reports, alcohol is not a problem while 36% indicated they could control alcohol (Nkyi, 2014).

Alcohol use

Students away from home in general are at a specific stage to experience more freedom in making personal choices about their health behaviours than earlier or later in life (Bewick, Trusler, Mulhern, Barkham, Hill, 2008). Some forms of risky behaviours such as alcohol consumption peak in this age group (Karam, Kypri, & Salamoun, 2007). Alcohol use is broadly reported among students (Brandao, Correia, de Farias, Antunes, & da Silva, 2011) and they seem to consume more alcohol than their counterparts in the general population (Gill, 2002). A comparative investigation in Germany among 5159 Chinese and German concerning alcohol consumption and factors found that all students drink alcohol but the German students consumed more alcohol than the Chinese. Regarding factors associated with drinking, the study revealed that gender difference in terms of males consuming more alcohol revealed only among the Germans, while a positive association between alcohol consumption, BMI and paying less attention to nutrition was

only found in the Chinese. The study further revealed that common associated factors between the two countries, such as a positive association between "At least once a year" alcohol use, doing at least three times a year physical activity and having a father with high educational degree. At the same time, we identified difference of the association between the same factor "age" and "At least once a year" drinking between the two groups, i.e. a positive association in Chinese and a negative association in Germans **(**Chu, Jahn, Khan & Kraemer, 2016**).**

A systematic and meta-analysis of empirical studies on alcohol use revealed daunting record of the situation among students. For instance, Francis, Grosskurth, Changalucha, Kapiga and Weiss (2014) reviewed 263 full-text papers and identified 56 eligible for inclusion in the review. The main reason for exclusion was that the paper did not report information on alcohol use from the target population, that is, young people aged 15-24 years, or that young people were included but we could not separate the prevalence in this age group from that in older people (Francis, Grosskurth, Changalucha, Kapiga & Weiss, 2014). Of the 56 eligible studies, five reported both current alcohol use and ever use, and one study reported current use and problem drinking and are included in each of these analyses. Most studies (n = 36, 58%) reported current alcohol use, 17 studies reported ever use of alcohol, four studies reported alcohol use in the last year, and five studies reported problem drinking (Francis, Grosskurth, Changalucha, Kapiga & Weiss, 2014). In terms of the ever use of alcohol, the prevalence among secondary school students was 37% (Interquartile Range: 23-56%), while the prevalence was lower among the primary school students (26-30%), general populations

(*Median = 32%, IQR 17-56%*), and among street children 14% (*95%CI: 4-24%*) (Francis, Grosskurth, Changalucha, Kapiga, & Weiss, 2014).

In a related study among Australian Secondary school students, it was revealed that about 60% of all students had consumed alcohol in the year preceding the survey. Students who drank alcohol in the preceding year were classified 'current drinkers'. The proportion of current drinkers increased with age and peaked among 17-year-olds at 46% for males and 37% for females. In the study, there were few consistent gender differences in the prevalence of drinking within the different ages. Among 12-year-olds, males were more likely than females to have consumed alcohol in the past year, and month. Males aged 17 years were more likely to consume alcohol in the past month and year than females of the same age. Among 16-year-olds, males were more likely than females to have consumed alcohol in the past year. Male students who consumed seven or more alcoholic drinks on at least one day in the preceding year and female students who consumed five or more alcoholic drinks on one day were termed risky drinkers. The percentage of all students who consumed alcohol at a risky level in the past year increased from around 1% among 13-year-olds to 18% among 17-year-olds (Australia, 2008). It was revealed also that the amount of alcohol students consumed per year increased as they aged (from three drinks among 12-year-olds to nine drinks among 17-year-olds. Males aged 16 and 17 years who were current drinkers consumed more alcohol per year than female current drinkers of the same age. The proportion of current drinkers drinking at risky levels at least once in the year before the survey increased with age. Around 7% of 13-year-olds who were

current drinkers consumed alcohol at risky levels and this increased to around 45% among 17- year-olds (Australia, 2008).

Furthermore, a survey conducted among 1,435 randomly sampled students in Iraq by Al-Ameri, Al-Badri, and Lafta (2016) revealed that the prevalence of alcohol consumption among the studied sample was 9.7%, as only 139 out of 1435 joining students reported life-time usage of alcohol. All the consumers reported their usage of alcohol in the past 30 days before filling the questionnaire. Alcohol consumption was prevalent among 133 (19.7%) male students. Only six females (0.8%) gave history of alcohol consumption. Out of 139 alcohol consumer students, 89 (64%) were occasional users of beers, including all the six females. 33 (23.7%) were moderate beer users, and the remaining 17 (12.2%) were heavy drinkers of both beer and spirit. In comparison among students regarding lifetime alcohol usage, the results showed that alcohol consumption was significantly higher among older age group ($p= 0.013$). Predominance of alcohol consumption among male students was highly significant in comparison to females. The prevalence of alcohol consumption among students from rural areas was higher compared to those from urban. The results also revealed that alcohol consumption among students living out of their families significantly exceeded that among those living in their families (Al-Ameri, Al-Badri, & Lafta, 2016).

Similarly, Mini, Anuja, Shaheer, and Shameel (2017) conducted a study among 300 Indian secondary school students and found that, among those who consumed alcohol, the first consumption of alcohol was, 24 (38.1%) of students consumed alcohol before the age of 10 years and 33(52.4%) between the age group 10-15 years and 6 (9.5%) above 15 years.

The common beverage used was beer among 45 (71.4%) followed by rum/brandy 9 (14.3%). The amount of beverage used by students at a time was, up to 2 drinks in 48 (76.2%) but about 15 (23.8%) has consumed more than 2 drinks at a time (one drink was about 30 ml). The main source of alcohol was beverage out let 42 (66.7%) followed by friends 15 (23.8%) and others from family members. Among those who have consumed alcohol the person who introduced drinking was a family member in 30 (47.6%) students and self-drinking by 24 (38.1%) and by friends in 9 (14.3%). Those who consumed alcohol 45 (71.42%) got alcoholic father and 47 (74%) got an alcoholic member in the family including father. The main occasion of drinking was family function in 36 (57.2%) of cases and during night in 21(33.4%) and even 6 (9.5%) is drinking in school time. Reason for starting drinking, 39 (61.9%) started the habit as experimentation and 9 (14.3%) to get a perception of cool and 12 (19%) due to peer pressure 3 (4.8%) to get relief from grief. Among those who are consuming alcohol, 33 (52.4%) are drinking openly, means that others (friends, other people around) knows that they are drinking and in 33 (61.9%) the family members are aware that they have consumed alcohol. About 42 (66.7%) students are drinking in groups and one student got daily craving for alcohol (Mini, Anuja, Shaheer, & Shameel, 2017).

Again, a study among 73 students by Olayinka, Ozoekwe, Halari, Halari, Alao, et al. (2016) in Roseau, Dominica revealed that 73.91% of males reported that they consume alcohol while 26.09% reported they do not consume alcohol. 63.27% of females reported that they consume alcohol while 36.73% of them reported they do not consume alcohol. Males reported they

began to consume alcohol at less than 10 years (6.25%), 11-15 years (6.25%), 16-20 years (81.25%), and 21-30 years (6.25%). The females reported they began to consume alcohol at less than10 years (10.71%), 11-15 years (7.14%), 16-20 years (60.71%), and 21-30 years (21.43%). It was also revealed that the onset of alcohol consumption based on age group. 33.33% and 66.67% of recipients started drinking less than 10 years and between 11-15 years respectively. Again, about 75% started drinking between 16-20 years, for the age groups; 21-25 years and 26-45 years. 72.41% started drinking between 16-20 years showing for the age group greater than 45 years while 25% and 75% of respondents below 10 years started alcohol consumption due to adult influence and social activity respectively. 33.33% and 66.67% in the age group 11-15 years started alcohol consumption due to peer pressure and social activity. About 70.00% in the age group 16-20 years had reasons for onset of alcohol consumption as social activity. In same study, about 71.43% in the age group 21-30 years had reason for onset of alcohol consumption also on social activity with a few of them giving reasons of peer pressure and adult influence (Olayinka et al., (2016).

According to National Campaign against Alcohol and Substance Use [NACADA] (2011) in Kenya, about 200,000,000 people worldwide use alcohol. On one of the studies carried out on alcohol use, it indicates that globally students have a higher prevalence of alcohol use (Karama, Kypros, & Salamounc, 2007). Dantzer et al. (2006) indicated that in USA 60% use alcohol while in Asia 48.9% of students' use alcohol, 24% being 1st years while 75.6% are final years and that Ireland had higher proportions of male and female who used alcohol. The prevalence of risky alcohol use is greater in

other continents, but is lesser in Africa and Asia (Karama, Kypros, & Salamounc, 2007). A research on alcohol use and associated factors among students in Ethiopia indicated that alcohol was most used by students at 50.2% (Gezahegn, Andualem, & Mitiku, 2014). A South African study shows that alcohol use prevalence rate was 39.1% (Madu & Matla, 2003). Young and De Klerk (2008) studied the patterns of alcohol use on a South African university campus in 2008, and found that on a cut off of 8 on the Alcohol Use Disorder Identification Test (AUDIT) 33.4% were risky drinkers, (AUDIT 8-15) 7.8% were harmful drinkers (AUDIT 16-19) and 9.0% probable alcohol dependent (AUDIT 20-40). In another study on the same students two years later using a cut off of 6 for women and 8 for men showed that 57.8% were risky or harmful drinkers (men: 57.9% women: 57.8%), (Young & Mayson, 2010).

National Campaign against Alcohol and Substance Use [NACADA] (2009) in a study indicated that alcohol use was prevalent among young adults of between 15-29 years old in Kenya. Atwoli, Mungla, Ndung'u, Kinoti, and Ogot (2011) indicated that the prevalence of alcohol use among students was high and caused major physical and psychosocial complications in that population. The study went on to state that majority of those using alcohol reported serious negative effects, increasing the need for interventions to reduce the risk of dependence and other harmful consequences (NACADA, 2009).

Cigarette use

Smoking is a leading cause of preventable morbidity and mortality worldwide. Cigarette smoking causes annually 6 million deaths worldwide and is projected to exceed 8 million by 2030, according to statistics from the

World Health Organization (WHO, 2011). Smoking was identified as the most important cause of preventable morbidity and premature death (WHO, 1999). This ratio is estimated to increase to 10 million in 20-30 years. Due to cigarette use, the morbidity rate is 70% in developing countries, and these countries are the ones in which problems due to epidemic cigarette use are mostly seen (Fakhfakh, Hsairi, Maalej, Achour & Nacef, 2002). The WHO estimates the number of smoking individuals as 1.1 billion, globally. A total of 700 million male smokers are located in developing countries, and 47% of men and 12% of women smoke a total of 6 trillion cigarettes a year worldwide (WHO, 2011). A Global Youth Cigarette Survey (GYTS) conducted in 2001-2002 in five Arab countries in the Middle East, approximately 10% of youths (13-15 years of age) use different kinds of cigarette products (Maziak, Ward, Afifi-Soweid & Eissenberg, 2004).

In the developed world, a significant reverse association between socioeconomic status and smoking happens such that the poorest and minimum educated peoples are more expected to smoke (Wipfli & Samet, 2009). Whereas there are limited studies characterizing cigarette use in the developing world, they mainly support the findings witnessed in the developed world. Furthermore, it has been suggested that cigarette use has grown into generally prevalent in developing countries and the public health importance of smoking related morbidity and mortality will continue to raise (Wipfli & Samet, 2009). Youth around the world use cigarette products at high amounts. Young people may not grip the longterm consequences of cigarette use, even though cigarette usage and exposure has been revealed to have significant negative health effects. Youth use a range of cigarette products that are

smoked, chewed, or sniffed. Prevention efforts have concentrated on answering those aspects that are believed to contribute to smoking acceptance, such as cigarette industry advertising and promotion, and access to cigarette.

Given the severity of the cigarette epidemic worldwide and the upsetting health effects on an individual and population basis, there are presently numerous efforts to restrict the cigarette problem, including the World Health Organization (WHO) sponsored Framework Convention on Cigarette Control (Tanski et al., 2004). Scientific evidence on all aspects of smoking amongst youth is very vital for planning suitable interventions to shrink smoking among this susceptible population (Minh, et al., 2016).

Smoking initiation is well thought-out the fundamental behaviour that governs the future health burden of cigarette smoking in a society (Kaleta et al., 2015). Understanding the role of the family in determining adolescent health risk behaviours has recently been given better consideration (Zaborskis & Sirvyte, 2015). Several countries around the world are experiencing an increase in the prevalence of current smoking among youth and young adults and are now having to deal with the preventing cigarette use (National Center for Chronic Disease, 2012).

These statistics indicate that cigarette smoking was generally prevalent. In terms of students, the situation seem not to be different. For instance, a cross-sectional survey by Nasser, Salah, Regasa, Alhakimy and Zhang (2018) among students in Yemen revealed that the prevalence of cigarette smoking prevalent among all students but was higher among students who were living in dormitories than those who were living with their families (23.2% vs 8.5%). Similarly, it was higher among students from low-income

families compared to those from average and high-income ones (15.9%, 10.8% and 3.2%, respectively). The total prevalence of smoking among students was 12.4% and the prevalence of cigarette smoking among males was 10.3% and 2.7% for females, while the prevalence of waterpipe smoking among males was 0.0% and 13.0% among females (Nasser, Salah, Regasa, Alhakimy, Zhang, 2018).

Likewise in Gambia, a study among 10,395 randomly sampled students revealed cigarette usage indicated that the situation was alarming. For example, the study revealed that one in six respondents (16.7%) had ever smoked cigarette, comprising around 1 in 4 (25.7%) boys and 1 in 10 (9.4%) girls and 7.9% of boys and 1.5% of girls had done so in the last 30 days (table 2). Manufactured cigarettes were the most widely used of these products (9.8% ever use; hand-rolled cigarettes 2.7%, cigars 2.3% and pipes 2.1%). After manufactured cigarettes, however, shisha was the next most widely used product, and with ever use reported by 11.4% and 5.4%, respectively, of boys and of girls, was relatively widely used by girls. Ever use of smokeless cigarette was reported by 2.7% and current use by 1.2% of respondents (Jallow, Britton, & Langley, 2017).

Around a quarter of current smokers started smoking before the age of 12, and two-thirds before age 16. The most common reasons given for starting smoking were stress relief (21.9%) and peer pressure (20.0%). Most smokers obtained cigarettes by purchase from shops, and under half reported any difficulty doing so. Age was not a common barrier to purchase. Over half reported a regular cigarette brand and a third spent ($0.9) on cigarettes per day. Of the 4.4% current smokers, 13.2% had smoked in all 30 days preceding

the survey, and over half had smoked two or more cigarettes per day on the days that they smoked. One in four had also used smokeless cigarette in the past 30 days. More than half (55.6%) of current smokers reported wanting to stop smoking and having tried to quit in the last 12 months (54. 5%), but only a quarter had received advice or help to quit or used nicotine replacement therapy (NRT) to help them stop smoking (Jallow, Britton, & Langley, 2017).

Zarallo, Chamorro, Luque, and Condon (2019) in a study among 209 secondary school students in Spain concerning the prevalence of cigarette consumption revealed that about 27.8% considered themselves to be habitual smokers, 27.8% were occasional and 44.5% were not consumers. The study showed that among women (n = 126) 50.8% were habitual or occasional smokers, compared to 49.2% who were not. With respect to men (n = 83), 62.6% were consumers and the remaining 37.3% were not. Moreover, the age group with the highest number of habitual smokers was between 20 and 24 years old (17.2%). There was a statistically significant difference between habitual or occasional consumer and the type of cigarette, industrial or non-industrial with an effect size of 0.265. The study further revealed that majority of smokers consumed 1-5 cigarettes a day (60.3%). On average, the sample takes 4.23 years smoking but almost all respondents consider that cigarette consumption was harmful to health, regardless of the amount (94.7%). The main reasons why they started smoking were other reasons than those stated in the survey (44%), by trend (16.4%) and to relax (18.1%), demonstrating statistically significant differences.

About 76.6% of the students did not consider that they were addicted to cigarette or that in the future they would become addicted. Statistically

significant differences were found with the type of smoker or non-smoker. Majority of the smokers (81.9%) consume more cigarette. Almost all smokers, whether habitual or casual, have thought about stopping smoking (47.4%) or maybe they could raise it (37.1%) (Zarallo, Chamorro, Luque, & Condon, 2019).

Similarly, a study in Iran among 1,750 secondary school students by Nakhaee, Divsalar, and Bahreinifar (2009) revealed that the average age for cigarette use initiation was 15.9 ± 4.5 years. Nearly 31% (n = 516) of the respondents had experienced cigarette use in their lifetime and 11% (n = 184) respondents were current smokers (22% of men and 2.4% of women). Nearly 2% smoked more than 10 cigarettes per day. Cigarette use among close friends alcohol use and being a male showed the strongest association with cigarette use (Nakhaee, Divsalar & Bahreinifar, 2009).

Again, Hossain, Hossain, Ahmed, Islam, Sikder, and Rahman (2017) conducted a study among 264 students in Bangladesh and it was revealed that respondents ranged in age from 18-27 years, with a mean of 21.55 (± 1.98) years. Among cigarette smokers, 94.34% were males and 5.66% were females. The average age of initiating cigarette smoking for both males and females was 17.91 years. Age of initiation of cigarette smoking for females was 20.22 years and for males it was 17.8 years. The 95% confidence interval for these means was 19.15 - 21.29 and 17.44 - 18.09 for female and male respondents, respectively. Some students reported initiation of cigarette smoking as early as 12 years of age and nearly one-third (30%) of ever smokers initiated it before they were 17 years of age. Initiation of cigarette smoking was found to be dramatically increased after 17 years of age until 21 years, and then smoking

decreases. The most significant factor for initiating cigarette smoking was the influence of a friend. Family history of cigarette smoking was also a significant factor for smoking initiation. A large proportion (69.62%) of students reported that at least one family member smoked cigarette. Of these respondents, 64.30 % reported that the father smoked cigarette, and 51.80 % reported that a brother smoked cigarette (Hossain, Hossain, Ahmed, Islam, Sikder & Rahman, 2017).

Among cigarette smokers, it was reported that almost 62% attempted to give up cigarette smoking at any stage after initiation, however, were unable to quit. Students were asked which factors influenced smoking continuation. Majority of the respondents (54.18%) reported depression as the reason they continued to smoke cigarette. Other reasons for continued smoking/use of other cigarette products were difficulties in a relationship with a girlfriend (41.51%) and educational problems (14%) (Hossain, Hossain, Ahmed, Islam, Sikder & Rahman, 2017).

In a systematic review and meta-analysis of 38 research articles concerning prevalence of cigarette use among students in Iran revealed that surprisingly 19 studies have not explained the meaning of “being a smoker" in their methodology. However, 19 studies reported smoking in males and 15 studies reported smoking in females. Seven studies reported that the average age of respondents was 21.5 years. Eight studies reported that the average age of students who started smoking was 18.1 years. Of only two papers, which studied the time when the students started smoking, one study reported that 43.5% started smoking after entering university, while the other study reported it as 50%. Among studies that entered this meta-analysis, the highest smoking

level was found to be 31.5% and the lowest rate, however, was found 6.2%. The highest smoking rate in males was 39.9% and the lowest rate was 13.4% reported. Moreover, among the studies entered to this research, the highest and lowest prevalence of smoking among female students of Iran was 25.5% and 0.7% respectively (Haghdoost & Moosazadeh, 2013).

In Tunisia, El-Mhamdi, Wlfcarius-Khiari, Mhalla, Ben-Salem and Soltani (2011) conducted a study among 144 students and it was reported that they were smokers, giving a prevalence of smoking among these school adolescents of 16.0%. The prevalence of smoking among men was 30.2% and among women was 4.6%. The median number of cigarettes smoked was seven per day (interquartile range 4-15). Among smokers, there were a significantly higher proportion of males than females (84.0% versus 16.0%) and of those aged less 16 years than greater than or equals to 16 years (53.5% versus 46.5%). However, it did not differ significantly by parent's level of education or parent's smoking status. The mean age of smokers was 15.5 years and the mean age at the first smoking experience was 13.8 years, with a significant difference according to sex: females were older than males at the first smoking experience. Smoking initiation was motivated by a friend in 45.8% of cases and by the smoker's family in 10.8%. Among these smokers, 21.5% reported consuming other cigarette products, 8.2% consumed alcohol and 2.1% were marijuana users.

Likewise in Portugal, a study conducted among high school students revealed that 35.8% of the high-school students had never smoked, 39.4% were experimental smokers, 3.3% were former and 6.6% were occasional smokers, while 14.9% were regular smokers. The proportion of regular

smokers increased significantly with age (Pearson r=0.95, P less than0.0005). There was a significant decrease by age in the proportion of never smokers (69.5% at 12 years to 22.8% at 19 years). Former smokers were rare at any age (always less than 5%), except for 19-year-olds (almost 6%). The mean age for starting smoking was 13.4+1.6 years for females and 13.4+2.1 years for males. Males were more likely either to have never tried smoking or to be current smokers; females were more likely to have only experimented with smoking or to be former smokers (Azeyedo, Machado & Barros, 1999). There were significant differences between males and females according to the number of cigarettes smoked daily. Among males, 34.5% smoked 1-5 cigarettes per day; 31.0% smoked 6-10; 29.8% smoked 11-20; and 4.8% smoked greater than20. Among females, 39.7% smoked 1-5; 36.8% smoked 610; 22.2% smoked 11-20; and 1.3% smoked greater than20 cigarettes per day.

A significantly higher risk of smoking was associated with the following: increasing age, mono- parental families, smoking by parents (or only the mother), smoking by siblings or friends, belief that smoking is harmless, low academic performance, and consumption of coffee, alcohol or illicit substances (Azeyedo, Machado & Barros, 1999). The prevalence of smokers varied significantly between the different schools. Of the smokers and illicit substance users, 77.2% first started to smoke before they used illicit substances. About 43.5% of the study respondents reported that school was where they smoke most often, followed by cafes (20.4%) and discotheques (15.4%) (Azeyedo, Machado & Barros, 1999).

Similarly, Algorinees et al., (2016) conducted a study among students and it was revealed that of the 287 respondents, 56/287(19.5%) respondents were found to be current smokers. Of the 56 current smokers, 14/52(27%), 29/52(55.8%), and 9/52(17.2%) were used to smoke 1-3 cigarette/day, 4-10 and 11+, respectively. For Duration most of the smokers used to smoke for 26-36 months. When asking them whether it is easy to quit smoking, 120/285(42%) said yeas. When asking them whether, you think to quit. Of the 237 respondents, 237/299(79%) respondents believe that adult imitation leads to smoking. About 235/297(79%), believe that family careless and lead to acquiring the habit. Education Failure believed to lead to smoking among 199/298(67%). Approximately 184/294(63%) confessed that Vacuum leads to smoking. About 53/289(18%), believe that smoking is the easy.

Marijuana use

Marijuana use can have serious detrimental effects in children and adolescents (Lubman, Cheetham, & Yucel, 2015). Furthermore, it is constantly changing (Copeland, Rooke, & Swift, 2013). As observed with cigarette smoking (MacCoun & Mello, 2015) newer methods, such as vaping, digesting or changing supply, and changes in the perception of the risk associated with marijuana are alarming (Wang, Roosevelt, & Heard, 2013). It is therefore important to continually assess the use of marijuana among young people in order to inform prevention efforts. Monitoring substance use also provides valuable information about potential determinants (established and emerging) of marijuana use and co-use of marijuana with alcohol, cigarette and/or other substances. These data could enable the evaluation of the effectiveness of policies and education programs. Research has shown that the

values and lifestyles of adolescents change quickly (Qidwai, 2010) and close monitoring can help to ensure that program responses are based on empirical evidence.

In a study conducted among 9,900 Canadian students by Sampasa-Kanyinga, Hamilton, LeBlanc and Chaput (2018), the prevalence rate of marijuana was deafening as 21.5% of students reported using marijuana at least once in the previous year. Fewer students reported using marijuana on a monthly and daily basis (13.9% and 2.8%, respectively). The conditional probability that an adolescent who reported marijuana use in the past year would report daily use was 12.5%. About 1% of students reported using synthetic marijuana at least once in the previous 12 months. Grades 9 and 10 were the most common grades in which students reported having tried marijuana for the first time. In the study, there was a dose-response gradient with age, with older students being more likely to use marijuana than younger students'. Marijuana use was more frequent among students who reported past-year cigarette use, those who reported occasional or regular alcohol use, and those with short sleep durations. The proportion of students', who reported cigarette use in the previous year, 18.1%, was similar to the proportion who reported past- year marijuana use (Sampasa-Kanyinga, Hamilton, LeBlanc & Chaput, 2018).

Similarly, marijuana is the most widely used illicit substance among college students. One in every 22-college students uses marijuana daily or near daily. More than 85 percent of college students think their peers used marijuana in the past 30 days; however, only 18.4 percent of college students actually used marijuana in the past month. In 2015, 38 percent of college

students indicated they used marijuana in the prior 12 months, up from 30 percent in 2006 (American College Health Association-National College Health Assessment, 2016).

A higher percentage of male students (29.6%) reported current marijuana use than female students (19.6%) was reported in a study conducted by Page and Scanlan (1999). However, the average or mean estimation by the sample was that 34.9% of males and 27.7% of females were current marijuana users (used marijuana in the past month). Both male and female current marijuana users had significantly higher estimations of peer marijuana use than non-users (Page & Scanlan, 1999). Page and Scanlan (1999) also revealed that male marijuana users were significantly more likely than male nonusers to smoke cigarettes on daily basis, use smokeless cigarette in the past year, drink five or more alcoholic drinks on a single occasion during the average year, have had a drink in the past year, used cocaine in the past month, have ever injected illegal substances, have ever used steroids, driven a motor vehicle under the influence of alcohol in the past month, had sexual intercourse in the past month, and had four or more sexual partners in their lifetime.

Again, female marijuana users were significantly more likely than female nonusers to smoke cigarettes on daily basis, drink five or more alcoholic drinks on a single occasion during the average year, have had a drink in the past year, used cocaine in the past month, driven a motor vehicle under the influence of alcohol in the past month, had sexual intercourse in the past month, had four or more sexual partners in their lifetime, and have an eating disorder (Page & Scanlan, 1999).

Previous research on marijuana use among students has primarily focused on either lifetime use or regular/heavy use (i.e., daily or almost daily). Regular, albeit not necessarily daily, marijuana use has received less scientific attention. Studies have found the prevalence of marijuana use at least once in the last month to range from 1.5% to 32.6% among South and North American students (Hynes, Demarco, Araneda & Cumsille, 2015; Johnston, O'Malley, Bachman, & Schulenberg, 2011). The variance in prevalence estimates across student populations may imply the influence of social and cultural factors on marijuana use. Few studies have investigated the prevalence of recurrent marijuana use among Scandinavian students. In a Norwegian study, 5% of the students reported having used marijuana at least five times in the last six months (Nedregard & Olsen, 2014), which suggests lower rates of use compared to North American students.

A study conducted among students in Norway by Erevik, Torsheim, Andreassen, Vedaa, and Pallasen (2017) concerning the prevalence of marijuana revealed that the mean age of the sample was 24.9 were women; and the vast majority were born in Norway. A total of 72.6% had never used marijuana, 14.5% had used marijuana at some point in their lives but not in the past six months, 7.7% had used marijuana one to four times in the past six months, 4.0% had used marijuana 5 to 50 times in negatively associated with recurrent marijuana use among women but not men, and conscientiousness scores were negatively associated with recurrent use among men but not women (Erevik, Torsheim, Andreassen, Vedaa & Pallasen, 2017).

In study among different countries by Hynes, Demarco, Araneda, and Cumsille (2015), it was evident that marijuana prevalence was inconsistent

both intra and inter countries. For instance, the study revealed that Marijuana was the most widely used illicit substance among university students, although prevalence varied across the Andean countries. Changes in prevalence in the four countries were characterized by increases in lifetime, past year and past month prevalence in each country and across gender groups. Differences in prevalence between 2009 and 2012 were statistically significant for all countries, in the overall population and among males. Differences in prevalence for females were only significant in Colombia and Ecuador. In Bolivia, lifetime prevalence of marijuana use increased from 7.49% in 2009 to 11.97% in 2012, past year prevalence increased from 2.04% to 3.44%, and past month prevalence increased from 0.76% to 1.45%. In Colombia lifetime prevalence increased from 26.41% in 2009 to 31.16% in 2012, past year prevalence increased from 11.51% to 15.01% and past month prevalence increased from 5.27% to 7.14%. In Ecuador, lifetime prevalence increased from 11.41% in 2009 to 21.94% in 2012, past year prevalence increased from 4.43% to 9.00% and past month prevalence increased from 1.68% to 3.67%. In Peru, lifetime prevalence of marijuana use increased from 8.40% in 2009 to 11.58% in 2012, past year prevalence increased from 2.97% to 4.29%, and past month prevalence increased from 1.00% to 1.62% (Hynes, Demarco, Araneda & Cumsille, 2015).

Tramadol use

Tramadol is a synthetic (man-made) pain reliever (analgesic). Researchers and doctors seem not know the exact mechanism of action of tramadol, but it is similar to morphine. Like morphine, tramadol binds to receptors in the brain (narcotic or opioid receptors) that are important for

transmitting the sensation of pain from throughout the body to the brain (Elliason, Sandow, Asechaab, Kpangkpari, & Asiaktiwen, 2018). According to Elliason, Sandow, Asechaab, Kpangkpari and Asiaktiwen (2018), there are many different forms, strengths and brands of tramadol. Some are immediate release formulations that start working quickly to ease the pain, while others are sustained or delayed release thus releasing the active moiety, tramadol more slowly, over several hours, to provide a constant and more even pain control.

In a statement copied to Joy News, the Pharmaceutical Society of Ghana stated that "the strengths approved for use in Ghana by the FDA are the 50mg and 100mg oral capsules," not 200mg/250mg as it has found to be circulating in markets in the country (Pharmaceutical Society of Ghana, 2017). Recently, Ghana News Agency (2019) reported that Food and Substances Authority (FDA) has decried the increasing use of Tramadol, a pain reliever, among the youth and called for concerted effort by stakeholders to curb the trend. Tramadol is a prescription only medicine used to treat moderate to severe pain. When taken, it works on the nervous system and the brain to reduce the feeling of pain.

Tramadol, classified as a weak opioid, with an analgesic effect similar to that of codeine, has evoked increasing concern for the risk of developing tramadol dependence (Babalonis, Lofwall, Nuzzo, Siegel, & Walsh, 2013) and a risk of serious adverse reactions, including epileptic seizures and fatal intoxications (Randall & Crane, 2014). Data from the UK have associated tramadol misuse with risk-taking behavior rather than with marginalization and other addictive disorders (Winstock, Borschmann, & Bell, 2014). In

Sweden, Richert and Johnson (2013) investigated the illicit use of buprenorphine and methadone among adolescents and young adults and concluded that benzodiazepines and tramadol were used by adolescents to a far greater extent, indicating that tramadol misuse may have increased during the past few years. Data from police authorities in Sweden have shown that tramadol is the second most common seized pharmaceutical substance on the substance scene nationwide in Sweden (Winstock, Borschmann, & Bell, 2014) which lends support to the assumption that the tramadol used in this milieu comes from other sources than prescription. In addition, Tjaderborn, Jonsson, Sandstrom, Ahlner, and Hagg (2016) found that tramadol was the third most common pharmaceutical substance among young substance-impaired drivers with mixed substance use, intoxicated with non-prescribed substances.

An investigation among youth in Wassa Amenfi in Ghana by Elliason, Sandow, Asechaab, Kpangkpari and Asiaktiwen (2018) revealed that Data per the (53.4%) of those youth respondents who have ever used tramadol said they have been using tramadol for 1-3 years, (29.2%) 5-6 years, (12%) 4-6 months and the remaining (5.4%) 1-3 months. Data obtained from table 10 found that majority (62.3%) of the respondents mostly take tramadol along with alcoholic beverage, (29%) indicated they add tramadol to energy drink and take, just few (8.7%) of the respondents swallow the tramadol with water. Strangely, it was further indicated by respondents that they sometimes use tramadol for enema as a way of preventing stomach upsets (Elliason, Sandow, Asechaab, Kpangkpari & Asiaktiwen, 2018).

Gender Difference in Substance Use

Although the extent of illicit substance use among men and women varies from country to country and in terms of the substances used, generally, men are two to three times more likely than women to have used an illicit substance. While there are varying regional trends in the extent of illicit substance use, overall global prevalence of substance use is considered to be stable (Gabriel, Muasya, Mwangi, Ewoi, & Andati, 2016). A comparison of the mean AADIS score between males (M = 25.28, SD = 16.28) and females s(M = 8.78, SD = 14.25) within the sample revealed significant differences in gender t (240) = 68.105, p less than .001. The analysis revealed AADIS mean score of the female students in the study was significantly lower than male students. The results of the present study show a significant difference in gender with greater use of alcohol and substances in males than females (Nkyi, 2014).

To Gabriel, Muasya, Mwangi, Ewoi, and Andati (2016), this is based on the prevalence rates of any substance use among males and females reported to the United Nations Office on Substances and Crime (UNODC) by Member States through the annual report questionnaire. Tshitangano and Tosin (2016) in a study among adolescent students in South Africa, using survey method by administering questionnaire, it was revealed that the majority of the male students (94%) said they had never used substances, and a very few (6%) attested to have used substances such as cigarettes, substances, marijuana (marijuana or ganja) etc. Similarly, the majority of the female learners (98%) said ‘no’ when asked if they had ever used substances, whilst a very few (2%) said they had used substances. Meanwhile, the

majority (67%) of the male students started using substances between the age of 13 to 15 years, whereas the female students mostly began substance use between the age of 16 to 18 years (33%).

On continual usage, surprisingly, the majority of the male students (63%) said they were still using substances, and a few (37%) said they were no longer using them, whereas all the female learners said they had stopped using substances (Tshitangano & Tosin, 2016). When further asked if they have ever tried to stop substance use and failed, a few (37%) of the male learners said 'yes' and most (63%) said 'no'. Meanwhile, only 50% (n = 1) of the female learners attested to have tried to stop substance use but failed and also only 50% (n = 1) said 'no' to this question (Tshitangano & Tosin, 2016).

According to Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif, and Chughtai, (2015), statistics by United State of America, men are more at risk for developing a substance dependency like alcoholism; women seem to be more vulnerable to becoming addicted to alcohol at much lower amounts of alcohol consumptions. There are many social and ethical issues surrounding the use and use of substances. These issues are made complex particularly because of conflicting values concerning substances use within modern societies. Values may be influenced by multiple factors including social, religious and personals views (Zaman, Razzaq, Hassan, Qureshi, Ijaz, Hanif, & Chughtai, 2015).

Measures to Curb Substance Use

The use of substances in Africa according to Gabriel, Muasya, Mwangi, Ewoi, and Andati (2016) is nevertheless escalating rapidly from marijuana use to the more dangerous substances and from limited groups of

substance users to a wider range of people using substances. The most common and available substance of use is still marijuana, which is known to be a contributing factor to the occurrence of a schizophrenic-like psychosis. The trafficking in and use of cocaine and heroin are the most recent developments in some African countries that had had no previous experience with these substances.

Chukwu, Pius, Fiase, Haruna, Terkuma, and Chinyere (2017) in their study among 220 senior high students revealed that the students suggested many ways that could be used to control substance use among the young generation. The findings were that, 31 (14.1%) believed placing Ban on Over the counter substance will be a great strategy, 45 (20.5%) believed awareness creation on the dangers of substance/substance use could be a preventive strategy. However, 70 (31.8%) respondents suggested the institution of early detection programs in schools, 62 (28.2%) say strict monitoring of pharmaceutical shops/chemists around communities will curb the problem.

Chapter Summary

Literature was reviewed extensively on the key concepts such as alcohol, cigarette, marijuana and tramadol. Empirical review was based on prevalence of the indicated substance among high school. Varied revelations were recorded, however, everything showed that substance use was prevalent among students in the Senior High Schools in the Berekum Municipality.

CHAPTER THREE

RESEARCH METHODS

Overview

This chapter presents the research design, study area, research population, sample and sampling procedure, research instrument, data collection procedure and data analysis procedure.

Research Design

Research design is a blueprint to every study. It serves as a foundation in which the study develops. According to Mugenda and Mugenda (2017), research design is a systematic approach that a researcher uses to conduct a scientific study. It is the overall synchronization of identified components and data resulting in a plausible outcome. The study employed descriptive survey design. The design was chosen because it allowed the researcher to investigate the prevalence of substance use among students. Again, the design presents researchers the opportunity to report situations emanating from investigations without necessarily manipulating any variable. With this design, experimentation is devoid and the current find appropriate than equally important designs. To Burns and Grove (2009), descriptive survey design was used because it has the advantage of producing good responses from a wide range of people and provides a picture of a situation as it naturally occurs or happens.

The study adopted the quantitative approach. The quantitative approach was adopted because questionnaire was the main data collection

instrument and findings were reported using numbers. According to Sekaran and Bougie (2010), quantitative research relies on deductive reasoning. Quantitative approach makes use of variety of quantitative analysis techniques that range from providing simple descriptive of the variables involved, to establishing statistical relationships among variables through complex statistical modelling (Saunders, Lewis & Thornhill, 2009).

Population

The study was about Senior High School Students in the Bekwai Municipality. There were 5,215 students from all the Public Senior High School Students located within the Municipality. Burns and Grove (2009) define population as the entire set of individuals that meet the sampling criteria for a study. A research population is generally a large collection of individuals or objects that is the main focus of a scientific query. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. Table 1 presents the population of senior high schools in the Bekwai Munincipality and the number of respondents sampled from each school.

Table 1: *Population with Proportions of the Selected Schools in the Bekwai Municipality (n=475)*

Schools	Population	%	Sample Size
SDA S.H.S	1353	26	124
OPONG MEMORIAL S.H.S	1121	21	100
WESLEY S.H.S.	965	19	89
ST. JOSEPH S.H.S.	911	17	81
OFOASE KOKOBEN S.H.S.	865	17	81
Total	5,215	100	475

Source: Bekwai Municipal-Ghana Education Service Data (2017/2018)

Sampling Procedures

The sample size was 475 as 9 percent of the population drawn from the various schools based on Ary, Jacobs, Razavieh, and Sorensen (2009) view that 5 to 10 percent of a population can serve as a sample for a study. Sample size in research studies represents a portion of the population that bear similar features with the population and could be used as basis to make generalization onto the population the sample was drawn. Polit, Beck, and Hungler (2010) asserts that, sampling is the process of selecting respondents who are representative of the population being studied. In other words, sampling can be defined as the process of selecting a portion of the population to represent the entire population. The study will employ the following sampling techniques:

Census Sampling Procedure: The census technique was used to sample all five (5) senior high schools in the Bekwai Municipality. The basis for the choice of census was that the schools were not many and per survey, the researcher could reach out to all for the study. According to U.N. (2008), census is the procedure of systematically acquiring and recording information about all the members of a given population. According to Umar (2013), census sampling method refers to the complete enumeration of a universe and may be a place, a group of people or a specific locality through which data is collected. This method is indispensable in some cases like this due to the population but very hefty in some other cases because it is believed to be costly and time consuming (Umar, 2013).

Stratified Sampling Procedure: The stratified technique was used to put the various schools into proportions due to population difference among the

schools. Again, there was a need to compare groups in the study so the choice of the procedure was appropriate as it allowed for a fair representation of the compared groups. Shahrokh and Dougherty (2014) defined stratified sampling as the process of dividing members of the population into homogeneous subgroups before sampling. The strata should be mutually exclusive where every element in the population must be assigned to only one stratum. The strata should also be collectively exhaustive and no population element can be excluded.

Systematic Sampling Procedure: Finally, the systematic technique was used in selecting cases for the study. The choice of systematic sampling was to give every respondent the opportunity to be part of the study. This is possible after identifying a kth term of 11 (5215/475=11) from the population and sample, in which the kth term becomes the determining condition of getting someone to be part of a study. In each school, students were selected by randomly selecting one respondent and subsequently select others the 11^{th} respondent in a roll. According to Kabiru and Njenga (2009), systematic sampling is a probability sampling method where the elements are chosen from a target population by selecting a random starting point and selecting other members after a fixed ‘sampling interval.

Data Collection Instruments

The instrument used for the data collection was an adapted 28-item 1999 Youth Risk Behaviour Survey (YRBS) with reliability coefficient of .91 by Center for Disease Control (CDC) (1999). The instrument contained four sub-sections namely alcohol (5-items, α .76), cigarette (13-items, α .84), marijuana (4-items, α .87) and tramadol (6-items, α .77). The original

instrument contained 72-items that cut across various risk behaviours that were not part of the study criterion so they were ignored. Again, the component of cocaine was replaced with tramadol because tramadol has been a topical issue in Ghana in recent times than cocaine. The items did not carry uniform scoring structure because different response set were offered for each item. The items on the questionnaire contained the stem and options that response set that respondents could choose.

Validity and Reliability of the Research Instrument

The adapted questionnaire was given to my supervisors to make their inputs and offer suggestions because the researcher is in the known that they are academics and are informed in research studies. After this, the instrument was pre-tested among 40 senior high school students of T.I. Ahmadiyya Senior High School at Adansi North to establish its internal consistency (.78) but the final study produced a reliability coefficient of .81. Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from various types of questionnaires or scales. The higher the score, the more reliable the generated scale is (Delafrooz, Paim & Khatibi, 2009). According to Ritter (2010), Cronbach alpha values ranging from the positive direction and .70 above are trusted to indicating high level of consistency and are considered in making decisions.

Ethical Considerations

Permission was sought from authorities in the schools while the purpose and significance of the research was clearly explained to the respondents and the authorities. Before the data collection, the respondents were constantly assured of anonymity by asking them not to write their names

or anything that could reveal their identity. Again, information they provided was kept confidential and devoid of third party access. Respondents were made aware that their participation was voluntary and that they had the freedom to withdraw from the research during the study period. Ethically, the researcher sought permission from the Department of Guidance and Counselling in the University of Cape Coast as well ensured Institutional Review Board Clearance was sought before data collection.

Data Collection Procedure

The researcher used two (2) weeks to collecting the data with the help of two (2) research assistants that were recruited by the researcher. The criteria for selecting the assistants was MPhil certificate holders. This is because the researcher was convinced they are a bit exposed to research related processes like data collection. The researcher employed their services because they equally possessed useful data-collection skills. The researcher explained the instrument to the assistances. The assistance were also schooled on the data collections procedure and the techniques to be used in collecting the data. The researcher and the assistants visited each of the selected schools on two (2) occasions to administer the questionnaire. The filled questionnaires were retrieved immediately the respondents completed them.

Data Processing and Analysis

The data gathered was sorted, ordered and coded to aid analysis. The quantitative data was anaylsed with descriptive and inferential statistics. Specifically, data for research question was analysed using frequencies and percentages. Data on hypothesis 1 was tested using independent samples t-test. Data on hypothesis 2 was tested using One-Way ANOVA.

CHAPTER FOUR

RESULTS AND DISCUSSION

Overview

This chapter covers the analysis, presentation and interpretation of the findings from this study. The purpose of the study was to examine prevalence of alcohol, cigarette, and marijuana and tramadol use among Senior High School students in the Bekwai Municipality. The analysis and interpretation of data were carried out based on the results of the research question and hypotheses set for the study. The analysis was based on the 100% return data obtained from 475 students selected for the study. The data were analysed using descriptive statistics (frequencies and percentages) inferential statistics (Mann Whitney U and One-Way ANOVA). The first part of this chapter described the demographic characteristics of the respondents. In the second part, the research findings are presented based on the research question and hypotheses formulated for the study. The following research questions and hypotheses guided the study:

Demographic Characteristics of the Students

The demographic aspect of the questionnaire was to elicit the personal information of the students. These demographic data include the student's gender, students' age, their school and their class level. Frequencies and percentages were used for the analysis. Tables 1, 2 and 3 present the demographic information of the respondents:

Table 2: *Distribution of Respondents by Age Groups*

Age Groups	Frequency	Percentage
12-15	62	13
16-18	368	77
19-22	45	10
Total	475	100

Source: Field Data (2019)

Table 2 shows the age groupings of the respondents. This was in three (3) groups namely 12-15 with a frequency count of 62 (13.0%), 16-18 with a frequency count of 368 (77.0%) and 19-22 with a frequency count of 45 (10.0%). It can be deduced that respondents within 16-18 were the majority, followed by respondents within 12-15 and respondents within 19-22 were the minority.

Table 3: *Gender Distribution of Students*

Gender	Frequency	Percentage
Male	249	52.0
Female	226	48.0
Total	475	100.0

Source: Field Data (2019)

Table 3 showed results of the respondents based on their gender. It is evident that male respondents were the majority with a frequency count of 249 (52.0%) against female respondents with a frequency count of 226 (48.0%). It is concluded that the sample was not equal in terms of gender.

Table 4: *Class Level Distribution of Students*

Class Level	Frequency	Percentage
S.H.S 1	273	58.0
S.H.S 3	198	42.0
Total	475	100.0

Source: Field Data (2019)

Table 3 indicates the results of the demographic information based on class level. It showed that S.H.S. 1 respondents were more with 273 (58.0%) against S.H.S. 3 students with a frequency count of 198 (42.0%). The disparity could be because of the fact that, the S.H.S. 1 respondents comprises two (2) streams of students (green and gold track). This disparity in numbers could be as a result of some respondents in S.H.S. 3 dropping out of school.

Analysis of Main Data

Research Question: What is the prevalence of substance use (alcohol, cigarette, marijuana and tramadol) among students in the Bekwai Municipality?

Alcohol use: This facet of the research question sought to solicit from respondents how often they use alcohol. Six items with varied response set on the questionnaire were used for the study. Summarily, it was indicated that respondents used alcohol and the situation was becoming a norm among the growing students. For example, about 10.9% of the respondents indicated that they drank alcohol in one or two days while 4.0% to 8.6% of the respondents indicated they took alcohol around ages of 13 to 17 years old. Again, about 8.6% of the respondents indicated that they took alcohol in one or two days while 6.1% of the respondents indicated, they took alcohol in the last five days

(Appendix C). The prevalence rate of alcohol usage among the respondents was 17.4%, which varied based on frequency, duration and age of initiation. Although the prevalence rate was a bit low, yet it is a concern because such behaviours among students would add nothing good to students' life but put them at risk.

Cigarette use: This aspect of the work sought to find out from the respondents how often they use cigarette (cigarette). In the analyses, 13-items on the questionnaire were used. The response set were varied but reported descriptively with frequencies and percentages. The study revealed that respondents smoke cigarette. The percentage is an average of the composite and as such, it reflects the duration, frequency and consistency of the use of cigarette among the respondents. For instance, 6.5% of the respondents indicated they have smoked and 2.3% of the respondents indicated they smoked during ages of 15 or 16 years. Also, 3.6% of the respondents indicated they bought cigarette at the least convenient store and about 15.2% of the respondents indicated those who sold cigarette to them never asked of their ages. Furthermore, 8.4% of the respondents indicated they had no brand of cigarette they engage while 31.2% of the respondents indicated they ever tried quitting smoking (Appendix C). It can therefore be said that, the overall prevalence rate of 11.1% was low in terms of cigarette use but efforts must be put in place to curb the potential escalation of the situation.

Marijuana use: The purpose of this section was to enquire from the respondents how they use marijuana. 4-items on the questionnaire was used for the study and the response set was varied for the various items. The scoring was based on frequency and percentages where an average of the

composite percentage response was used as basis for describing the prevalence. The study revealed that the respondents indicated they use marijuana and their usage trend varies based on frequency and duration. For instance, about 2.7% of the respondents indicated they have smoked marijuana in their lifetime while 1.9% of the respondents indicated they smoked marijuana when they were 8 years and younger. Again, about 2.5% of the respondents indicated they marijuana around 10 to 19 times in the past 30 days while 2.5% indicated they smoked marijuana in one or two times daily in the last 30 days on school property (Appendix C). In general, the prevalence rate of 7.5% was minimal comparing the numbers but management of schools should not relent on their efforts to control the few. Again, it is possible the respondents might hibernate and failed to tell the true story which might have contributed to the revelation.

T**ramadol use**: The goal of the section was to find out how tramadol is used among respondents. In the attempt to meet the objective, 6-items on the research questionnaire were used. The response set for the items were varied and scored descriptively using frequencies and percentages where the average for the composite of responses was used as basis for further discussion. The study revealed that the respondents affirmed that they use tramadol. For instance, about 4.8% of the respondent indicated they ever used tramadol one or two times in their life while about 3.2% of the respondents indicated they have ever mixed tramadol with other contents within one or two times in their life. Again, 3.4% of the respondents indicated they have drunk tramadol one or two times in order to get high, while 4.6% indicated they took tramadol based on doctors' prescription on one or two occasions. Furthermore, about

5.7% of the respondents indicated they injected themselves with substances like tramadol into their body for at least ones while about 9.7% of the respondents indicated they have tramadol on their various campuses (Appendix C). Although the overall prevalence rate of 6.9% looks small, yet it is important to make efforts towards total eradication of substance use among youth. Tramadol use, for instance has been topical the last few years and calls for concerted effort to control it so that the future of the young generation can be protected.

Substances use based on Prevalence Rank

As revealed, it is evident that there are differences in terms of the rate at which students use substances such as alcohol, cigarette, marijuana and tramadol. Table 5 presents the information based on proportional rank:

Table 5: *Substances use based on Prevalence Rank*

Substance	Proportion	Rank
Alcohol	17.4%	1st
Cigarette	11.1%	2nd
Tramadol	7.5%	3rd
Marijuana	6.9%	4th

Source: Field Survey (2019)

Table 5 presents information on the respondents based on ranks, using different substances. It was revealed that alcohol was the most used substance with 17.4%, followed by cigarette with 11.1%, followed by tramadol with 7.5% and marijuana with 6.9%.

Research Hypothesis One

H0: There is no statistical significant gender difference in terms of substance use among S.H.S students in the Bekwai Municipality.

The objective of the hypothesis check whether there exists any significant difference in substance use among students based on their gender. Exploring possible inferential statistical tools, the independent samples t-test was deemed appropriate. Table 6 presents information on the Tests of Normality:

Table 6: *Tests of Normality*

		Shapiro-Wilk			Mean Rank	
Test Variable	Gender	Statistic	df	Sig.	Mean R	Sum of R
Prevalence Rate	Male	.448	249	.000	240.49	59882.00
	Female	.341	226	.000	235.26	53168.00

Source: Field Survey (2019)

Table 6 indicates results on normality test and it is evident that the data violated the assumptions using the Shapiro-Wilk. Thus, the sig. value for both males and females was less than the alpha value (p=.000), which implies that the normality test was significant at .05 alpha level. The results indicate that data did not meet the demands of independent samples t-test as a parametric test tool, therefore, the non-parametric counterpart, Mann Whitney U Test was considered.

To check for differences, Tables 7 presents Test Statistics for Mann Whitney U:

Table 7: *Test Statistics*

Variable	Substance Use Prevalence
Mann-Whitney U	27517.000
Wilcoxon W	53168.000
Z	-.826
Asymp. Sig. (2-tailed)	.409

Source: Field Data (2019) Not significant, p>0.05

Table 7 displays results on the Test Statistics, and it can be deduced that there was no statistical significant difference between male and female respondents in terms of substance use prevalence. Thus, Mann-Whitney U test showed that there was no significant difference (Z=-.826, U = 27517, p = .409) between male and female respondents based on prevalence rate in substance use (alcohol, cigarette, marijuana and tramadol). Male respondents had a mean rank of 240.49, while female respondents had a mean rank of 235.26. Based on the findings, the null hypothesis was not rejected because no difference existed between the variables, however, any little difference observed might occur by chance or error.

Research Hypothesis Two

H0: There is no statistical significant age difference in terms of substance use among S.H.S students in the Bekwai Municipality.

The hypothesis was about age and prevalence of substance use among the respondents. The age groups were three (3) and as such, One-Way ANOVA was deemed appropriate. However, upon the testing for assumptions necessarily ANOVA, it was indicated that the data violated the assumptions,

thus, unsuitable for One-Way ANOVA. Table 8 presents the normality test indicating the violation:

Table 8: *Tests of Normality*

		Shapiro-Wilk		
	Age Group	Statistic	df	Sig.
Substance use	12-15	.367	62	.000
	16-18	.400	368	.000
	19-22	.363	45	.000

Source: Field Data (2019)

The Sig. value of the Shapiro-Wilk Test is less than the 0.05. Literature says that, if it is below 0.05 then the data significantly deviate from a normal distribution. In terms of ANOVA, it is indicated that it can stand the test of data deviation due to its robustness, therefore, it was computed. Table 9 presents the Test of Homogeneity:

Table 9: *Results of Homogeneity of Variances Test*

Levene Statistic	df1	df2	Sig.
.237	2	473	.789

Source: Field Data (2019) Significant, p>0.05

Table 9 presents the results for test of homogeneity. It was evident from the Table 9 that the significant value (Sig) for Levene' test is .789 which is greater than the alpha value of 0.05. This implies that equal variances were assumed among the age categories. Based on these results, the ANOVA was reported. Table 10 presents the ANOVA results:

Table 10: *Summary of One-way Analysis of Variance (ANOVA) Results*

Substance usage	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.079	2	.040	.449	.638
Within Groups	39.780	473	.088		
Total	39.859	475			

Source: Field Data (2019) Not significant, p>0.05

Table 10 shows whether the overall *F* ratio for the one-way ANOVA between-groups analysis of variance (ANOVA) is significant or not. From the analysis, it was noted that the F-ratio (.449) is not significant at 0.05 (*p* =.638) alpha level which implies that there was no significant difference in ages among the age groups. The ANOVA F-ratio of *F* (2, 473) =.449, p=.05, n=475, Sig. = .638) gives statistical evidence to that effect. It was concluded that no statistical difference existed among age groups 12-15, 16-18 and 19-22 in terms of substance use prevalence. Therefore, the hypothesis that there is no statistical difference among age groups in terms of substance usage was not rejected.

Discussion

Prevalence of Substance Use

Alcohol use

The findings revealed that in terms of alcohol, 17.4% of the students reported they use alcohol. The findings corroborate a study revelation by Kotina, Sawant, and Kokiwar (2016) that among substances used by students, alcohol intake was high showing prevalence of 48.54%, which is similar to the current study revelation. However, the findings conflict similar past studies, for instance, a study among adolescent students in Ghana by Nkyi (2014)

revealed about 76.1% report that they have never used alcohol and this is phenomenal. Statistically, the rate of prevalence is low per what is reported but there is more to be done to the revelation. Looking at the ages and stage of education of such users of alcohol, there is an anticipated problem because it is possible that they could influence colleagues to engage in alcoholism or even engage in other acts that may go against societal values and norms. This go in line with Brandao, Correia, de Farias, Antunes, and da Silva (2011) assertion that alcohol use is broadly reported among students and they seem to consume more alcohol than their counterparts in the general population. The findings corroborate studies such as Francis, Grosskurth, Changalucha, Kapiga, and Weiss (2014) that reported current alcohol use in 17 studies, where students indicated reported the use of alcohol between a period of 1-5 years. However, the blame cannot be put on to those who use or affected but to the societies, and students' lives. As it holds, it is possible there is breakage in the moral fiber, hence moral decadence.

Cigarette use

In an attempt to investigate the prevalence of cigarette use among senior high school students in the Bekwai Municipality. The study revealed that about 11.1% of the respondents accepted that they use cigarette. The study findings confirms that of Bassiony, El-Deen, Yousef, Raya, Abdel-Ghani, El-Gohari, and Atwa (2015), where 16.7% of the student respondents indicated they use more than one substance (poly-substance) as two-thirds of the respondents started with tramadol as the first substance after cigarette smoking as a form of graduating from one type of substance to the other.

Also, the findings of the current study affirmed Kotina, Sawant, and Kokiwar (2016) study revelation that showed that cigarette smoking (23.36%) and cigarette (8.76%) use were prevalent among the students investigated. Majority of the respondents indicated they were not using cigarette or cigarette but it calls for concern as the future usage could predict other complementary substance usage. Corroborated by Global Youth Cigarette Survey (GYTS) in 2001, in five Arab countries in the Middle East, it was revealed that 10% of youths (13-15 years of age) use different kinds of cigarette products (Maziak, Ward, Afifi-Soweid, & Eissenberg, 2004). Again, the few who are using could influence others to join the bandwagon is using and possibly bring their future aspirations to jeopardy. The cigarette smoking behaviour among students could be caused by influence due to the boarding homes. Unsurprisingly, Nasser, Salah, Regasa, Alhakimy, and Zhang (2018) study among students in Yemen confirms this as it revealed that the prevalence of cigarette smoking was prevalent among all students but was higher among students who were living in dormitories than those who were living with their families. Similarly, it was higher among students from low-income families compared to those from average and high-income ones. The total prevalence of smoking among students was 12.4% (Nasser, Salah, Regasa, Alhakimy & Zhang, 2018).

Furthermore, the researcher tried to find out the prevalence of marijuana use among senior high school students in the Bekwai Municipality. The study revealed that 6.9% of the respondents indicated they use marijuana. The finding is appalling despite the low rate. The study findings reflect a report by the United Nations (2014) concerning the prevalence rate of marijuana use among students. The report indicated that in Canada, in 2008

and 2009 about 2.3% of high school used marijuana and 1.4% had used it once in the past month. It indicated that in South Africa, marijuana use among students aged 13 to 22 years was 6.2% and in Kenya in 2007 marijuana use among students aged 15 to 17 years was 1.1%.

Marijuana is classified as a hard substance and when found with it one would be prosecuted. It access and usage are condemned internationally. The revelation speaks ill about the fortunes of the younger generation because marijuana has the potential to negatively alternate one consciousness when taken. For instance, in a study among Canadian students by Sampasa-Kanyinga, Hamilton, LeBlanc, and Chaput (2018) revealed the prevalence rate of marijuana was deafening as 21.5% of students reported using marijuana at least once in the previous year. However, fewer students reported using marijuana on a monthly and daily basis. Similar studies such as (Allen & Holder, 2014; Hynes, Demarco, Araneda, and Cumsille (2015) and Johnston, O'Malley, Bachman, and Schulenberg (2011) have found similar findings as the prevalence of marijuana use at least once in the last month to range from 1.5% to 32.6% among South and North American students.

Finally, this area of research question one sought to identify the trend of tramadol use among senior high school students in the Bekwai Municipality. The study revealed that 7.5% of the respondents agreed they use tramadol. However, the rate of tramadol prevalence is not high but it is in the ascendancy in the past few years. The study revelation supports a National Survey Report in Egypt where it revealed that 9.6% of Egyptians high school students used substances such as tramadol at least once during their lives (Hamdi, Gawad, Khoweiled, Sidrak, Amer, Mamdouh, Fathi, & Loza, 2013).

In a similar report, it was indicated that tramadol use has dramatically increased in Egypt since 2008. The trend has led to many admissions to addiction treatment centers (Abolmaged, Kodera, Okasha, Gawad, & Rawson, 2013).

The youth in Ghana, for the past few years, have been into tramadol usage with explanations that they take it to boost their strengths in endeavors they find themselves. This support Richert and Johnson (2013), Winstock, Borschmann, and Bell (2014) and Tjaderborn, Jonsson, Sandstrom, Ahlner, and Hagg (2016) study findings that illicit use of buprenorphine and methadone among adolescents and young adults and concluded that benzodiazepines and tramadol were used by adolescents to a far greater extent, indicating that tramadol misuse may have increased during the past few years. Information from police authorities in Sweden have shown that tramadol is the second most common seized pharmaceutical substance on the substance scene nationwide in Sweden. In addition, tramadol was found to be third most common pharmaceutical substance among young substance-impaired drivers with mixed substance use, intoxicated with non-prescribed substances. However, the use of tramadol with medical prescription is allowed and its usage without prescription is illegal. Noting this, it evident students use tramadol without prescription or with no apparent reason attached to the usage. Therefore, there is need to education the use and as well implore legal modalities to control the situation before it becomes worse among the students.

Research Hypothesis One

The hypothesis was meant to test if there was any or not statistical significant difference between male female senior school students in the Bekwai Municipality concerning substance use (alcohol, cigarette, marijuana and tramadol). The study revealed that there was no statistical difference between the compared groups. Thus, Mann-Whitney U test (Z=-.826, U = 27517, p = .409) and male a mean rank was not different from female mean rank of 235.26. The results of the current study debunked a similar conducted in Ghana among senior high school students by Nkyi (2014). Nkyi's study revealed female students in the study was significantly lower than male students in terms of substance use males with M = 25.28, SD = 16.28 against and females with M = 8.78, SD = 14.25 within the sample revealed significant differences as the independent t-test results showed, t (240) = 68.105, p less than .001. The study further corroborates Tshitangano and Tosin (2016) study findings that majority of the male students were still using substances than female students.

Research Hypothesis Two

The hypothesis was test if there was any or not significant difference among the three (3) age groups. The study revealed there was no statistical significant difference existed among the categorized aged groups. As the ANOVA F-ratio of *F* (2, 473) =.449, p=.05, n=475, Sig. = .638). It was concluded that no difference existed among age groups 12-15, 16-18 and 19-22 in terms of substance use prevalence (alcohol, cigarette, marijuana and tramadol). The current study findings disconfirms that of Kotina, Sawant, and Kokiwar (2016) which revealed that prevalence rate of substance use is more

in the age groups where students aged between 13-15 years showed prevalence of 33.34%, followed by 27.78% at 10-12 years of age, followed by 16-17 years (21%). Again, the findings refute that of U.N (2014) report that differences exist in age groups when it comes to substance use among students. For instance, in South Africa, the use of heroin amongst age 13 to 22 years was 6.2%, in Kenya in 2007 revealed that 1.1% of adolescents of aged 15 to 17 years was different from other compared age groups (United Nations, 2014).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

This chapter presents a summary of the research findings, the conclusion and the recommendations. The study was about prevalence of alcohol, cigarette, marijuana and tramadol use among senior high school students in the bekwai municipality, Ghana. The study employed a descriptive survey research design with a quantitative approach. The study used a sample of 475 respondents through census, stratified and systematic sampling procedures. The used for data collection was an adapted 28-item instrument named Youth Risk Behaviour Survey (YRBS) with reliability coefficient of .91 developed by Center for Disease Control (CDC) (1999). The study dwelled on one (1) research question and two (2) hypotheses. Data was collected and was analysed quantitatively using descriptive statistics (frequencies and percentages) and inferential statistics (Mann-Whitney U and One-ANOVA).

Summary of Findings

The findings was about prevalence of alcohol, cigarette, marijuana and tramadol use among students. The study revealed that respondents used alcohol. The prevalence of alcohol usage among the respondents as revealed by the study was varied based on frequency, duration and as well age of initiation.

Again, the prevalence of cigarette or cigarette use among students and the study revealed that respondents smoke cigarette. The percentage is an

average of the composite and as such, it reflects the duration, frequency and consistency of the use of cigarette among the respondents.

The prevalence of marijuana use among students and the study revealed that respondents indicated they use marijuana and their usage trend varies based on frequency and duration.

The prevalence of marijuana use among students and the study revealed respondents affirmed that they use tramadol. Although the number looks small, yet it is important to make efforts towards total eradication of substance use among youth.

Hypothesis one revealed that there was no statistical significant difference existed between male and female respondents in terms of prevalence of substance use. Male respondents had a mean rank of 240.49, while female respondents had a mean rank of 235.26 but were irrelevant.

Hypothesis two revealed that there was no statistical difference among age groups in terms of substance use prevalence.

Conclusions

Based on the findings concerning prevalence of substance use, the following conclusions were drawn:

Alcohol prevalence rate among senior high school students in the Bekwai Municipality was low with 17.4%. Although the prevalence rate was a bit low, it calls for concern as such behaviours among students would add nothing good to students' life than bad.

Cigarette or cigarette use among senior high school students in the Bekwai Municipality was low with 11.1%. Despite the fact that prevalence

rate was low in terms of cigarette use, efforts must be put in place to curb the potential escalation of the situation.

Marijuana use among senior high school students in the Bekwai Municipality was low with 7.5%. In as much as the prevalence rate was minimal, management of schools should put in efforts to control the few and possibly the low prevalence could be that respondents might have hibernated and failed to tell the true story.

Tramadol use among senior high school students in the Bekwai Municipality was low with 6.9%. However, it is important that efforts are made towards total eradication of substance use among youth. Tramadol use for instance has been topical the last few years and calls for concerted effort to control it so that the future of the young generation can be protected.

In terms of differences in gender and age concerning the prevalence of substance use among students, the study showed no difference in gender, as well as age of the respondents, which may be caused by the low prevalence.

Recommendations

There exist implications that hover around substance use in relation to the holistic development of students in general. It is important to note that substance uses have direct consequence on students as well the environment in which they may find themselves. Therefore, I recommend that:

Community based outreach programmes be organized by Social Welfare Organizations with support from interested Non-Governmental Organizations to sensitize students on the best in attitudes towards eradication of substance use among students in the Bekwai Municipality. This will help them understand how negative substance may be to their lives. This will go a

long way to help positively in developing these students comprehensively as they continue to interact with varied people in their various, schools, homes and communities.

Secondly, NGOs and the counselling centres of the senior high schools should organise programmes themed at taking students through ways that would help them live peacefully and harmoniously without being influenced towards substance use, irrespective of how such substance are praised. It is possible students become substance users out of curiosity and peer influence and this singular act would help give a long lasting disregard for substance by students in the Bekwai Municipality.

In addition, I recommend that counselling units in the senior high schools should organise consistent counselling sessions for students in schools and communities so that students can be taken through how to control innate and learned desires on substance use. This can be championed by the guidance and counselling coordinators of the various schools in the Bekwai Municipality.

Suggestion for Further Research

The researcher suggests that a study be conducted on teachers' perception of substance use among students. This would help bring to the fore whether what students tell are true reflection or otherwise.

In addition, the researchers suggest a study is conducted on the socio-economic background influence on substance use among affected students. This would help establish whether socio-economic background of students has a role to play in substance use among students.

In addition, the researcher suggests that a study be conducted on the perceived factors responsible for substance use among students.

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APPENDICES

APPENDIX A

Reliability

Reliability Statistics

Cronbach's Alpha	Number of Items
.909	28

APPENDIX B

Study Results

Research Question One

Have you ever tried cigarette smoking, even one or two puffs?

	Frequency	Valid Percent
Yes	31	6.5
No	444	93.5
Total	475	100.0

How old were you when you smoked a whole cigarette for the first time?

	Frequency	Valid Percent
I have never smoked a whole cigarette	432	90.9
8 years old or younger	6	1.3
9 or 10 years old	3	.7
11 or 12 years old	5	1.1
13 or 14 years old	8	1.6
15 or 16 years old	11	2.3
17 years old or older	10	2.1
Total	475	100.0

During the past 30 days, on how many days did you smoke cigarettes?

	Frequency	Percent
0 days	441	92.8
1 or 2 days	5	1.1
3 to 5 days	4	.8
6 to 9 days	7	1.5
10 to 19 days	8	1.7
20 to 29 days	4	.8
All 30 days	6	1.3
Total	475	100

During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

	Frequency	Percent
I did not smoke cigarettes during the past 30 days	426	89.7
I bought them in a store such as a convenience store, supermarket, or gas station	17	3.6
I bought them from a vending machine	7	1.5
I gave someone else money to buy them for me	9	1.9
I borrowed them from someone else	8	1.7
I stole them	2	.4
I got them some other way	6	1.3
Total	475	100.0

During the past 30 days, how did you usually get your own cigarettes?

	Frequency	Valid Percent
I did not smoke cigarettes during the past 30 days	426	89.7
I bought them in a store such as a convenience store, supermarket, or gas station	17	3.6
I bought them from a vending machine	7	1.5
I gave someone else money to buy them for me	9	1.9
I borrowed them from someone else	8	1.7
I stole them	2	.4
I got them some other way	6	1.3
Total	475	100.0

When you bought cigarettes in a store during the past 30 days, were you ever asked to show proof of age?

		Frequency	Valid Percent
	I did not buy cigarettes in a store during the past 30 days	366	77.1
	Yes	37	7.8
	No	72	15.2
	Total	475	100.0

During the past 30 days, on how many days did you smoke cigarettes on school property?

		Frequency	Valid Percent
Valid	0 days	442	93.1
	1 or 2 days	10	2.1
	3 to 5 days	6	1.3
	6 to 9 days	2	.4
	10 to 19 days	6	1.3
	20 to 29 days	3	.6
	All 30 days	6	1.3
	Total	475	100.0

During the past 30 days, what brand of cigarettes did you usually smoke?

		Frequency	Valid Percent
Valid	I did not smoke cigarettes during the past 30 days	409	86.1
	I do not have a usual brand	40	8.4
	Camel	7	1.5
	Newport	5	1.1
	Virginia Slims	3	.6
	GPC, Basic, or Doral	4	.8
	Some other brand	7	1.5
	Total	475	100.0

Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30 Days?

		Frequency	Valid Percent
Valid	Yes	38	8.0
	No	437	92.0
	Total	475	100.0

Have you ever tried **to quit** smoking cigarettes?

		Frequency	Valid Percent
Valid	Yes	148	31.2
	No	327	68.8
	Total	475	100.0

During the past 30 days, on how many days did you use **chewing cigarette or snuff**?

		Frequency	Valid Percent
Valid	0 days	435	91.6
	1 or 2 days	19	4.0
	3 to 5 days	6	1.3
	6 to 9 days	8	1.9
	10 to 19 days	1	.2
	20 to 29 days	2	.4
	All 30 days	4	.8
	Total	475	100.0

During the past 30 days, on how many days did you use **chewing cigarette or snuff on school property?**

		Frequency	Valid Percent
Valid	0 days	481	92.6
	1 or 2 days	13	2.7
	3 to 5 days	5	1.1
	6 to 9 days	6	1.3
	10 to 19 days	3	.6
	20 to 29 days	3	.6
	All 30 days	5	1.1
	Total	475	100.0

During the past 30 days, on how many days did you smoke **cigars?**

		Frequency	Valid Percent
Valid	0 days	445	93.7
	1 or 2 days	9	1.9
	3 to 5 days	9	1.9
	6 to 9 days	5	1.1
	10 to 19 days	4	.8
	20 to 29 days	1	.2
	All 30 days	2	.4
	Total	475	100.0

Research Question Two

During your life, on how many days have you had at least one drink of alcohol

		Frequency	Valid Percent
Valid	0 days	418	77.3
	1 or 2 days	52	10.9
	3 to 9 days	22	4.6
	10 to 19 days	10	2.1
	20 to 39 days	6	1.3
	40 to 99 days	8	1.7
	100 or more days	10	2.1
Total		475	100

How old were you when you had your first drink of alcohol other than a few sips?

	Frequency	Valid Percent
I have never had a drink of alcohol other than a few sips	335	70.5
8 years old or younger	18	3.8
9 or 10 years old	19	4.0
11 or 12 years old	8	1.7
13 or 14 years old	22	4.6
15 or 16 years old	32	6.7
17 years old or older	41	8.6
Total	475	100.0

During the past 30 days, on how many days did you have at least one drink of alcohol?

	Frequency	Valid Percent
0 days	387	81.5
1 or 2 days	41	8.6
3 to 5 days	22	4.6
6 to 9 days	12	2.5
10 to 19 days	7	1.5
20 to 29 days	5	.4
All 30 days	1	.2
Total	475	100

During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

	Frequency	Valid Percent
0 days	404	85.1
1 day	29	6.1
2 days	20	4.2
3 to 5 days	9	1.9
6 to 9 days	3	.6
10 to 19 days	6	1.3
20 or more days	4	.8
Total	475	100

During the past 30 days, on how many days did you have at least one drink of alcohol **on school property?**

		Frequency	Valid Percent
Valid	0 days	430	90.5
	1 or 2 days	20	4.2
	3 to 5 days	7	1.5
	6 to 9 days	11	2.3
	10 to 19 days	6	1.3
	All 30 days	1	.2
Total		475	100

Research Question Three

During your life, how many times have you used marijuana?

	Frequency	Valid Percent
0 days	439	92.4
1 or 2 days	13	2.7
3 to 9 days	11	2.3
10 to 19 days	7	1.5
20 to 39 days	2	.4
40 to 99 days	2	.4
100 or more days	1	.2
Total	475	100.0

How old were you when you tried marijuana for the first time?

	Frequency	Valid Percent
I have never tried marijuana	439	92.4
8 years old or younger	9	1.9
9 or 10 years old	6	1.3
11 or 12 years old	8	1.7
13 or 14 years old	2	.4
15 or 16 years old	8	1.8
17 years old or older	3	.6
Total	475	100.0

During the past 30 days, how many times did you use marijuana?

	Frequency	Valid Percent
0 times	441	92.8
1 or 2 times	8	1.7
3 to 9 times	10	2.1
10 to 19 times	12	2.5
20 to 39 times	2	.4
40 or more times	2	.4
Total	475	100.0

During the past 30 days, how many times did you use marijuana **on school property?**

	Frequency	Valid Percent
0 times	443	93.3
1 or 2 times	12	2.5
3 to 9 times	7	1.5
10 to 19 times	8	1.7
20 to 39 times	2	.4
40 or more times	3	.6
Total	475	100.0

Research Question Four

During your life, how many times have you used **any** form of tramadol?

	Frequency	Valid Percent
0 times	438	92.2
1 or 2 times	23	4.8
3 to 9 times	9	1.9
10 to 19 times	4	.8
20 to 39 times	1	.2
40 or more times	0	0
Total	475	100.0

During your life, how many times have you swallowed or mixed tramadol with any drink to get high?

	Frequency	Valid Percent
0 times	442	93.1
1 or 2 times	15	3.2
3 to 9 times	8	1.7
10 to 19 times	6	1.3
20 to 39 times	1	.2
40 or more times	3	.6
Total	475	100.0

During the past 30 days, how many times have you swallowed, drank any tramadol contents to get high?

	Frequency	Valid Percent
0 times	443	93.3
1 or 2 times	16	3.4
3 to 9 times	5	1.1
10 to 19 times	7	1.5
20 to 39 times	2	.4
40 or more times	3	.6
Total	475	100.0

During your life, how many times have you taken **tramadol** with doctor's prescription?

	Frequency	Valid Percent
0 times	441	92.8
1 or 2 times	22	4.6
3 to 9 times	8	1.7
10 to 19 times	6	1.3
20 to 39 times	3	.6
40 or more times	1	.2
Total	475	100.0

During your life, how many times have you used a needle to inject any **illegal** substance like tramadol into your body?

	Frequency	Valid Percent
Time	434	92.0
1 time	27	5.7
2 or more times	11	2.3
Total	475	100.0

During the past 12 months, has anyone offered, sold, or given you tramadol **on school property?**

	Frequency	Valid Percent
Yes	46	9.7
No	429	90.3
Total	475	100.0

APPENDIX C

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

FACULTY OF EDUCATIONAL FOUNDATIONS

DEPARTMENT OF GUIDANCE AND COUNSELING

Questionnaire for Senior High School Students

This survey is about substance use. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to develop better health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do. If you are not comfortable answering a question, just leave it blank.

The first 13 questions ask about cigarette use.

1. Have you ever tried cigarette smoking, even one or two puffs?

A. Yes B. No

2. How old were you when you smoked a whole cigarette for the first time?

A. I have never smoked a whole cigarette

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

3. During the past 30 days, on how many days did you smoke cigarettes?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

4. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

A. I did not smoke cigarettes during the past 30 days

B. Less than 1 cigarette per day

C. 1 cigarette per day

D. 2 to 5 cigarettes per day

E. 6 to 10 cigarettes per day

F. 11 to 20 cigarettes per day

G. More than 20 cigarettes per day

5. During the past 30 days, how did you usually get your own cigarettes? (Select only **one** response.)

A. I did not smoke cigarettes during the past 30 days

B. I bought them in a store such as a convenience store, supermarket, or gas station

C. I bought them from a vending machine

D. I gave someone else money to buy them for me

E. I borrowed them from someone else

F. I stole them

G. I got them some other way

6. When you bought cigarettes in a store during the past 30 days, were you ever asked to

show proof of age?

A. I did not buy cigarettes in a store during the past 30 days

B. Yes

C. No

7. During the past 30 days, on how many days did you smoke cigarettes **on school property**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

8. During the past 30 days, what brand of cigarettes did you usually smoke? (Select only **one** response.)

A. I did not smoke cigarettes during the past 30 days

B. I do not have a usual brand

C. Camel

D. Marlboro

E. Newport

F. Virginia Slims

G. GPC, Basic, or Doral

H. Some other brand

9. Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30

days?

A. Yes

B. No

10. Have you ever tried **to quit** smoking cigarettes?

A. Yes

B. No

11. During the past 30 days, on how many days did you use **chewing cigarette or snuff**, such as Redman, Levi Garrett, Beechnut, Skoal Bandits, or Copenhagen?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

12. During the past 30 days, on how many days did you use **chewing cigarette or snuff on school property**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

13. During the past 30 days, on how many days did you smoke **cigars, cigarillos, or little cigars**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

The next 5 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

14. During your life, on how many days have you had at least one drink of alcohol?

A. 0 days

B. 1 or 2 days

C. 3 to 9 days

D. 10 to 19 days

E. 20 to 39 days

F. 40 to 99 days

G. 100 or more days

15. How old were you when you had your first drink of alcohol other than a few sips?

A. I have never had a drink of alcohol other than a few sips

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

16. During the past 30 days, on how many days did you have at least one drink of alcohol?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

17. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a

row, that is, within a couple of hours?

A. 0 days

B. 1 day

C. 2 days

D. 3 to 5 days

E. 6 to 9 days

F. 10 to 19 days

G. 20 or more days

18. During the past 30 days, on how many days did you have at least one drink of alcohol **on school property**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

The next 4 questions ask about marijuana use. Marijuana also is called grass or pot.

19. During your life, how many times have you used marijuana?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 to 99 times

G. 100 or more times

20. How old were you when you tried marijuana for the first time?

A. I have never tried marijuana

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

21. During the past 30 days, how many times did you use marijuana?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

22. During the past 30 days, how many times did you use marijuana **on school property**?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

The next 6 questions ask about Tramadol.

23. During your life, how many times have you used **any** form of tramadol?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

24. During your life, how many times have you swallowed or mixed tramadol with any drink to get high?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

25. During the past 30 days, how many times have you swallowed, drank any tramadol contents to get high?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

26. During your life, how many times have you taken **tramadol** with doctor's prescription?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

27. During your life, how many times have you used a needle to inject any **illegal** substance like tramadol into your body?

A. 0 times

B. 1 time

C. 2 or more times

28. During the past 12 months, has anyone offered, sold, or given you tramadol **on school property**?

A. Yes

B. No

Kindly provide the following:

29. What is your sex (gender)?

A. Male

B. Female

30. What is your level (class)?

A. SHS 1

B. SHS 2

C. SHS 3

31. What is your age? ……

THANK YOU