PREVALENCE AND FACTORS ASSOCIATED WITH SUBSTANCE USE AMONG GIRLS IN COMPASSION INTERNATIONAL AIDED PROJECTS IN NAKAWA AND KAWEMPE DIVISION KAMPALA DISTRICT

DIANAH ANYINE

RJ22M21/003

A DISSERTATION SUBMITTED TO THE FACULTY OF PUBLIC HEALTH, NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF PUBLIC HEALTH LEADERSHIP OF UGANDA CHRISTIAN UNIVERSITY

April, 2025

UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

Declaration

I declare that "Prevalence and Factors Associated with Substance Use Among Girls in Compassion International Aided Projects in Nakawa and Kawempe Divisions, Kampala District." is my own work. It has never been submitted to any University or Institution for any award.

Sign: ..... Date: 7/08/2024

Student: Anyine Dianah -

Reg No: RJ22M21/003

Approved for internal and external examination

Dr. EK. Mukooza, supervisor 

7th August 2024

Declaration and acknowledgement

I would like to express my deepest gratitude to God for His unwavering guidance and blessings throughout this journey.

I am profoundly thankful to my husband and family for their unending support, love, and encouragement, which have been my pillars of strength.

My heartfelt appreciation goes to my supervisor for their invaluable guidance, patience, and insightful feedback that greatly contributed to the success of this work.

I would also like to extend my sincere thanks to my friends for their constant encouragement and support throughout this process.

Lastly, I am grateful to all those who have, in one way or another, supported and contributed to this endeavor.

Table of Contents

Operational Definition

Substance: A substance that is chemical in nature and causes physical, mental and emotional changes to people.

Substance use: It is inappropriate use of a drug such that it results in negative consequences upon a student's physical and/or psychological well-being.

Effects of drugs: These are the short-term consequences or end-result, which occur when girls abuse drugs.

List of Abbreviations

WHO	–	World Health Organization
HIV	–	Human Immunodeficiency Virus
AIDS	–	Acquired Immunodeficiency Syndrome
UN	–	United Nations
UNODC	-	United Nations Office on Drugs and Crime
DALYs	-	Disability-Adjusted Life Years
STDs	–	Sexually Transmitted Diseases
ISSUP	–	International Society of Substance Use Professionals
NDA	-	National Drug Authority
NIDA	-	National Institute on Drug Abuse
NGO	-	Non-Governmental Organizations
NCDA	-	National Center on Drug Abuse
USA	–	United States of America
LMICs	–	Low- and Middle-Income Countries

Chapter One

1.0 Introduction

According to the World Health Organization's 2018 Global Status Report on Substance use, specifically alcohol and health, hazardous alcohol use resulted in around 3 million deaths worldwide in 2016 (World Health Organisation [WHO], 2019). In comparison to deaths from tuberculosis (2.3%), HIV/AIDS (1.8%), diabetes (2.8%), and traffic accidents (2.5%), alcohol usage is anticipated to account for 5.3 percent of global mortality (WHO, 2018). Additionally, the global burden of disease estimated that the world's top three killers were, in order, illicit substances, alcohol, and tobacco (Remuzzi et al., 2012). Further predictions indicate that smoking tobacco will cause 1 billion deaths worldwide in the 21st century (Remuzzi et al., 2012). In addition, it is predicted that the percentage of people who currently drink will increase from 47% in 2017 to 50%, while the percentage of people who abstain from alcohol will decrease from 43% in 2017 to 40% in 2030 (Manthey et al., 2019). The United Nations (2015) reports that heroin and cocaine are the most commonly abused illicit substances. With global illicit drug consumption increasing, Surveys conducted by the United Nations Office on Drugs and Crime [UNODC] (2018) reveal that young people continue to consume drugs to a greater extent than older people, and now there is concern that children appear to be the new target market for the drug. According to the UNODC (2014), there has been a nearly 24% increase in the number of people in Pakistan who started using heroin when they were between the ages of 15 and 20. In the Czech Republic, 37% of adolescents between the ages of 15 and 19 had begun using drugs, and during the past ten years, while smoking rates

had decreased in the poor world, they had climbed by as much as 50% in the Asia and Pacific region.

According to the WHO, adolescents are people between the ages of 10 and 19. Nevertheless, because they are seen as healthy, their health is sometimes overlooked, yet the largest rates of substance use disorders occur in adolescence and the first few years of adulthood. More medical symptoms, including altered appetite, weight loss, headaches, disturbed sleep, and depression, are experienced by young people who abuse alcohol and drugs than by their peers. These symptoms have a negative impact on learning and development. Since 2000, Africa's population has increased by almost 50%, and over that same period, the percentage of years lost to disability due to mental and drug use problems rose by 52%. Substance use is a major factor in the loss of disability-adjusted life years [DALYs] among young people globally; the rate of DALYs in Africa is 2.5 times greater than that in high-income nations.Substance use pose a challenge to many countries in Africa, as evidenced in different studies. In Egypt, around 6% of sampled secondary school students acknowledged having experimented with drugs (Kavutha & Kariuki,2015). A survey among adolescents in Ethiopia showed that drug use was on the rise (Hambisa et al., 2014). Based on the number of users and the amount spent, South Africa was one of the top 10 countries for drug and alcohol misuse in the world; for every 100 persons, 15 had a problem with drugs, and for every 100 Rands in circulation, 25 Rands were associated with the problem (Matthew, 2016).

Uganda has not been free of substance use. According to world Population prospects, Uganda is among the top 10 Countries with the Highest Alcohol Consumption in liters of pure alcohol per capita (UN, 2019). In addition, in comparison with average annual

consumption of pure alcohol for people aged 15 and older in the world and the African region, which is 6.4 and 6 liters, respectively, Uganda's is higher at 9.8 litres (WHO, 2016). A study done on drug and substance use in schools in Kampala and Wakiso found that between 60 and 71% of students used illicit drugs, with alcohol and cannabis taking the biggest percentages (Ovuga et al., 2016). Another study on youths in Kisenyi parish, Rubaga Division, Kampala, revealed that about 30% of respondents were drug users (Nasir, 2013). Drug usage and misuse have not been completely absent from Uganda. Uganda once had the world's highest alcohol consumption rate per capita (World Health Organization, 2004). In Kampala and Wakiso schools, research on drug and substance misuse found that between 60 and 71% of pupils used illicit drugs, with alcohol and cannabis accounting for the largest numbers (Ovuga et al., 2016). Results from a different survey on youths in Kisenyi parish, Rubaga Division, Kampala, showed that 30% of respondents used drugs (Nasir, 2013).

More often than boys, girls are subjected to traumatic situations and victimization (Brunelle et al., 2014). Anderberg and Dahlberg (2018) claim that girls and young women use tobacco, alcohol, and other drugs for different reasons than boys and that they are more susceptible to substance use, addiction, and its effects. Further, even when they use the same amount or less of a substance, girls can develop a substance use disorder more quickly. Stinchfield et al., (2006) found that Girls were more likely than males to report having eating disorders, being sexually or physically assaulted, or being sad, all of which raise the likelihood that they may take drugs and become addicted. Therefore, this study sought to establish the prevalence and factors associated substance use among girls.

1.1 Problem statement

Drug and substance use rates among teenage girls in Uganda have risen substantially. Recent studies indicate that 70% of students aged 12–24 attending schools in Kampala and Gulu had ever used alcohol or illicit drugs, of which 39.1% reported regular use of substances (Abbo et al., 2016). Likewise, substance use among young people in Uganda has been recognized as one of the major causes of mental, social, health, and economic set back (Kagwa et al., 2022). These include teenage pregnancy, HIV and AIDS, other sexually transmitted diseases (STDs), child abuse, psychosis, physical fights, unemployment, poverty, school dropouts, motor vehicle crashes, crime, homicide, and suicide, all of which have major impacts on individuals, families, and communities. Also, programs such as "drug-free schools," which were launched by the Church of Uganda (International Society of Substance Use Professionals [ISSUP], 2020), were launched by Compassion International through its local church partner with the theme "whole-life care is holistic care — comprehensive care'' with the aim of helping children fully develop and become responsible and fulfilled adults. Despite these programs, there is no effective blend of practices that control drug and substance use among adolescent girls. In addition, the girls who participate in the compassion program come from dysfunctional families and are economically disadvantaged; the majority of them are orphans. These girls may face a variety of social and psychological challenges, which makes it likely that they are more susceptible to drug and substance use. Even so, there wasn't much research done on this group of girls in Uganda. There was also scant literature on drug and substance use among girls. This scarcity of literature called for a study to help fill the gap.

1.2 Objectives

1.2.1 General Objective

To assess the factors associated with drug and substance use among girls in Compassion International aided project in Nakawa and Kawempe divisions, Kampala District.

1.2.2 Specific objectives

1. To determine the prevalence of substance use among girls in Compassion International aided project Nakawa and Kawempe divisions, Kampala District.
2. To determine the factors contributing to substance use among girls in compassion international aided project Nakawa and Kawempe divisions, Kampala District.

1.3 Significance of the Study

The findings of the study are of significance to Compassion International and other stakeholders, including national youth counseling organizations, church institutions, schools, the National Drug Authority [NDA], the National Institute on Drug Abuse [NIDA], and Non-Governmental Organizations [NGOs] involved in the fight against drug and substance use. Further, the study provided a basis for the government and its agencies to draft legislation or adopt policies aimed at curbing substance use, which should work toward the achievement of predetermined goals.

1.4 Scope of the study

1.4.1 Geographical Scope

The study was conducted in each of the two; Nakawa and Kawempe divisions in Kampala district. These two divisions are among the five administrative divisions of the city of Kampala, the capital and largest city of Uganda. It had 23 parishes, among which included Banda, Kyambogo, Bugolobi, Luzira, Kyanja and many others.

1.4.2 Time scope

The researcher conducted the study between August 2022 to May 2024.

1.4.3 Content scope

The study focused on investigating the factors associated with substance use among girls in compassion international aided project Nakawa and Kawempe divisions, Kampala District.

1.5 Ethical Considerations

1.5.1 Ethical Clearance

The researcher sought approval from the research and ethics committees of Uganda Christian University [UCU] and Compassion International Uganda. Following the approval, the research made formal contact with the targeted churches that were participating in the Compassion-aided project within the divisions of Nakawa and Kawempe. The respondents were then told the goals of the study and asked if they wanted to take part.

Throughout the study, the researcher adhered to the highest ethical standards and was guided by the values of honesty, informed consent, confidentiality, anonymity, privacy, and research independence (MacDonald & Headlam, 2014). The researcher was responsible for ensuring that the participant's well-being was protected and that they were safe from any form of danger. The researcher was aware of these ethical standards and endeavored to adhere to them by obtaining the girls' assent in conjunction with their guardians' consent. During data collection, participants were treated with fairness and respect to protect their dignity and sense of fairness. To protect the participants' privacy and anonymity, only codes and data that have been put together were shared. Also, collected data was not amended or tampered with to accommodate the researcher's viewpoint. Finally, plagiarism was minimized by mentioning all sources cited in the study.

1.5.2 Plans for handling emergent ethical issues

The researcher adhered to the strictest ethical standards throughout the study and was governed by the values of integrity, informed consent, and confidentiality. The researcher also ensured dignity and equity and treated subjects fairly and with respect during data collection. In order to protect the privacy of the participants and the confidentiality of the information provided, codes were used in place of names, and only aggregate data was shared with the key stakeholders.

1.6 Limitations

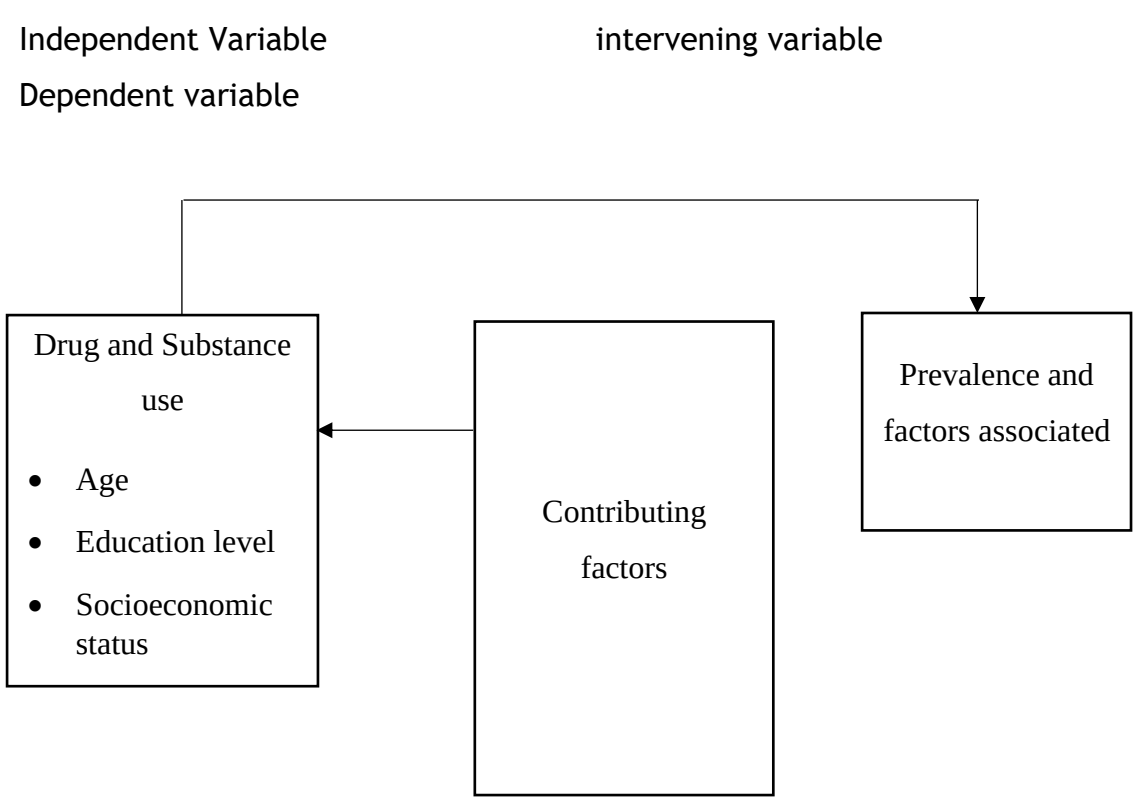
According to the study, one of the study's drawbacks was some respondents' reluctance to divulge information, particularly when it came to details that are private or indicate a fear of victimization. The impact of this restriction was lessened, by assuring the respondents that the information they provided was to be

kept private and used solely for academic research. The responders were also given the assurance that whatever information they provided won't be used against them.

1.7 Conceptual Framework

The conceptual framework served as a guide and ballast to research; it is a means of explaining why your topic is important practically and theoretically as well as detailing how your methods will answer your research questions. (Ravitch & Riggan, 2016). It pointed out the expected relationship between variables.

Fig 1: Conceptual framework of drug and substance use among girls



Chapter Two: Literature Review

2.0 Introduction

This chapter summarized previous research on factors contributing to substance use, particularly among girls. Emerging themes were emphasized, and the chapter concluded by providing a wrap-up.

2.1 Substance use among girls

The use of drugs and alcohol by young people has negative health, psychological, and social effects. Alcohol, marijuana, and tobacco are the substances most commonly used by adolescents (Johnson et al., 2014). Long-term alcohol use can raise the risk of unprotected or undesired sex, intoxication, accidents, crime and violence, self-harm, and suicide (Patton et al., 2014). The initiation of drug use in adolescents at a young age may also impede education completion, disrupt the maturation process into adulthood, and raise the risk of social marginalization, mental illness, criminality, and more severe substance misuse issues in later life (Catalano et al., 2012). According to the National Center on Drug Abuse [NCDA] (2020), data reveals that 2.08 million, or 8.33%, of 12- to 17-year-olds in the USA report using substances in the previous month, and 4,777 Americans between the ages of 15 and 24 passed away from an illicit drug overdose in the previous year.

In a study carried out in Kampala (Central Uganda) and Gulu (Northern Uganda), more than two-thirds (70.1%) of the young people in this study had ever used substances of abuse only once, and slightly over a third had used them regularly (Abbo et al., 2016). Additionally, a study by Ostojic et al. (2012) in Bosnia and Herzegovina found that greater than one-third of the boys and one-fourth of the girls

were daily smokers, and almost half of the boys and one-fifth of the girls practiced harmful drinking. Approximately 6% of the girls reported that they practiced harmful drinking and smoking simultaneously. Lastly, a report by Gripe (2015) on students in Sweden found that 44% of the females reported drinking in the previous year, 14% of the girls reported smoking, and 2% of the girls reported using snuff.

2.2 Factors contributing to substance use among girls

Substance use are a problem that is rampant in most countries, and the trend is increasing (Kemei, 2014). This practice has been associated with psychological, social, economic, and environmental factors. Schulenberg et al., (2012) in a study conducted in the U.S., found that low socio-economic status was associated with high levels of alcohol, cigarette, and cocaine use among white teenagers. In addition, a study based on the premise that pregnancy influences drug and substance use was conducted among adolescent mothers in the United Kingdom. It was found that adolescent mothers reported higher levels of substance use during pregnancy compared to other adolescent females (Wu et al., 2013). Studies also indicate that more frequent use of illegal substances, such as cocaine, heroin, and barbiturates, is linked to physical and sexual abuse (Young-Wolff et al., 2017). An adolescent's likelihood of using drugs increases by two to four times if they experience physical or sexual violence. The strongest contributor varies according to the study, with some finding a higher risk linked with sexual abuse and others reporting a higher risk connected with physical abuse (Brown et al., 2013).

Peer pressure has been identified as a key factor in the beginning of alcohol use. Additionally, it has been demonstrated that teenagers whose parents had alcoholism started drinking heavily earlier than their classmates (Stea et al., 2019). Bachand et

al., (2013) examined drug and substance use among street children in Gambia. The study sought to determine the risk and prevalence of drug and substance use among these children. The findings revealed that the level of awareness of the dangers of drug and substance use among the children was high. Despite this, most street children still abuse drugs, mainly due to peer influence, with the objective of getting high to relieve stress and earn group recognition. The study, unlike the current one, was on the risks and prevalence of drug and substance use among street children. Whereas the study established that stress, peer pressure, and earning group recognition were correlated with drug and substance use, it was not gender specific to girls. According to Pedersen and Skrondal (1998), peers influence children mostly through their behavior.

A study conducted in metropolitan Kano, Nigeria, by Hali (2017) found that neglect and overprotection by parents and guardians of substance-abusing children, drug availability, tension, peer pressure, early marriage, the influence of western media, frustration, depression, and co-wife rivalry were all risk factors for substance use among women. In addition, some women abused substances to control their emotions and their sexual urges when their husbands were away, induce sleep, and keep calm. However, in Namibia, Alimi and Olayiwola (2015) found that the availability of drugs and school-related factors influenced drug abuse. Also, Njeru and Ngesu (2014) conducted a studyitan Kano, Nigeria, indicated that negligence and overprotection by parents and guardians of children who abused substances, drug availability, tension, peer pressure, early marriage, the influence of western media, frustration, depression, and co-wife rivalry were the predisposing factors of substance use among women. In addition, some women abused substances to control their emotions and their sexual urges when their husbands were away, induce sleep,

and keep calm. However, in Namibia, Amusan et al. (2015) found that the availability of drugs and school-related factors influenced drug abuse. Also, Njeru and Ngesu (2014) conducted a study on the causes and effects of drug and substance use among secondary school students in Nairobi West District, Kenya. The study established that peer pressure, media influence, availability, tendency to copy parental behavior, and ability to afford drugs (pocket money and travel allowances) were the factors associated with substance use. The study, unlike the current one, did not focus on girls.

Ongwae (2016) conducted a study on the causes and effects of substance use among students in secondary schools in Starehe Sub-County, Nairobi. It sought to establish the influence of parents' income, the location of schools, school administration, and peer pressure on substance use. The sample consisted of two hundred and sixty-eight students, six guidance and counseling teachers, and six principals. The study established that most students were driven into drug use by peer pressure. According to Pedersen and Skrondal (1998), other peer pressure impacts are primarily through behavior and the vulnerability of the victims to be accepted. On the other hand, Nyaoke (2013) indicates that lack of direction and purpose in life, rejection, isolation, and spiritual emptiness influenced drug and substance use. It further found out that socio-economic status, the cost of drugs, the level of education of parents, family size, low self-esteem, unconcerned school administrations, and poor academic performance were determinants of drug and substance use. Even though the study was on factors contributing to drug and substance use, it was not gender-specific and focused on institutions of higher learning

Farrell et al., (2003) looked at alcoholism and the cost of alcoholic beverages in the United States of America [USA]. According to the study, adolescents from more affluent social and economic backgrounds were more likely to suffer from substance addiction issues. They also discovered that pricing had an impact on alcohol consumption because rising prices led to a decline in consumption. This study, which exclusively included teens and was done in the USA, concentrated on the cost of alcohol and its effects. It was not gender-directed like the current one, which focuses on girls.

Poor connections between teenagers and their parents and classmates have often been identified as a risk factor for problematic drug use, including problematic alcohol, cigarette, and marijuana use (Johnston et al., 2018). Additionally, teenagers (especially girls) with strained parent-child relationships frequently report binge drinking and regular alcohol use, and they have a higher likelihood of smoking marijuana (Westling et al., 2018). According to Stickley et al. (2014), socially awkward and lonely teenagers are more likely to take drugs to deal with their strained parent-child relationships. However, what differentiates this study from the above-mentioned one is that this one is focusing on only girls.

According to a study conducted in six ASEAN LMICs, alcohol and drug use among adolescents who were bullied and had no close friends was highly prevalent. Also, regular worry, loneliness, and physical activity were found to be predictors of heavy and binge drinking among teens (Pengpid & Peltzer, 2019). The physical and mental health of the adolescent is another aspect that is linked to substance use. No matter the confounding variables, such as sex, race, or household economic level (Lebron et al., 2017), The use of substances by teenagers with internalizing issues (such as

anxiety) to deal with their psychological discomfort has been proposed as the explanation for the positive correlation between psychological distress and substance use reported in studies (Memedovic et al., 2019). As much as the studies looked at substance use, they included both boys and girls, unlike this one, which focuses on girls only.

2.3 Summary of Literature

In conclusion, the study of the factors that contributed to substance use showed that a huge number of empirical studies had been done on the subject. They were able to figure out what kinds of things make people addicted to drugs and other substances, but they didn't look at female gender like this study intended. In addition, the vulnerable demographic of hildren who come from broken families and whose assistance comes from a non-governmental organization was not examined in the research that was carried out. The current study looked at the abuse of substances, and one of its goals was to fill in some of the knowledge gaps that have been identified, such as the ones that have been outlined above.

Chapter three: Methodology

3.1 Introduction

This Chapter presented the research methodology, which was employed to conduct the study. It examined the research design, area understudy and target population. It also included sampling procedures and sample size, data collection and analysis procedures.

3.2 Design

The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby ensuring you will effectively address the research problem; it constituted the blueprint for the collection, measurement, and analysis of data (Vaus, 2008). The study used a cross-sectional survey, employing quantitative research. Quantitative data involved collecting and analyzing numerical data. It was used to find patterns and averages, make predictions, test associations, and generalize results to wider populations (Bhandari et al., 2020).

3.3 Area under study

The study was carried out in Kampala district, particularly in the divisions of Nakawa and Kawempe. Kawempe is located at 00 23N, 32 33E (latitude: 0.3792; longitude: 32.5574) and has19 parishes. Nakawa Division, on the other hand, is located in the eastern part of the city and shared borders with Kira Town to the east, Wakiso District to the north, Kawempe Division to the north-west, Kampala Central Division to the west, Makindye Division across Murchison Bay to the south-west, and Lake

Victoria to the south. The division's coordinates were 0° 20' 00.0" N and 32° 37' 00.0" E (Latitude: 0.333333; Longitude: 32.616667).

Since the study looked at girls supported by the Compassion International Aid Projects, it included churches that have the Compassion Project operational within the two divisions. The churches included; Naguru, Agape, Bugolobi, Kamwokya, Makerere, Muntu womunda, Kyambogo and Kiwuliriza Child development centers. Compassion has a total of 4,499 girls on the project from the two division, between the age of 13 to 22 years. The girls supported by compassion come humble families that require support to raise the children.

3.4 Population under study

A study population is the collection of elements from which the sample is drawn; in this study, the population was young girls aged 13 to 22 who were supported in their school by Compassion aided project in the Nakawa and Kawempe divisions of Kampala district.

3.5 Sample size determination

A sample is a subset of the population that is chosen for the purpose of observation and study (Orodho & Kombo, 2002). In quantitative designs, the population from which the sample is taken must be represented by the sample. A sample of young girls aged 13 to 22 years old was collected for this study. "Sampling" is the statistical process of choosing a portion of an interest population with the intention of making observations and drawing statistical inferences about that population (Baridalyne, 2012). The Records department of the compassion aided projects reported that 4499 girls in Nakawa and Kawempe Division were part of the project. The sample was

calculated using simplified formula for calculating sample sizes by Isreal (1992). The formula is:

$n = N/(1 + Ne^2)$.

Where n is the sample size,

N is the population size,

e is the margin of error,

and 1 is a constant value.

$$n = N/(1 + Ne^2)$$

$$n = 4499/(1 + 4499 * 0.05^2)$$

$$4499/ (1 + 4499 * 0.0025)$$

$$n = 367$$

3.6 Sampling Procedure

For successful research, choosing an appropriate sample size with traits that match those of the target population is essential (Orodho & Kombo, 2002). Therefore, simple random sampling was used for this study. Simple random sampling is where subjects in the population are sampled by a random process, using either a random number generator or a random number table, so that each person remaining in the population has the same probability of being selected for the sample (Kahn et al.,

2006). The principal investigator contacted the records department of all the implementing Church partners in the Compassion Aid Project within Nakawa and Kawempe Division, requesting for the names of young girls between 13 and 22 years, who were being supported by the project. The names from all the churches were compiled into a single excel sheet. In order to reduce sample bias, this list was de-identified and unique numbers were given to the people on it. Excel's random number generation was used to choose the numbers (respondents) at random. Following the selection, the names of the young girls on the list corresponding to the chosen numbers (sample) were contacted through their caretakers to do the interview. Girls who were not willing to participate in the study were left out.

3.6.1 Inclusion criteria

Girls between the ages of 13 and 22, who are registered with Compassion International, were included in the study.

3.6.2 Exclusion Criteria

Girls who were mentally ill or bed ridden at the time of data collection

3.6 Tool for data collection

3.6.1 Type of tool

A structured questionnaire was developed and used in the study. A questionnaire was preferred because it takes less time and is more practical with a large sample, as was the case in this study. Questionnaires also allow for anonymity and reduce interviewer bias. The questionnaire had closed-ended questions. To enable refinement and evaluation of the tool, it was pretested on 10 girls at St. Luke Church

Ntinda, who didn’t take part in the study. The data collected during the pre-test were used only for tool refinement. Pre-testing, according to Polit and Beck (2009), makes it possible to: 1) Identify the components of the instrument that the respondents find challenging. 2) Identify the questions that the participants find offensive. 3) Check to see if the questions are in a logical order. 4) Identify the research assistants' training requirements. 5) Check to see if the tool produces reliable and sufficiently variable data to allow the instrument to detect changes in critical variables.

An English language specialist, a public health specialist, and a social scientist edited the tool for content validity.

3.6.2 The data collection tool's content validity

According to Ti-Enkawol Nachinab & Armstrong (2024) "validity is the degree to which an instrument measures what it is supposed to measure." The literature studied before tool development as well as reviews by one expert from public health and one expert from social sciences improved the validity of the questionnaire used.

3.6.3 Reliability of the data collection tool

According to Polit and Beck (2009), a reliable tool measures the target variable consistently and accurately. Such a tool is stable, consistent, and dependable at all times when measuring the target variable. To improve reliability, the developed questionnaire was be pre-tested among girls who didn’t participate in the study. All the data collection was done by the principal researcher, assisted by two research assistants who received training on the objectives and methodology of the study.

3.7 Data collection

A researcher-administered questionnaire was used to capture responses during the survey. To have valid and reliable data, the researcher ensured that the tools were tested for validity and reliability to minimize error. The questionnaire consisted of four parts: (1) socio-demographic characteristics (2) substance use among girls (3) factors contributing substance use among girls. The principal investigator and research assistants administered the questionnaires in the English language. The questionnaires had closed-ended items for ticking yes or no and making choices among a number of possible alternatives. The completed questionnaires were collected by the principal investigator from each research assistant for scrutiny on each field day. The advantage of using questionnaires was the ability of the data derived from them to be analyzed using existing, cheap, and readily accessible software such as SPSS for the study.

3.8 Study variables

3.8.1 Dependent Variables

Substance use.

3.8.2 Independent variables

The independent variable include age, education level, and many more demographic factors of girls in the Compassion International-aided project.

3.9 Data analysis

Data analysis refers to the process of making sense and drawing meaningful inferences from raw data collected in the field. Data analysis also involves the

process of interpreting and presenting information that can be easily understood by the research audience. The qualitative data analysis process included the categorization, accounting, and interpretation of the data in light of the participants' perceptions of the situation (Kitchenham & Pfeeger, 2003). The four stages Islam et al., (2018) suggested for data analysis—coding, data cleaning, making meaning of the data, and presenting the data in narrative and interpretive forms—were used to examine the data that had been gathered. The researcher then visually depicted data in percentages and numbers using charts, tables, and graphs in order to evaluate it and provide an analytical summary.

Univariate analysis was used to get descriptive statistics. The statistics included counts (number of observations), averages, standard deviations, percentages, and proportions of various variables, including social demographic traits and their frequencies. Bivariate analysis involved utilizing a Chi-square distribution and cross tabulation to examine the relationship between substance use and each independent variable among adolescent girls. The association was conducted with a confidence level of 95%. Any associations with P-values greater than 0.05 (significance threshold) was considered statistically significant.

Multivariate analysis was done using an extended linear model known as multinomial logistic regression, or MLogit regression, which used a set of explanatory variables X. The analysis was conducted with a 95% confidence level. An odds ratio more than 1 indicated a high likelihood, an odds ratio less than 1 indicates a lower likelihood, and an odds ratio of 1 indicates an equal likelihood. If the p-value was below the 5% level of significance, it indicated that the model was a strong fit, suggesting that

the independent factors effectively explain the dependent variable. Following the analysis, the data presented in tables and figures.

Chapter Four: Results

4.0 Introduction

This chapter presents results from the analysis of data in line with the study objectives. The analysis has been done at two levels; univariate and bivariate.

4.1 Prevalence of Substance use

Table 1 Shows the Demographic Characteristics of Respondents (n=367)

Variable	*Category*	*Frequency (n=367)*	*Percentage (%)*
Age	13-15 Years	39	10.63
	16-18 Years	223	60.76
	Greater than 18 Years	105	28.61
Education Level	Senior 1 or 2	29	7.90
	Senior 3 or 4	238	64.85
	A' Level	33	8.99
	Tertiary/University	67	18.26
Religion	Catholics	104	28.34
	Muslims	53	14.44
	Traditional Faith	7	1.91
	Anglican	107	29.16
	Pentecostal	53	14.44
	Other	43	11.72
Whom do you live with	Both Parents	116	31.61
	Father	58	15.80
	Mother	63	17.17
	Total Orphan	28	7.63
	Relatives	93	25.34
	Kind People	9	2.45
Who have you used substances with	Friend	119	59.80
	School mate	34	17.09
	Family Member	40	20.10
	Other	6	3.02
Education level of care taker/parent	No formal education	31	8.45
	Primary	47	12.81
	Secondary School	159	43.32
	Tertiary/University	130	35.42
Who tops up school fees	Mother	118	32.15
	Father	141	38.42
	Relative	79	21.53
	Non-Relative	29	7.90
Know anyone at school taking drugs	Yes	199	54.37
	No	167	45.63
Where do you take drugs from	Home	96	42.29
	School	66	29.07
	Both Home and School	4	1.76
	Other	61	26.87
Are there girls you know who have fallen sick due to drugs and substance use	Yes	118	32.15
	No	249	67.85
	Yes	71	19.35

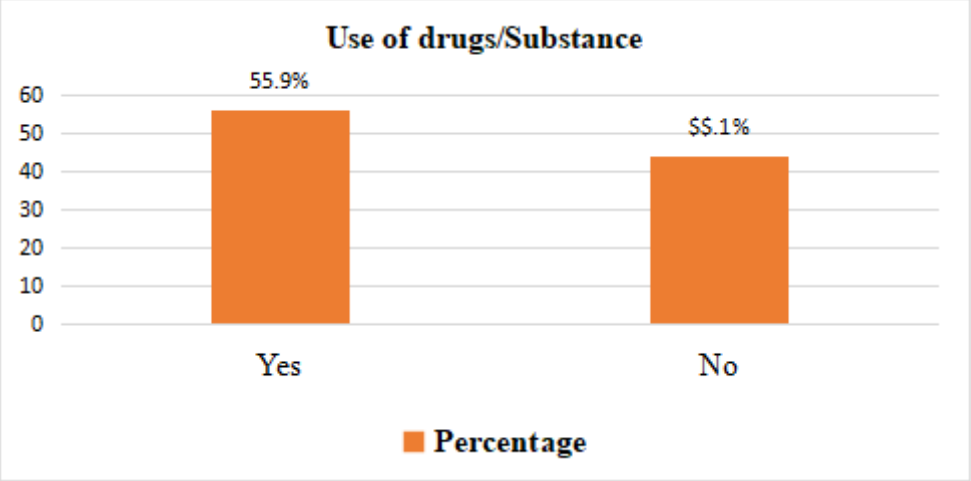
Have you ever fallen sick due to substance use	No	296	80.65
Know anyone who fell sick due to substance use	Yes	164	44.81
	No	202	55.19
Do you think Faith in God increases the use to substance	Yes	55	14.99
	No	312	85.01
Do you think Faith in God helps prevent use of substance	Yes	311	84.97
	No	55	15.03
Do you think attending church at least once a week is likely to reduce use substances	Yes	283	77.11
	No	84	22.89
Who do you think is more likely to use substances?	Boys	287	78.20
	Girls	80	21.80

Results from table 1 above reveal that;

The highest proportion of respondents (60.76%) were aged 16-18 years. Regarding the education, majority (64.85%) were in senior 3 or 4 while the least proportion were in senior 1 or 2 at (7.9%). The highest proportion of respondents were Anglicans (29.16%), followed by Catholics (28.34%) while those in traditional faith were the least at 1.91%. majority of the respondents (31.61%) were living with both parents, followed by those living with relatives (25.34%). Regarding the education level of the caretakers, the highest fraction (43.32%) had attained secondary education, followed by tertiary/university (35.42%) while minority (8.45) had no formal education. Regarding who tops up on fees, the highest proportion (38.42%) said their fathers. Majority (54.37%) of the respondents knew at least someone using drugs. and of those who used substances, majority (42.29%) were taking them from home,

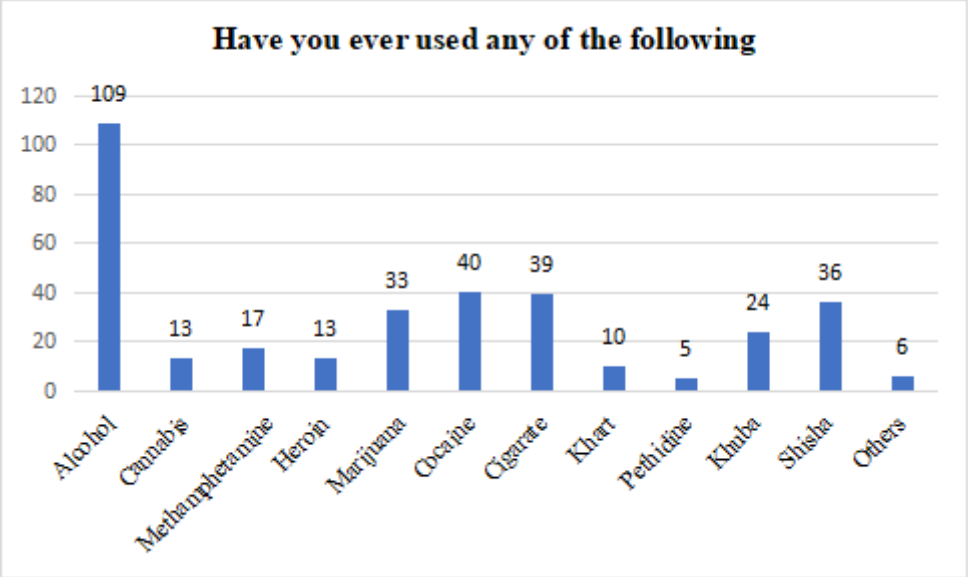
followed by school (29.07%) and lastly both home and school (1.76%). The highest percentage (67.85%) did not know of any girl using drugs/substance while the rest did. The highest proportion (80.65%) had never fallen sick because of using substance. While majority (55.19%) never knew anyone who fell sick because of using substance. Majority (85.01%) of the respondents thought faith in God decreases the use to substance and on the other hand, Majority (84.97%) of the respondents thought faith in God helps prevent use to substance. The highest percentage (77.11%) of respondents thought attending church at least once a week is likely to reduce use substances. And lastly majority (78.20%) thought boys were more likely to use substance as compared to girls (21.80%).

Figure 1 Shows the prevalence of substance use among girls (n=367)



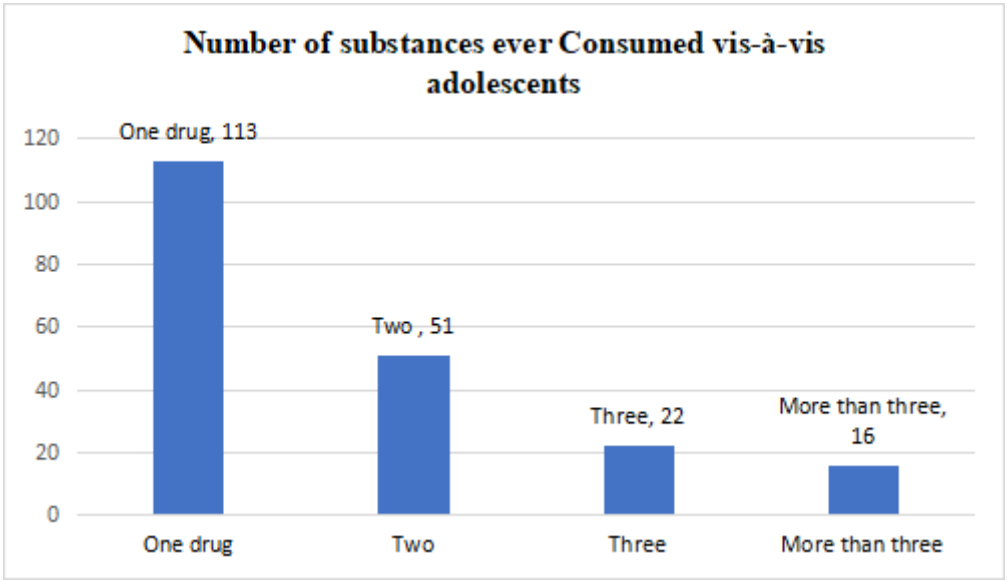
Results from figure 1 above reveals that; the highest proportion (55.9%) of respondents had ever used substance.

Figure 2 shows the girls who have ever used/consumed any of the substances



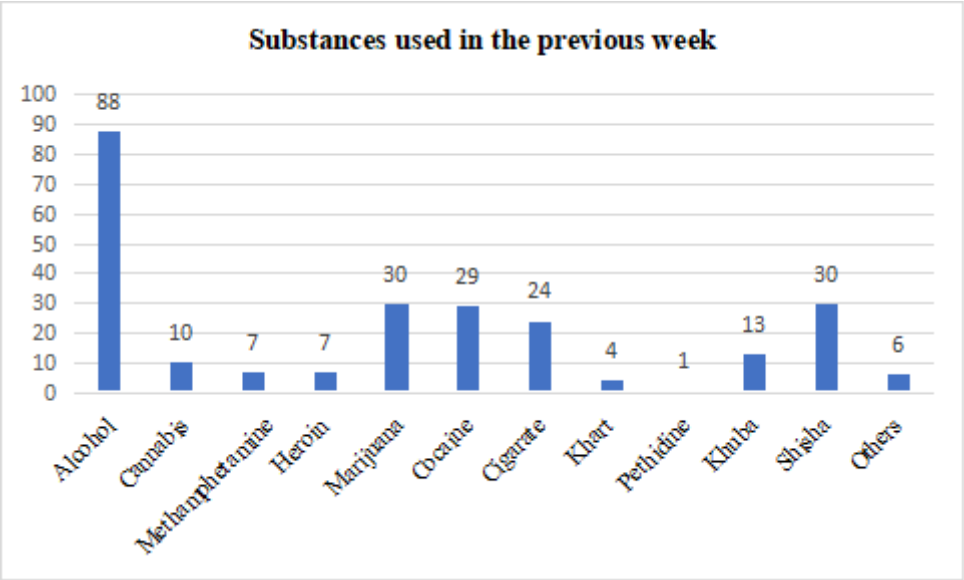
Results from figure 2 above reveals that; alcohol was the most common ever used substance (109 adolescent) followed by cocaine (40 adolescents) and the least most ever used drug was pethidine (5 adolescents).

Figure 3 shows the number of Adolescents girls **vis-à-vis** ***number of substances ever consumed n= 202***



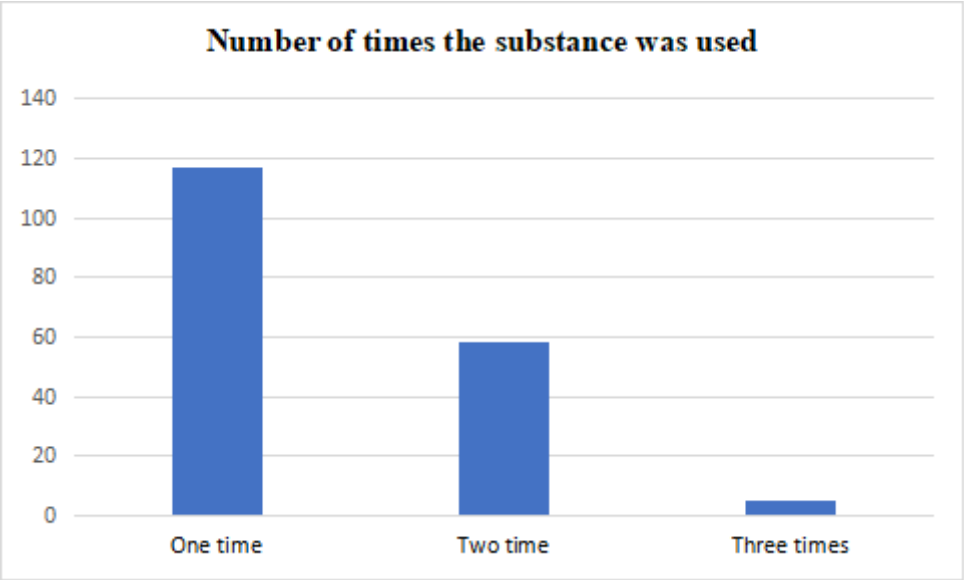
Results from figure 3 above reveals; of the 202 (55.9%) adolescent who ever used substances, 113 have used only one substance, and 16 (7.9%) have used more than three substances

Figure 4: Girls who used/consumed any of the substances/drugs the previous week n=202



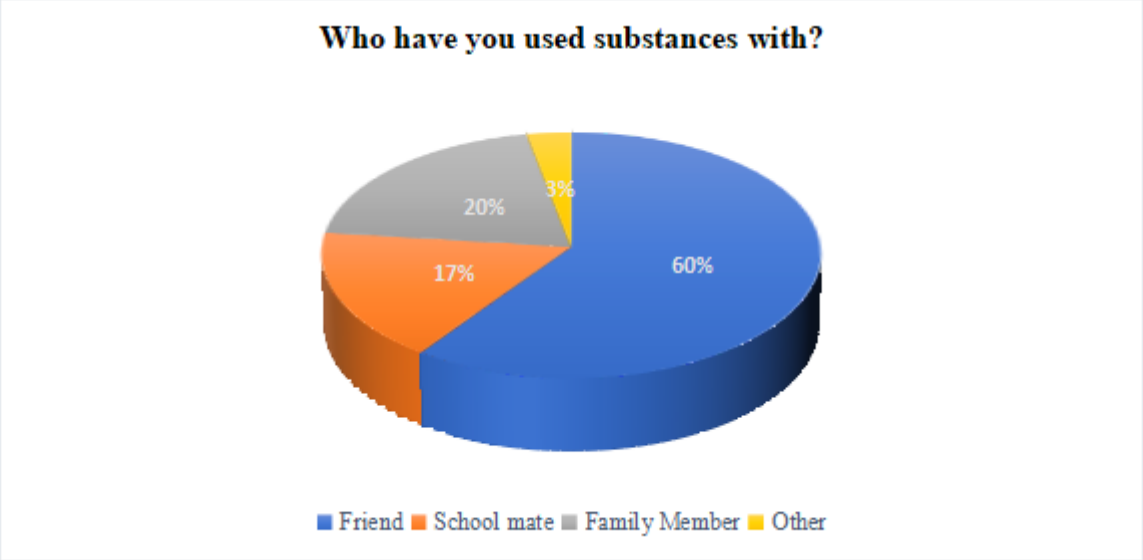
Results from figure 4 above reveals that; alcohol was the most used substance in the previous week (88 adolescent) followed by marijuana and shisha (30 adolescents) and the least most ever used drug was pethidine (1 adolescent).

Figure 5 Shows the number Adolescents girls who used/consumed any of the substances/drugs the previous week visa-vi the number of substances consumed



Results from figure 5 above reveals; of the 117-adolescent consumed one substance, 58 consumed two substances last week and only five consumed three substances.

Figure 6 shows who Adolescents girls have used substances with (n=202)



The results show that slightly more than half (60%) of the girls used substances with a friend, 17% and 20% used them with a schoolmate and family member respectively.

Table 2 shows Substance use among guardians/parents (n=321)

Variable	Category	Frequency (n=321)	Percentage (%)
Drug use by guardians/parents	Yes	166	45.26
	No	201	54.72
If Yes Which drugs	Alcohol	99	51.03
	Cannabis	7	3.61
	Methamphetamine	7	3.61
	Heroin	2	1.03
	Marijuana	14	7.22
	Cocaine	14	7.22
	Cigarette	21	10.82
	Khart	2	1.03
	Pethidine	3	1.55
	Khuba	2	1.03
	Shisha	13	6.70
	Others	10	5.15

Results from table 2 above reveals that; Regarding drug use by guardians/caretakers, majority (54.72%) were not using them and of those who were using, majority were using alcohol (51.03%), followed by cigarette (10.82%), cocaine (7.22%), marijuana (7.22%) and least was khuba, khart and heroin each of them at 1.03%.

4.3 Reasons why girls use Substances

Table 3 shows the scoring per items of the factors that contribute to Substance use among adolescent girls.

SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD= Strongly Disagree

	Items	SA	A	N	D	SD
1	Poor relationship between girls and guardians/ parents contribute to substance use among girls	168 (45.78)	86 (23.43)	36 (9.81)	37 (10.08)	40 (10.90)
2	Some girls learn using substances from their family members	98 (26.78	78 (21.31	81 (22.13	61 (16.67	48 (13.11)
3	Some girls end up using drugs as a way of releasing pressure from their parents and the society	126 (34.33	90 (24.52	68 (18.53	55 (14.99	28 (7.63)
4	Lack of proper guidance and counselling from parents/ guardians leads girls to use	151 (41.14	96 (26.16)	56 (15.26	44 (11.99	20 (5.45)
5	Some girls end up using drugs when they lack someone to share their problems with	127 (34.70	95 (25.96)	73 (19.95	48 (13.11	23 (6.28)
6	Lack of proper guidance and counselling leads to girls to use substance	118 (32.15	116 (31.61)	69 (18.80	37 (10.08	27 (7.36)
7	Lack of cooperation between the parents may lead to girls to use substance	101 (27.67	101 (27.67)	92 (25.21	47 (12.88	24 (6.58)
8	The perception that drug and substance use help you forget your problems motivates	87 (23.71	68 (18.53	78 (21.25	68 (18.53	66 (17.98)
9	Some girls in their earlier stages of substance use do so out of ignorance on the	93 (25.34	103 (28.07	90 (24.52	35 (9.54)	46 (12.53)
11	Some girls tend to take excessive painkillers to counter the effect of	86 (23.43	93 (25.34	95 (25.89	56 (15.26	37 (10.08)
12	Girls from single families are more likely to use substances compared to girls with both	89 (24.25	70 (19.07	73 (19.89	58 (15.80	77 (20.98)
13	Parents level of education influence substance use among girls	55 (15.07	56 (15.34	69 (18.90	77 (21.10	108 (29.59)

14	Parenting style (authoritarian, authoritative, permissive and neglectful) influences the level of substance use among	86 (23.50)	89 (24.32)	79 (21.58)	66 (18.03)	46 (12.57)
15	Some of the girls who use substances might have suffered rejection from the members of their family	101 (27.52)	116 (31.61)	65 (17.71)	39 (10.63)	46 (12.53)
17	Some traditional cultures may lead to substance use among girls	82 (22.47	83 (22.74	75 (20.55	60 (16.44	65 (17.81)
18.	Some students who use substances are ignorant on the effect of substance use	97 (26.43	94 (25.61	84 (22.89	51 (13.90	41 (11.17)
19.	Some girls who have too much pocket money in their disposal tend to use	76 (20.71	83 (22.62	77 (20.98	50 (13.62	81 (22.07)
20.	Some girls tend to use substances because of lack of sleep	72 (19.67	80 (21.86	75 (20.49	66 (18.03	73 (19.95)
21.	Some girls use substance because of influence from others (peer influence).	156 (42.51	86 (23.43	70 (19.07	28 (7.63)	27 (7.36)
22	Faith in God helps prevent use of substances among girls	190 (51.77	66 (17.98	50 (13.62	26 (7.08)	35 (9.54)
23	Going to Church may reduce the use of substances among girls	164 (44.69	78 (21.25	53 (14.44	36 (9.81)	36 (9.81)

Results from the table above reveal that; Most (45.78%) of the respondents strongly agree that Poor relationship between girls and guardians/ parents contribute to substance use while the least (9.81%) were neutral. Most (26.78%) strongly agreed that Some girls learn using drugs from their family members while the least (13.11%) strongly disagreed. The highest proportion (34.33%) strongly agreed that Some girls end up using substances as a way of releasing pressure from their parents and the society while the least (7.63%) strongly disagree. Most (41.14%) strongly agreed that lack of proper guidance and counselling from parents/ guardians leads girls to use substance. Most (34.7%) strongly agreed that some girls end up using drugs when they lack someone to share their problems with School and

personal related factors. The highest proportion (27.67%) strongly agreed that Lack of cooperation between the parents may lead to girls to substance use.

Most;

Strongly agree that the perception that substance use help you to forget your problems motivates some girls to start using drugs at (23.71%)

Agree that some girls in their earlier stages of substance use do so out of ignorance on the effect of drug and substance use at 28.07%.

Were neutral to the statement some girls tend to take excessive painkillers to counter the effect of substance at 28.25.89%

Strongly agree that girls from single families are more likely to use substances compared to girls with both parents at 24.25%

Strongly disagreed that parents level of education influence substance use among girls at 29.59%

Agreed parenting style (authoritarian, authoritative, permissive and neglectful) influence the level of substance use among girls at 24.32%.

Strongly agreed that some of the girls who use drugs might have suffered rejection from the members of their family at 27.52%.

Agree that some traditional cultures may lead to substance use among girls at 22.74%.

Strongly agree that some students who use substances are ignorant on the effect of drug and substance use at 26.43%.

Agree that some girls who have too much pocket money in their disposal tend to abuse drugs at 22.62%.

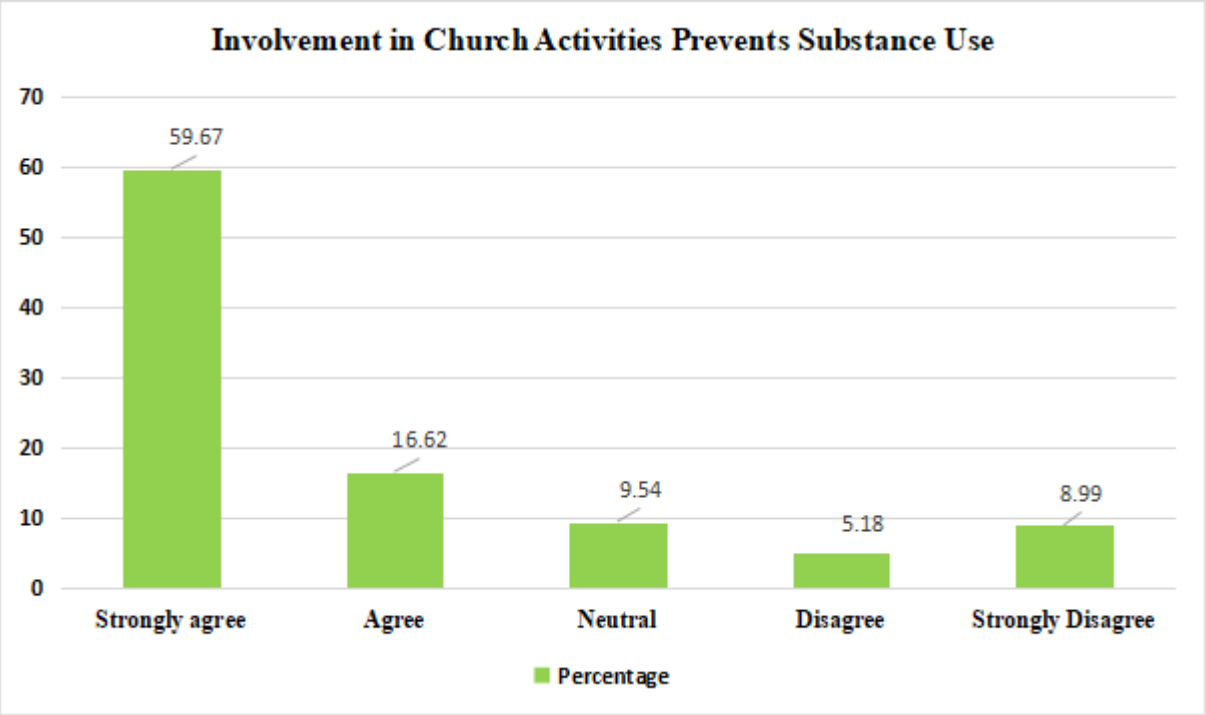
Agree some girls tend to use substance because of lack of sleep at 21.86%.

Strongly agree that some girls use substance because of influence from others (peer influence) at 42.51%.

Strongly agree that faith in God helps prevent use of substances among girls at 51.77%.

Strongly agree that going to Church may reduce the use of substances among girls at 44.69%

Figure 7 shows Church activities involvement and substance use.



Results from figure 7 above reveal that; majority of the girls (59.67%) strongly agreed that being involved in Church activities such as choir, youth groups help prevents substance use.

4.2.1 Bivariate Analysis

Table 4 shows the demographic factors associated with substance use among girls

Explanatory Variable		*Substance/drug Use*		*95%CI*
	Categories	*Never used*	*Ever used*	*P-Value*
Age	13-15 Years	15(38.46)	24(61.54)	**0.042**
	16-18 Years	110(49.33)	113(50.67)	
	Greater than 18 Years	37(35.24)	68(64.76)	
Education level	Senior 1 or 2	3(10.34)	26(89.66)	**0.000**
	Senior 3 of 4	130(54.62)	108(45.38)	
	A' Level	12(36.36)	21(63.64)	
	Tertiary/University	17(25.37)	50(74.63)	
Religion	Catholics	53(50.96)	51(49.04)	**0.002**
	Muslims	25(47.17)	28(52.83)	
	Traditional Faith	0(0.00)	7(100.00)	

	Anglican	34(31.78)	73(68.22)	
	Pentecostal	31(58.49)	22(41.51)	
	Other	19(44.19)	24(55.81)	
Whom do you live with	Both Parents	49(42.24)	67(57.76)	**0.001**
	Father	25(43.10)	33(56.90)	
	Mother	38(60.32)	25(39.68)	
	Total Orphan	3(10.71)	25(89.29)	
	Relatives	45(48.39)	48(51.61)	
	Kind People	2(22.22)	7(77.78)	
Who have you used drugs with	Friend	1(0.84)	118(99.16)	**0.001**
	School mate	0(0.00)	34(100.00)	
	Family Member	0(0.00)	40(100.00)	
	Other	1(16.67)	5(83.33)	
Education level of care taker/parent	No formal education	6(19.35)	25(80.65)	**0.026**
	Primary	19(40.43)	28(59.57)	
	Secondary School	76(47.80)	83(52.57)	
	Tertiary/University	61(46.92)	69(53.08)	
Do care takers use drugs	Yes	36(22.09)	127(77.91)	**0.000**
	No	126(63.96)	71(36.04)	
Who tops up school fees	Mother	58(49.15)	60(50.85)	0.548
	Father	60(42.55)	81(57.45)	
	Relative	31(39.24)	48(60.76)	
	Non-Relative	13(44.83)	16(55.17)	
Know anyone at school taking drugs	Yes	62(31.16)	137(68.84)	**0.000**
	No	99(59.28)	68(40.72)	
Where do you take drugs from	Home	27(28.13)	69(71.88)	**0.017**
	School	10(15.15)	56(84.85)	
	Both Home and School	1(25.00)	3(75.00)	
	Other	26(42.62)	35(57.38)	
	No	12(14.29)	72(85.71)	
Who do you think is likely to use substances?	Boys	150(52.26)	137(47.74)	**0.000**
	Girls	12(15.00)	68(85.00)	

From table 9 above, there was a statistically significant association between use of drugs/substance and; *Age, Education level, Religion,* Whom do you live with, Who

have you used it with, Education level of care taker/parent, Do care takers use drugs, Know anyone at school taking drugs, Where do you take drugs from, Are there girls you know who have fallen sick due to drugs and substance use, Have you ever fallen sick due to substance use, Know anyone who fell sick due to substance use, Do you think Faith in God increases the use to substance, Do you think Faith in God helps prevent use to substance, Do you think attending church at least once a week is likely to reduce use substances, Who do you think is likely to use substances in that;

Tables 5 shows the bivariate analysis of factors associated with substance use among Girls a

SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD= Strongly Disagree

Items	Substance/drug use			P-value
	category	Never	Ever used	
Poor relationship between girls and guardians/parents contribute to substance use among girls	SA	80(47.62)	88(52.38)	**0.006**
	A	47(54.65)	39(45.35)	
	N	12(33.33)	24(66.67)	
	D	14(37.84)	23(62.16)	
	SD	9(22.50)	31(77.50)	
Some girls learn using substances from their family members	SA	50(51.02)	48(48.98)	**0.045**
	A	41(52.56)	37(47.44)	
	N	35(43.21)	46(56.79)	
	D	21(34.43)	40(65.57)	
	SD	15(31.25)	33(68.75)	
Some girls end up using substances as a way of releasing pressure from their parents and the society	SA	68(53.97)	58(46.03)	**0.011**
	A	42(46.67)	48(53.33)	
	N	25(36.76)	43(63.24)	
	D	15(27.27)	40(72.73)	
	SD	12(42.86)	16(57.14)	
Lack of proper guidance and counselling from parents/ guardians leads girls to use substance	SA	83(54.97)	68(45.03)	**0.000**
	A	48(50.00)	48(50.00)	
	N	14(25.00)	42(75.00)	
	D	10(22.73)	34(77.27)	

	SD	7(35.00)	13(65.00)	
Some girls end up using substances when they lack someone to share their problems with School and personal related factors	SA	73(57.48)	54(42.52)	**0.000**
	A	48(50.53)	47(49.47)	
	N	18(24.66)	55(75.34)	
	D	11(22.92)	37(77.08)	
	SD	11(47.83)	12(52.17)	
Lack of proper guidance and counselling leads to girls to use substance	SA	63(53.39)	55(46.61)	**0.033**
	A	53(45.69)	63(54.31)	
	N	25(36.23)	44(63.77)	
	D	10(27.03)	27(72.97)	
	SD	11(40.74)	16(59.86)	
Lack of cooperation between the parents may lead to girls to use substance	SA	52(51.49)	49(48.51)	**0.037**
	A	49(48.51)	52(51.49)	
	N	40(43.48)	52(56.52)	
	D	16(34.04)	31(65.96)	
	SD	5(20.83)	19(79.17)	
The perception that substance use help you forget your problems motivates some girls to start using drugs	SA	43(49.43)	44(50.57)	**0.032**
	A	29(42.65)	39(57.35)	
	N	24(30.77)	54(69.23)	
	D	29(42.65)	39(57.35)	
	SD	37(56.06)	29(43.94)	
Some girls in their earlier stages substance use do so out of ignorance on the effect of drug and substance use	SA	43(46.24)	50(53.76)	**0.092**
	A	53(51.46)	50(48.54)	
	N	30(33.33)	60(66.67)	
	D	13(37.14)	22(62.86)	
	SD	23(50.00)	23(50.00)	
Some girls tend to take excessive painkillers to counter the effect of substance use	SA	42(48.84)	44(51.16)	0.244
	A	41(44.09)	52(55.91)	
	N	47(49.47)	48(50.53)	
	D	19(33.93)	37(66.07)	
	SD	13(35.14)	24(64.86)	
	SA	37(41.57)	52(58.43)	0.418
	A	26(37.14)	44(62.86)	

Girls from single families are more likely to use substances compared to girls with both parents	N	31(42.47)	42(57.53)	
	D	30(51.72)	28(48.28)	
	SD	38(49.35)	39(50.65)	
Parents level of education influence substance use among girls	SA	20(36.36)	35(63.64)	0.543
	A	23(41.07)	33(58.93)	
	N	28(40.58)	41(59.42)	
	D	37(48.05)	40(51.95)	
	SD	52(48.15)	56(51.85)	
Parenting style (authoritarian, authoritative, permissive and neglectful) influence the level of substance use among girls	SA	43(50.00)	43(50.00)	0.229
	A	42(47.19)	47(52.81)	
	N	26(32.91)	53(67.09)	
	D	30(45.45)	36(54.52)	
	SD	20(43.48)	26(56.52)	
Some of the girls who use substances might have suffered rejection from the members of their family	SA	50(49.50)	51(50.50)	**0.001**
	A	65(56.03)	51(43.97)	
	N	22(33.85)	43(66.15)	
	D	11(28.21)	28(71.79)	
	SD	14(30.43)	32(69.57)	
Some traditional cultures may lead to substance use among girls	SA	39(47.56)	43(52.44)	**0.064**
	A	37(44.58)	46(55.42)	
	N	23(30.67)	52(69.33)	
	D	33(55.00)	27(45.00)	
	SD	30(46.15)	35(53.85)	
Some students who use substances are ignorant on the effect of substance use	SA	49(50.52)	48(49.48)	**0.014**
	A	48(51.06)	46(48.94)	
	N	35(41.67)	49(58.33)	
	D	12(23.53)	39(76.47)	
	SD	18(43.90)	23(56.10)	
Some girls who have too much pocket money in their disposal tend to use substances	SA	29(38.16)	47(61.84)	0.183
	A	43(51.81)	40(48.19)	
	N	28(36.36)	49(63.64)	
	D	26(52.00)	24(48.00)	
	SD	36(44.44)	45(55.86)	
Some girls tend to use substance because of lack of sleep	SA	31(43.06)	41(56.94)	0.164
	A	37(46.25)	43(53.75)	
	N	41(54.67)	34(45.33)	
	D	28(42.42)	38(57.58)	

	SD	25(34.25)	48(65.75)	
Some girls use substance because of influence from others (peer influence).	SA	97(62.18)	59(37.82)	**0.000**
	A	39(45.35)	47(54.65)	
	N	16(22.86)	54(77.14)	
	D	5(17.86)	23(82.14)	
	SD	5(18.52)	22(81.48)	
Faith in God helps prevent use of substances among girls	SA	108(56.84)	82(43.16)	**0.000**
	A	29(43.94)	37(56.06)	
	N	13(26.00)	37(74.00)	
	D	5(19.23)	21(80.77)	
	SD	7(20.00)	28(80.00)	
Going to Church may reduce the use of substances among girls	SA	101(61.59)	63(38.41)	0.000
	A	39(50.00)	39(50.00)	
	N	6(11.32)	47(88.68)	
	D	4(11.11)	32(88.89)	
	SD	12(33.33)	24(66.67)	
Being involved in Church activities such as choir, youth groups help prevents use substances among girls.	SA	119(54.34)	100(45.66)	0.000
	A	24(39.34)	37(60.66)	
	N	5(14.29)	30(85.71)	
	D	4(21.05)	15(78.95)	
	SD	10(30.30)	23(69.70)	

From table above, there was a statistically significant association between use of substance and all the factor with the p-values less than the significance level 0.05, except for those with un-bolded p-values that were greater than the level of significance thus the association not being statistically significant at 95% level of confidence.

Multivariate Analysis

The predictors of substance/drug use among girls were established through a binary logistic regression. The contribution of all variables represents a girls' likelihood of using substance/drugs. The table depicts the odds ratio (e) standard error (Std Err.) and significance level for coefficients (p-value). In all cases, unless stated, the level of significance is at 95%. The coefficient is interpreted as a chance of a girl using drugs compared to the reference category of the variable when all other factors included in the model are held constant. The model was a good fit (P-value=0.0000). **Tables 6 shows the multivariate analysis of factors that predict Substance use among Girls.**

Variable	**Odds Ratio**	**Std Err**	**p-value**
Do your parents use substance			
No	.2582707	.098744	**0.000**
Who tops upon your school fees			
Father	1.007747	.4436617	0.986
Relative	3.285723	1.754178	**0.026**
Non-Relative	.659964	.4816045	0.569
Do you know any or some of your friends taking substance			
No	2.697194	1.708051	0.117
Where do your friends take the substances from?			
School	1.778331	.9278952	0.270
Both Home and School	5.499676	7.298083	0.199
Other	.3392296	.1557611	**0.019**
Are there some girls you know who use substances			
No	1.782479	.7939876	0.194
Have you ever fallen sick due to substance use			
No	.0993571	.0705162	**0.001**
Do you know any who has fallen sick due to substance use			

No	.6960657	.2946444	0.392
Do you think Faith in God helps to prevent use substances among girls			
No	3.570441	2.350378	0.053
Do you think attending church may reduce the use of substances			
No	5.372475	2.898917	**0.002**

95% confidence interval

The results in table above reveals that;

With an odds ratio of 0.2582707 girls whose parents were not taking substance were less likely to use drugs as compared to those whose caretakers were using substance (p=0.000).

Girls whose fees was topped up by relatives with odds ratio 3.285723 were more likely to use substance/drugs as compared to those who were topped up by non-relatives (p=0.026).

With and odds ratio of 0.3392296 girls were taking substance from other places were less likely to use drugs as compared to their counterparts who consumed it from home (p=0.019).

With an odds ratio of 0.099357, girls who had ever fallen sick due to substance use had fewer chances of using substance/drugs as compared to their counterparts who have never (p=0.001).

With an odds ratio of 5.372475, girls who thought attending church may not reduce the use of substances were 5.372475 times more likely to use substance/drugs as compared to their counterparts who did not think so (p=0.002).

The factors like; “Do you know any or some of your friends taking substance”, “Are there some girls you know who take drugs” and “Do you think Faith in God helps to

prevent use substances among girls" did not significantly predict use of substance among girls.

The remaining factors however predicated substance use perfectly!

Chapter Five: Discussion of the Study Findings

5.0 Introduction

This chapter discusses the study results of the present research and gives policy recommendations based on the findings.

5.1 Substance use among girls

Demographic Information

The majority of participants (60.76%) were in the age group of 16-18 years. The prevalence reported in this study is lower than the 70.1% prevalence identified by Abbo et al. (2016) in their research conducted in central and northern Uganda. This discrepancy may be attributed to the fact that this study focused on girls participating in the compassion project. Research conducted by Aber-Odonga et al. (2024) found that 72.5% of children tested with suspected AUD/SUD fell between the age range of 14-17 years. Furthermore, Strashny (2016) states that a significant majority (74.0%) of individuals seeking treatment for substance misuse started their substance use at the age of 17 or younger. This seems to suggest that the study group is typically more susceptible to substance misuse.

Anglicans constituted the largest percentage of respondents (29.16%), followed by Catholics (28.34%), while those adhering to traditional faith represented the smallest number at 1.91%. The prevalence of religious affiliation among the participants in the region may be greatest among Anglicans and Catholics because they have developed institutions, such as educational or medical facilities, that have a substantial impact on society and draw in adherents. Regarding the living arrangements of the adolescent girls, the majority of the respondents (31.61%) reported living with both parents. The second-largest group (25.34%) stated that they lived with relatives, while the smallest group (2.45%) reported living with compassionate individuals. In addition, conditions like economic instability or social problems might result in a greater proportion of survey participants residing with extended family members instead of their nuclear family.

A majority (54.37%) of the respondents were acquainted with at least one individual who engages in substance use. The majority (42.29%) of those who used substances obtained them from their own homes, followed by schools (29.07%), and lastly from both their homes and schools (1.76%). The majority (54.37%) of adolescent girls were aware of at least one person taking drugs, which highlights the widespread occurrence of substance use within the social networks of adolescent females. The high occurrence of this phenomenon may be ascribed to a multitude of reasons, including peer influence, family relationships, and larger cultural influences. Moreover, the discovery that a significant proportion (42.29%) of drug users obtained their substances from their own homes raises concerns regarding the ease of access and availability of substances within the family setting. Additionally, it implies that there can be insufficient oversight within households, which raises the likelihood of teenagers engaging in substance experimentation or usage.

The vast majority (85.01%) of the respondents said that having trust in God reduces drug use, whereas conversely, a significant majority (84.97%) of the respondents believed that having faith in God helps avoid substance use. This observation likely reflects the prevalent cultural and religious beliefs within the questioned group, which view faith as a protective measure against substance use. Furthermore, a significant majority of respondents (77.11%) said that regularly visiting church, at least once a week, is likely to decrease drug usage. The elevated proportion might be attributed to religious doctrines discouraging substance misuse, the assistance and responsibility present in religious societies, and the feeling of meaning and satisfaction obtained from religious rituals. Lastly, the majority (78.20%) said that guys were more inclined to use substances compared to girls (21.80%). The view may be shaped by social preconceptions and cultural conventions that link substance use

with masculinity, as well as variations in reported substance usage trends between genders in different research and surveys.

5.2 Prevalence Substance use among girls

The prevalence of substance use among girls stands at 55.86%. This finding is high and suggests a significant public health challenge within these communities. When compared to other studies, this prevalence is considerably higher. For instance, a study conducted in the urban slums in Kampala reported substance use rates among adolescent girls at approximately 34.9% (Kalungi et al., 2023), while another study in South Africa found prevalence rates around 35% (Peltzer et al., 2011). The stark contrast between these figures indicates that the problem of substance use among girls in Nakawa and Kawempe may be more severe, potentially due to different socio-economic, cultural, or environmental factors. Several factors might contribute to the higher prevalence in Kampala. These may include the high levels of poverty, lack of educational opportunities, and limited access to mental health services, which can exacerbate the vulnerability of girls to substance use (UNICEF, 2019). Additionally, societal and familial pressures, coupled with the stresses of urban living in low-income areas, may drive higher rates of substance use as a coping mechanism (Brook et al., 2016).

Among those who have ever consumed drugs, the majority (48.29%) reported using alcohol. This finding aligns with the study conducted by Johnson et al. (2014), which found that alcohol is the most commonly used substance among teenagers. Additionally, the findings align with those of Ngesu et al (2008) which indicated that alcohol was the substance most commonly misused by students. The high prevalence of alcohol use can be attributed to the social acceptability of drinking within certain

social circles, which in turn may encourage teenagers to start alcohol consumption at a young age. Furthermore, the impact of peer pressure can also play a significant role, as teenagers may feel compelled to adhere to their peers who engage in drinking behaviors (Ivaniushina et al., 2019). Furthermore, the easy accessibility of alcohol, coupled with lax enforcement of age restrictions, enables teenagers to get and use alcohol. From a sociological standpoint, several reasons such as scholastic stress or familial challenges may drive adolescents to turn to alcohol as a coping mechanism. However, these studies vary in terms of the drug that was taken. This analysis reveals that cocaine (11.22%) was the second most used substance, behind marijuana, which ranked second in the study conducted by Johnson et al. (2014). This discrepancy may be attributed to the distinct geographical regions in which the two investigations were conducted. Additionally, this study corroborates the findings of Abbo et al. (2016) which identified the most prevalent drugs ever used as alcohol (19.3%), followed by kuber (4.4%), cigarettes (3.9%), marijuana (2.9%), aviation fuel (1.9%), and khat (1.7%).

Regarding drug usage by guardians/caretakers, the majority (54.72%) did not use drugs. Among those who did use drugs, the most common substance was alcohol (51.03%), followed by cigarettes (10.82%), cocaine (7.22%), marijuana (7.22%), and the least common were khuba, khart, and heroin, each at 1.03%. The statistics indicating that a majority (54.72%) of guardians or caregivers abstained from drug use is a promising sign of responsible conduct within this particular group. Nevertheless, the reported drug usage by certain guardians or caretakers raises concerns regarding the possible impact of substance use inside the family setting.

5.3 Factors contributing to substance use among girls (Bivariate analysis)

5.3.1 Individual Factors

The findings demonstrate many statistically significant correlations between the substance usage and numerous demographic and environmental characteristics among teenage girls. Most of the girls above 18 years exhibited a greater incidence of substance use, with 64.76% reporting having used substances at some point. The study results are in agreement with the study by Bush and Lipari (2016) who combined data from 2008 to 2012 which indicated that a substantial number of people aged 18 used alcohol heavily in the past month. This trend suggests a possible correlation between age and the start of drug use, emphasizing the importance of targeted preventive strategies for various age groups to tackle changing risk factors and behaviors. Education level is identified as an additional relevant factor, with a higher prevalence of drug use observed among those with lower levels of education. More precisely, 89.66% of those in senior 1-2 acknowledged engaging in substance use, whereas the percentage was 45.38% among those in senior 3-4. The difference seen may be due to differences in the amount of exposure, influence from peers, and developmental characteristics at different educational stages. This highlights the need to intervene early and provide customized assistance within schools to reduce the risks associated with drug use among vulnerable groups.

Religion has a considerable influence on drug use habits, and there are noticeable variations across different religious affiliations. The incidence of substance use was highest among respondents who identified with traditional faiths, while Pentecostals had the lowest prevalence at 41.51%. These findings highlight the intricate relationship between cultural norms, spiritual beliefs, and social settings in shaping

substance-related attitudes and behaviors within religious groups. The living arrangements of girls have been identified as a significant contextual element that influences their drug use. According to the statistics, the group with the greatest percentage of drug users were individuals who had lost both parents (89.29%), while those who lived with their moms had the lowest frequency at 39.68%. This implies that having strong support and stability within the family can help prevent substance use. It emphasizes the need to implement treatments that focus on the family, aiming to enhance parent-child interactions and offer enough supervision and direction.

Moreover, the impact of peer dynamics on substance use is apparent, as most participants said that they engage in drug use with their classmates or relatives. This highlights the relevance of social networks and peer interactions in influencing substance-related behaviors, underscoring the need to encourage good peer influences and create supportive social environments within school and home settings. The data also indicates a link between caregiver substance use and adolescent substance use, since the majority of respondents whose caregivers were substance users also reported substance use (77.91%). This is in line with Stea et al. (2019) who demonstrated that teenagers whose parents had alcoholism started drinking heavily earlier than their classmates. In contrast, a significant majority (63.96%) of those whose parents had never used drugs did not partake in substance use. This emphasizes the critical role of parental modeling and family dynamics in shaping adolescents' behaviors, emphasizing the need for specific treatments that attempt to assist families impacted by drug use and improve parental monitoring and support systems. Furthermore, school plays a prominent role in the occurrence of substance use among teenage females, as the majority (84.85%) of them report

engaging in substance use while at school. This study is in agreement with Dudovitz et al. (2016) who concluded that using alcohol or marijuana at school should be immediately and carefully screened. This underscores the necessity of implementing comprehensive interventions in schools that target environmental risk factors, foster good peer connections, and offer information and support services to minimize the negative effects of drug use within educational environments.

5.2.2. Church activities involvement and use of drugs

The general agreement among respondents about the preventative impact of church engagement on drug misuse is remarkable, as a significant 59.67% strongly concur that involvement in church activities, such as choir and youth groups, acts as a safeguarding element. This is in agreement with a study by Mazikana et al. (2023) which established that churches in Zimbabwe have the potential to collaborate with other organizations in combating the problem of substance misuse and drug abuse. This discovery highlights the substantial impact of religious involvement on changing the actions and attitudes of teenage girls towards drug use. Engaging in church activities frequently offers a well-organized setting for social engagement, advice from mentors, and spiritual direction, promoting a feeling of inclusion and meaning. In these environments, adolescents can form beneficial friendships, connect with support systems, and learn effective strategies to avoid participating in dangerous activities such as drug and substance misuse.

The consensus on this issue indicates a universal acknowledgement of the positive impact of religious engagement in fostering healthy behaviors and resistance against substance misuse. Furthermore, it emphasizes the perceived need for comprehensive strategies for prevention that include spiritual and moral aspects in

addition to educational and behavioral treatments. Furthermore, the significant percentage of participants who expressed agreement (16.62%) further strengthens the agreement on the beneficial influence of church activities, suggesting a wide range of support for utilizing religious resources in preventative methods This is in agreement with a study by Johnson and Pagano (2014) who found that spiritual support and religious involvement can be an integral part of dealing with substance use. Nevertheless, the fact that a significant percentage of respondents (9.54%) expressed neutral feelings, while 8.99% strongly disagreed and 5.18% disagreed, highlights the need to take into account subtle and detailed factors. It implies that while some people recognize the potential benefits of participating in a church, others may have differing opinions or see limitations in its effectiveness. The presence of different viewpoints highlights the need to customize preventative initiatives to suit the diverse ideas and preferences within communities, guaranteeing inclusion and cultural appropriateness in the planning and execution of programs.

5.2.3 Family, Community and Environmental Factors

A significant majority (45.78%) of the participants strongly concur that an inadequate relationship between females and their guardians or parents is a contributing factor to drug and substance misuse. This is in line with a study done in Kenya by Odhiambo (2020) who established that poor relationship between girls and parents/guardians, ineffective guidance and counselling contributed to substance use. This research emphasizes the need to cultivate strong and supportive ties within the family as a means of preventing drug misuse among teenage females. Furthermore, a significant majority (34.33%) strongly concurred that certain girl's

resort to drug use as a means of alleviating parental pressure, while the smallest percentage (9.81%) remained neutral. This is in agreement with a study done by Montgomery et al. (2008) on the effects of perceived parenting style on the propensity for illicit drug use: the importance of parental warmth and control. This emphasizes the importance of targeted interventions that address substance use within family dynamics and foster healthier family relationships. In addition, the significant agreement (34.33%) among respondents who strongly believe that certain girls resort to drugs as a way to cope with pressures from their parents and society reveals the intricate relationship between external stressors and substance use in adolescents. It also emphasizes the importance of understanding the various factors that contribute to drug use among young girls, such as social and familial pressures.

Furthermore, the results shed light on the intricate interaction of several variables that contribute to the susceptibility of teenage females to drug and substance misuse. The participants largely accepted that drug usage is appealing as a method of fleeing issues (23.71%) and recognized the lack of understanding about the consequences of such activities (28.07%). This in agreement with a study by Ngesu (2014) who reveals that some women abused substances to control their emotions, that is to say, it was a away, induce sleep, and keep calm. This highlights the need for extensive education programs that address the psychological and physiological consequences of drug misuse. In addition, the study found that familial dynamics had a crucial role in determining outcomes. There was a consensus that girls from single-parent families were more vulnerable (24.25%) and that parenting methods had a substantial influence (24.32%). It is essential to address the issue of familial rejection (27.52%) and promote supportive family situations in order to reduce the risks of drug misuse among teenage females. This highlights the important role that

family structures play in preventive efforts. Furthermore, the study revealed that individuals acknowledged the significant role of traditional cultures (22.74%) and peer pressure (42.51%) in influencing substance use habits. This is in agreement with the study by Njeru and Ngesu (2014) who established that peer pressure was a factor associated with drug and substance use. Futher, the study is in agreement with Ongwae (2016) who established that most students were driven into drug use by peer pressure. Effective therapies should incorporate culturally relevant strategies and allow teenagers to effectively counteract harmful peer effects. Moreover, the poll emphasized the protective function of religious activities, with a high level of consensus on the importance of faith in avoiding (51.77%) and decreasing (44.69%) substance use. This is in alighnment with a study by Nyaoke (2013) who indicated that lack of direction and purpose in life, and spiritual emptiness influenced drug and substance use. Therefore, community-based initiatives, such as church involvement, can play a crucial role in promoting resilience and encouraging positive lifestyle choices among adolescent girls. This highlights the significance of comprehensive approaches that tackle social, cultural, and familial factors in preventing substance use.

5.3 Predictors of substance use among adolescent girls (Multivariate analysis)

The odds ratio of 0.2582707 suggests that girls whose parents were not taking substances were approximately 0.258 times less likely to use drugs compared to those whose parents were using substances. This finding highlights the significant impact of parental substance use on the drug use behavior of adolescent girls. Several factors could contribute to this result. First, parental substance use can serve as a model for behavior, influencing children to adopt similar patterns of substance use. When caretakers engage in substance use, it may normalize this

behavior within the household and reduce perceived risks associated with drug use among children. Second, parental substance use may also affect the level of supervision and guidance provided to children (Lander et a., 2013). Caretakers who are under the influence of substances may be less attentive to their children's activities and less capable of providing appropriate guidance regarding substance use. Additionally, the home environment of girls whose parents are not taking substances may be more conducive to healthy behaviors and positive influences. These girls may have greater access to supportive relationships, structured activities, and resources that deter substance use (Hernandez et al., 2015). Overall, this result highlights the critical role of parental behavior and household dynamics in shaping the substance use behavior of adolescent girls. Interventions aimed at preventing substance use among this population should consider the influence of parental substance use and provide support and resources to families to promote healthy behaviors and environments.

The odds ratio of 3.285723 indicates that girls whose fees were topped up by relatives were approximately 3.286 times more likely to use substances compared to those whose fees were supported by non-relatives. This finding shed light on the potential influence of financial support sources on drug use behavior among adolescent girls. When fees are subsidized by relatives, it may suggest a closer familial relationship or financial dependency, which could impact the level of supervision and guidance provided to the girl. It's possible that girls receiving financial support from relatives may have less parental oversight or receive mixed messages about substance use from their family members, leading to a higher likelihood of experimentation with drugs (Lander et a., 2013). Additionally, the dynamics within family relationships and the extent of communication about

substance use may differ between those supported by relatives and non-relatives, further influencing drug use behavior. This result suggests the importance of considering familial and financial factors when developing interventions aimed at preventing substance use among adolescent girls. Providing support and resources to families to facilitate open communication about substance use and promoting positive family dynamics may help mitigate the risk of drug experimentation and use (Kumpfer, 2014). Additionally, offering alternative forms of support for girls whose fees are subsidized by relatives could help address underlying vulnerabilities and reduce the likelihood of substance use.

The odds ratio of 0.3392296 indicates that girls who consumed substances from places other than home were approximately 0.339 times less likely to use drugs compared to those who obtained them from within their household. This finding underscores the significant impact of environmental factors on drug use behavior among adolescent girls. Access to substances, social dynamics, and peer influence can vary significantly depending on the location where substances are obtained. Girls who acquire substances outside of their home environment may face different social circles and levels of peer pressure, potentially reducing the likelihood of regular drug use. Additionally, increased parental oversight within the home environment may contribute to a lower accessibility of sunstances, further discouraging substance use (Bahr et al., 2005). These insights suggest that interventions targeting environmental factors, such as limiting access to substances within the home and promoting alternative activities outside of the home environment, could be effective strategies for mitigating substance use among adolescent girls.

The odds ratio of 0.099357 indicates that girls who had ever fallen sick due to substance use were approximately 0.099 times less likely to use drugs compared to those who had never experienced such consequences. This finding suggests that experiencing negative health outcomes associated with substance use serves as a significant deterrent to further substance use among adolescent girls. Experiencing sickness or adverse effects from substance use may act as a wake-up call, prompting individuals to reconsider their behavior and prioritize their health. The physical discomfort and consequences of substance-related illness may deter girls from continuing to use substances in order to avoid further harm (Lander et al., 2013). Moreover, experiencing sickness due to substance use may increase awareness of the risks and consequences associated with substance use. Girls who have firsthand experience with the negative effects of substances may be more inclined to make informed decisions to avoid further substance use in order to protect their health and well-being. Overall, this result highlights the importance of incorporating education and awareness about the health risks and consequences of substance use into prevention efforts targeting adolescent girls. Providing information about the potential negative effects of substances and highlighting personal stories of individuals who have experienced substance-related illness may help deter drug experimentation and promote healthier choices among this population.

The odds ratio of 5.372475 indicates that girls who believed that attending church may not reduce substance use were approximately 5.372 times more likely to use substances compared to their counterparts who did not share this belief. This finding highlights the potential influence of attitudes towards religion and its perceived impact on substance use on actual drug use behavior among adolescent girls. Girls who doubt the effectiveness of church attendance in reducing substance use may

have less engagement with religious communities or may not perceive religion as a protective factor against substance use. As a result, they may be less inclined to adhere to religious teachings or values that discourage substance use (Grim & Grim, 2019).

Further, girls who hold skeptical views about the role of church attendance in reducing substance use may have different social networks and influences compared to those who believe in its efficacy. Peer groups and social norms within religious communities may serve as protective factors against substance use, while girls who do not view church attendance as a deterrent may lack these protective influences (Quinn et al., 2023). Overall, this result underscores the importance of considering attitudes towards religion and spirituality in substance use prevention efforts targeting adolescent girls. Interventions that promote positive attitudes towards religion, facilitate engagement with religious communities, and emphasize the protective role of religious values and teachings may help reduce the likelihood of substance use among this population. Additionally, addressing misconceptions and doubts about the efficacy of religious involvement in substance use prevention may be important in promoting healthier attitudes and behaviors.

5.4 Conclusion

The prevalence of substance use among girls, at 56.4%, highlights a serious public health challenge that demands urgent and targeted intervention. This alarming rate indicates the need for comprehensive and evidence-based approaches to prevention, early detection, and treatment. Efforts must focus on raising awareness, strengthening community support systems, and implementing programs tailored to address the unique vulnerabilities faced by adolescent girls.

The factors driving substance use among girls are complex and multifaceted, rooted in a combination of individual, social, and environmental influences. Individual factors may include coping mechanisms peer pressure, and a lack of awareness about the risks of substance use. Socio-environmental influences such as family dynamics, societal norms, economic hardships, and exposure to risky behaviors also play a significant role. A holistic approach that addresses these varied influences is essential for effective prevention and rehabilitation strategies.

5.4 Recommendations

Establishing secure settings that provide counseling, help, and mentorship is crucial for preventing substance use among young girls. Community and peer support can achieve this. Peer support groups, after-school programs, and recreational activities provide advantageous possibilities for social engagement and skill development. Engaging community leaders, volunteers, and role models as mentors may offer guidance and assistance to at-risk young people. Enabling girls to participate in community service efforts or leadership development programs fosters a sense of inclusion and purpose.

Religious-based interventions: Through the utilization of religious institutions and faith-based groups, we may effectively deter substance use since we view confidence in God and active involvement in church as elements that provide protection against it. Religious groups may have a significant impact on promoting substance use prevention by utilizing their existing networks and resources. By actively collaborating with clergy members, youth pastors, and religious educators,

we can effectively incorporate substance use education into religious teachings and youth programming, thereby reaching a wide and varied audience. Creating faith-based support groups, retreats, and counseling programs can provide those struggling with drug abuse with spiritual guidance and emotional support. Applying religious values such as empathy, forgiveness, and personal responsibility enhances positive behavior and resilience.

References

Abbo C, Okello ES, Muhwezi W, Akello G, Ovuga E. Alcohol, Substance Use and Psychosocial Competence of Adolescents in Selected Secondary Schools in Uganda: A Cross Sectional Survey. Int Neuropsychiatr Dis J. 2016;7(2):25387. doi: 10.9734/INDJ/2016/25387. PMID: 27398388; PMCID: PMC4936516.

Aber-Odonga, H., Babirye, J. N., Engebretsen, I. M. S., & Nuwaha, F. (2024). Prevalence of probable substance use disorders among children in Ugandan health facilities. BMC public health, 24(1), 314. https://doi.org/10.1186/s12889-024-17732-6

Adelekah, P., Makanjuola, E., Ndom, U., Fayeye, Y., Adegoke, M., & Amusan, K. (2015). On the importance of peer influence for adolescent drug abuse: commonly neglected considerations. *Journal of Addiction, 91(2*), 185-198

Alimi, K. M., & Olayiwola, I. O. (2015). Personal variables as correlate of drug use behaviour among secondary school students in Osun State, Nigeria. *Journal of Educational and Social Research*, *5*(2), 205.

Anderberg, M., & Dahlberg, M. (2018). Gender differences among adolescents with substance use problems at Maria clinics in Sweden. Nordic Studies on Alcohol and drugs, 35(1), 24-38.

Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Schulenberg, J. (2018). Transitions in drug use during late adolescence and young adulthood. In *Transitions through adolescence* (pp. 111-140). Psychology Press.

Bahr, S. J., Hoffmann, J. P., & Yang, X. (2005). Parental and peer influences on the risk of adolescent drug use. *Journal of primary prevention*, *26*, 529-551. http://dx.doi.org/10.1007/s10935-005-0014-8

Baridalyne, N. (2012). Sampling, sample size estimation and randomisation. *Indian J. Med. Spec*, *3*, 195-197.

Bhandari, R., Kirilina, E., Caan, M., Suttrup, J., De Sanctis, T., De Angelis, L., ... & Gazzola, V. (2020). Does higher sampling rate (multiband+ SENSE) improve group statistics-An example from social neuroscience block design at 3T. *NeuroImage*, *213*, 116731.

Balogun, O., Koyanagi, A., Stickley, A., Gilmour, S., & Shibuya, K. (2014). Alcohol consumption and psychological distress in adolescents: a multi-country study. *Journal of adolescent health*, *54*(2), 228-234.

Beavers, A. S., Lounsbury, J. W., Richards, J. K., Huck, S. W., Skolits, G. J., & Esquivel, S. L. (2013). Practical considerations for using exploratory factor analysis in educational research. *Practical Assessment, Research, and Evaluation*, *18*(1), 6.

Blanchette-Martin, N., Tremblay, J., Gendron, A., & Tessier, M. Brunelle, N. (2014). Relationships between drugs and delinquency in adolescence: Influence of gender and victimization experiences. Journal of Child & Adolescent Substance use, 23(1), 19-28.

Botzet, A. M., Winters, K. C., & Stinchfield, R. (2006). Gender differences in measuring adolescent drug abuse and related psychosocial factors. Journal of Child & Adolescent Substance use, 16(1), 91-108.

Bush, D. M., & Lipari, R. N. (2016). Substance use and substance use disorder by industry. https://www.samhsa.gov/data/sites/default/files/report_1959/ShortReport-1959.html

De Vaus, D. (2008). Comparative and cross-national designs. *The SAGE handbook of social research methods*, 249-264.

Dudovitz, R. N., McCoy, K., & Chung, P. J. (2015). At-school substance use as a marker for serious health risks. Academic pediatrics, 15(1), 41–46. https://doi.org/10.1016/j.acap.2014.06.022

Farrell, S., Manning, W. G., & Finch, M. D. (2003). Alcohol dependence and the price of alcoholic beverages. *Journal of Health Economics*, *22*(1), 117-147.

Grim, B. J., & Grim, M. E. (2019). Belief, Behavior, and Belonging: How Faith is Indispensable in Preventing and Recovering from Substance use. *Journal of religion and health*, *58*(5), 1713–1750. https://doi.org/10.1007/s10943-019-00876-w

Hali,M. (2017), The Predisposing Factors of Substance use among Women in Kano Metropolis.(unpublishedM.Sc dissertation),Department of Sociology, Bayero University, Kano- Nigeria.

Haugland, S. H., Coombes, L., & Stea, T. H. (2019). Associations between parenting and substance use, meal pattern and food choices: a cross-sectional survey of 13,269 Norwegian adolescents. *Preventive medicine reports*, *14*, 100862.

Hernandez, L., Rodriguez, A. M., & Spirito, A. (2015). Brief Family-Based Intervention for Substance Abusing Adolescents. *Child and adolescent psychiatric clinics of North America*, *24*(3), 585–599. https://doi.org/10.1016/j.chc.2015.02.010

Islam, M. S., Hasan, M. M., Wang, X., Germack, H. D., & Noor-E-Alam, M. (2018). A Systematic Review on Healthcare Analytics: Application and Theoretical Perspective of Data Mining. Healthcare (Basel, Switzerland), 6(2), 54. https://doi.org/10.3390/healthcare6020054

Ivaniushina, V., Titkova, V., & Alexandrov, D. (2019). Peer influence in adolescent drinking behaviour: a protocol for systematic review and meta-analysis of stochastic actor-based modeling studies. BMJ open, 9(7), e028709. https://doi.org/10.1136/bmjopen-2018-028709

Johnson, B., & Pagano, M. *(2014)*. Can faith rewire an addict's brain? New evidence shows that 'God Consciousness' can keep young people off drugs and alcohol, *March 27. Retrieved from https://www.wsj.com/articles/byron-johnson-and-maria-pagano-can-faith-rewire-an-addicts-brain-1395961374. Accessed April 16, 2024.*

Johnson LD, O'Malley PM, Bachman JG, Schulenberg JE, Miech RA. (2014) Monitoring the Future national survey results on drug use, 1975-2013: Volume 1, Secondary school students. Ann Arbor, MI: Institute for Social Research, University of Michigan, 2014: 32-36.

Karlsson, P., Ekendahl, M., Gripe, I., & Raninen, J. (2018). Individual and school-class correlates of youth cannabis use in Sweden: A multilevel study. *Nordic Studies on Alcohol and Drugs*, *35*(2), 131-146.

Kemei, C. R. (2014). Effectiveness of drug and substance use prevention programs in selected public and private universities in Kenya. *Unpublished PhD Thesis in Counselling Psychology). Kenyatta University, Kenya*.

Kumpfer K. L. (2014). Family-based interventions for the prevention of substance use and other impulse control disorders in girls. *ISRN Addiction*, *2014*, 308789. https://doi.org/10.1155/2014/308789

Lander, L., Howsare, J., & Byrne, M. (2013). The impact of substance use disorders on families and children: from theory to practice. Social work in public health, 28(3-4), 194–205. https://doi.org/10.1080/19371918.2013.759005

Lebron, C., Stoutenberg, M., Janowsky, M., Asfour, L., Huang, S., & Prado, G. (2017). The role of physical activity and sedentary behavior in substance use and

risky sex behaviors in hispanic adolescents. *The Journal of Early Adolescence*, *37*(7), 910-924.

Lozano, R., Naghavi, M., Foreman, K., Lim, S., Shibuya, K., Aboyans, V., ... & Remuzzi, G. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the Global Burden of Disease Study 2010. The lancet, 380(9859), 2095-2128.

Kavutha, M. J., & Kariuki, M. (2015). Influence of drug use on academic performance among secondary school students in Matinyani District, Kenya. International Journal of Scientific and Research Publications, 5(11), 726-732.

Kahn, K. B., Barczak, G., & Moss, R. (2006). Perspective: establishing an NPD best practices framework. *Journal of Product Innovation Management*, *23*(2), 106-116.

Kitchenham, B., & Pfleeger, S. L. (2003). Principles of survey research part 6: data analysis. *ACM SIGSOFT Software Engineering Notes*, *28*(2), 24-27.

MacDonald, S. & Headlam, N. (2012). Research Methods Handbook Introductory guide to research methods for social research, Centre for Local Economic Strategies. http://www.cles.org.uk/publications/research-methodshandbook

Matthew Loftus| (2016) Is Addiction a Disease? Yes, and Much More: Four core aspects of recovery that are essential for addressing addiction. https://www.christianitytoday.com/ct/2016/december/is-addiction-disease-yes-and-much-more.html

Mazikana, Anthony., Soko, Sneddon., Ncube, Doreen (2023). The role of the church in curbing youth drug and substance use: a case study of the Roman catholic parish in Mbare, Harare. JO - Social work and social education

Memedovic S., Slade, T., Ross, J., Darke S., Mills K.L. , Marel C., Teesson M. (2019). Rumination and problematic substance use among individuals with a long-term history of illicit drug use Drug and Alcohol Dependence, 203 (2019), pp. 44-50

Montgomery, C., Fisk, J. E., & Craig, L. (2008). The effects of perceived parenting style on the propensity for illicit drug use: The importance of parental warmth and control. Drug and alcohol review, 27(6), 640-649.

Moran PB, Vuchinich S, Hall NK. (2004) Associations between types of maltreatment and substance use during adolescence. Child Abuse and Neglect. 2004;28(5):565–574.

Nasir, I. S. (2013). Factors Contributing to Drug Abuse Among the Youth in Kisenyi, Rubaga Division, Kampala Uganda (Doctoral dissertation, International Health Sciences University).

Nyaoke, L. M. (2013). *Determinants of the prevalence of drug and substance use amongst Youth in institutions of Higher learning in Mombasa County* (Doctoral dissertation, University of Nairobi).

Ngesu, L.M., Ndiku, J., Masese, A. (2008). Drug dependence and abuse in Kenya secondary schools: Strategies for intervention. Academic Journal of Education 7(45), 304-308.

Ngesu, L. M., & Njeru, A. N. (2014). Causes and effects of drugs and substance use among secondary school students in Dagoreti division, Nairobi West district.

Odhiambo, D. (2020). Drug and substance use and their effects on girls' academic performance in secondary schools in Nakuru County, Kenya.

Ongwae, M. N. (2016). *A study of the causes and effects of drug and substance use among students in selected secondary schools in Starehe Sub County, Nairobi County* (Doctoral dissertation, University of Nairobi).

Orodho, A. J., & Kombo, D. K. (2002). Research methods. *Nairobi: Kenyatta University, institute of open learning*.

Patrick, M. E., Wightman, P., Schoeni, R. F., & Schulenberg, J. E. (2012). Socioeconomic status and substance use among young adults: a comparison across constructs and drugs. *Journal of studies on alcohol and drugs*, *73*(5), 772-782.

Pedersen, W., & Skrondal, A. (1998). Alcohol consumption debut: predictors and consequences. *Journal of studies on alcohol*, *59*(1), 32-42.

Pengpid S. and Peltzer K. (2019). Early substance use initiation and psychological distress among adolescents in five ASEAN countries: A cross-sectional study. Psychology Research and Behavior Management, 12 (2019), pp. 1003-1008

Polit, D. F., & Beck, C. T. (2009). International differences in nursing research, 2005–2006. *Journal of Nursing Scholarship*, *41*(1), 44-53.

Prevalence and factors associated with substance use among girls in compassion international aided projects in nakawa and kawempe divisions, kampala district

Prochaska, J. J., Das, S., & Young-Wolff, K. C. (2017). Smoking, mental illness, and public health. *Annual review of public health*, *38*, 165-185.

Quinn, C. R., Waller, B., Hughley, A., Boyd, D., Cobb, R., Hardy, K., ... & Voisin, D. R. (2023). The Relationship between Religion, Substance Misuse, and Mental Health among Black Youth. *Religions*, *14*(3), 325. https://doi.org/10.3390/rel14030325

Rehm, J., Shield, K. D., & Ferreira-Borges, C., Manthey, J,. (2019). Trends in substance use and in the attributable burden of disease and mortality in the WHO European region, 2010–16. European Journal of Public Health, 29(4), 723-728.

Rusby, J. C., Light, J. M., Crowley, R., & Westling, E. (2018). Influence of parent–youth relationship, parental monitoring, and parent substance use on adolescent substance use onset. *Journal of family psychology*, *32*(3), 310.

Sekulic, D., Ostojic, M., Ostojic, Z. et al. (2012) Substance use prevalence and its relation to scholastic achievement and sport factors: an analysis among adolescents of the Herzegovina–Neretva Canton in Bosnia and Herzegovina. BMC Public Health 12, 274 (2012). https://doi.org/10.1186/1471-2458-12-274

Strashny, A. (2016). Age of substance use initiation among treatment admissions aged 18 to 30.

Strickland, J. C., & Smith, M. A. (2014). The effects of social contact on drug use: behavioral mechanisms controlling drug intake. *Experimental and clinical psychopharmacology*, *22*(1), 23–34. https://doi.org/10.1037/a0034669

Stone, A. L., Becker, L. G., Huber, A. M., & Catalano, R. F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive behaviors*, *37*(7), 747-775.

Tesfaye, G., Derese, A., & Hambisa, M. T. (2014). Substance use and associated factors among university students in Ethiopia: a cross-sectional study. Journal of addiction, 2014.

Wall AE, Kohl PL. (2007) Substance use in maltreated youth: findings from the national survey of child and adolescent well-being. Child Maltreatment. 2007;12(1):20–30.

Whitesell, M., Bachand, A., Peel, J., & Brown, M. (2013). Familial, social, and individual factors contributing to risk for adolescent substance use. *Journal of addiction*, *2013*.

United Nations Office on Drugs and Crime (2015). World Drug Report 2015 (United Nations publication, Sales No. E.15.XI.6).

United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019: Highlights (ST/ESA/SER.A/423).

UNDOC (2018). World Drug Report 2018 (United Nations publication, Sales No. E.18.XI.9).

United Nations Office on Drugs and Crime (2014). World Drug Report 2014 (United Nations publication, Sales No. E.14.XI.7).

W.H.O (2021). Adolescent health in the South-East Asia Region. https://www.who.int/southeastasia/health-topics/adolescent-health#:~:text=WHO%20defines%20'Adolescents'%20as%20individuals,15%2D24%20year%20age%20group. Accessed on 12 December 2022

W.H.O (2004). United Nations office for control of crime and prevention. Bath Press, Great Britain.

World Health Organization. (2019). Global status report on alcohol and health 2018. World Health Organization.

Whitesell, M., Bachand, A., Peel, J., & Brown, M. (2013). Familial, social, and individual factors contributing to risk for adolescent substance use. *Journal of addiction, 2013*.

World Health Organization (2016). Medication Errors: Technical series on safer primary care.

Wu, L. T., Blazer, D. G., Swartz, M. S., Burchett, B., Brady, K. T., & Workgroup, N. A. (2013). Illicit and nonmedical drug use among Asian Americans, Native Hawaiians/Pacific Islanders, and mixed-race individuals. *Drug and Alcohol Dependence*, *133*(2), 360-367.

Appendix I: Consent Form

My name is Dianah Anyine, I am pursuing a master's degree of Public Health from Uganda Christian University (UCU). I am requesting you to take part in my academic research study called: "***Prevalence and factors associated with substance use among girls in compassion international aided projects in Nakawa and Kawempe divisions, Kampala district"***

The purpose of this study is to:

1. To determine the prevalence of drug and substance use among girls in Compassion International aided project Nakawa and Kawempe divisions, Kampala District.
2. To determine the factors contributing to drug and substance use among girls in compassion international aided project Nakawa and Kawempe divisions, Kampala District

Study Procedures:

You are being asked to participate in this study, as a young girl in the Compassion international aided project, you can help us understand factors and prevalences associated with substance use among girls between 13 and 22 years in Nakawa and Kawempe divisions, Kampala District

- If you take part in this study, you will be asked to:
- Take part in a one-time, one-on-one, using a structured Questionnaire;
- The interview will take approximately 30minutes;
- The interview will take place at a location most convenient to you.

Benefits:

There may be no direct benefits associated with your participation in the study, but the information you will provide will be useful in planning and organizing health awareness campaigns on adolescent health services.

Risks or Discomfort:

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study.

Compensation:

No research participants will be compensated

Privacy and Confidentiality:

We will keep your study records private and confidential. Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

The research team, including the Principal Investigator and those involved with the study. I may publish what I have learnt from this study. If l do, l will not include your name. l will not publish anything that would let people know who you are.

Voluntary Participation / Withdrawal:

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

You can get the answers to your questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, or experience an adverse event or unanticipated problem, contact the principal investigator on +256775222447.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone

outside the research, call the Chairperson of Research Ethics Review committee UCU Dr. Edward Mukooza on (0772957345).

Assessment of understanding:

Please check which box best describes your assessment of understanding of the above informed consent document:

☐ I have read the above informed consent document and understand the information provided to me regarding participation in the study and benefits and risks. I give consent to take part in the study and will sign the following page.

_____ _____

Signature of Person Taking Part in Study Date

_____

Thumb print of Person Taking Part in Study

Appendices

Appendix II: Questionnaire

Hello,

My name is Dianah Anyine, a Masters student at Uganda Christian University undertaking a research titled "Prevalence and factors associated with substance use among girls in compassion international aided projects in Nakawa and Kawempe divisions, Kampala district" as part of the course. I kindly request you to participate in the research by filling this questionnaire. I wish to assure you that any information

given will be treated with utmost confidentiality and will be used only for purposes of this research ☐

Instructions

- Do not write your name on the Questionnaire
- Indicate the selected response by placing a tick in the appropriate cell/box
- Please be accurate and honest with your response.

Thank You

1. Age:

   13-14 ☐ 15-16 ☐

   17-18 ☐ > 18 ☐

2. Education level:

   Senior 1 or 2 ☐ Senior 3 or 4 ☐

   A 'level ☐ Tertiary/University ☐

3. Religion:

   Catholic ☐ Anglican ☐

   Pentecostal ☐ Muslim ☐

   Traditional Faith ☐ Other ☐

4. Whom do you live with?

   Both Parents ☐ Mother ☐

   Father ☐ Orphanage

   Relatives ☐ Kind People

5. Have you ever used any of the following

Alcohol ☐ Marijuana ☐

Cannabis ☐ Cocaine ☐

Methamphetamine ☐ Cigarettes ☐

Heroin ☐ Shisha ☐

Khart ☐ Khobar ☐

Pethidine ☐ Others…….

6. In the previous week, which of the following have you used?

Alcohol ☐ Marijuana ☐

Cannabis ☐ Cocaine ☐

Methamphetamine ☐ Cigarettes ☐

Heroin ☐ Shisha ☐

Khart ☐ Khobar ☐

Pethidine ☐ Others…….

7. If you have used any of the above drugs, whom have you used it with?

Friend ☐ Family member ☐

School mate ☐ Others ……..

8. What is the level of Education attained by your care taker or parents

Primary ☐ Secondary School ☐

Tertiary/University ☐ No Education ☐

9. Do your parents/caretaker use(d) drugs before?

   Yes ☐ No ☐

10. Who tops up on your school fees after compassion gives you half of the fees

    Non-relative ☐ Relativ ☐

    Parents ☐

11. Do you know any or some of your school mates/friends who use drugs:

    Yes ☐ No ☐

12. Where do they take the drugs from

    Home ☐ School ☐

    Other ☐

13. Are there some girls you know who have fallen sick due to drugs and substance use in your ☐ool? Yes ☐No

14. Have you ever fallen sick due to use of substances?

    Yes ☐ No ☐

15. Do you know any who has fallen sick duo to use of these substances?

    Yes ☐ No ☐

16. Do you think Faith in God increases the use to substances?

    Yes ☐ No ☐

17. Do you think Faith in God helps prevent use to substances?

    Yes ☐ No ☐

18. Who do you think is likely to use substances?

Boys ☐ Girls ☐

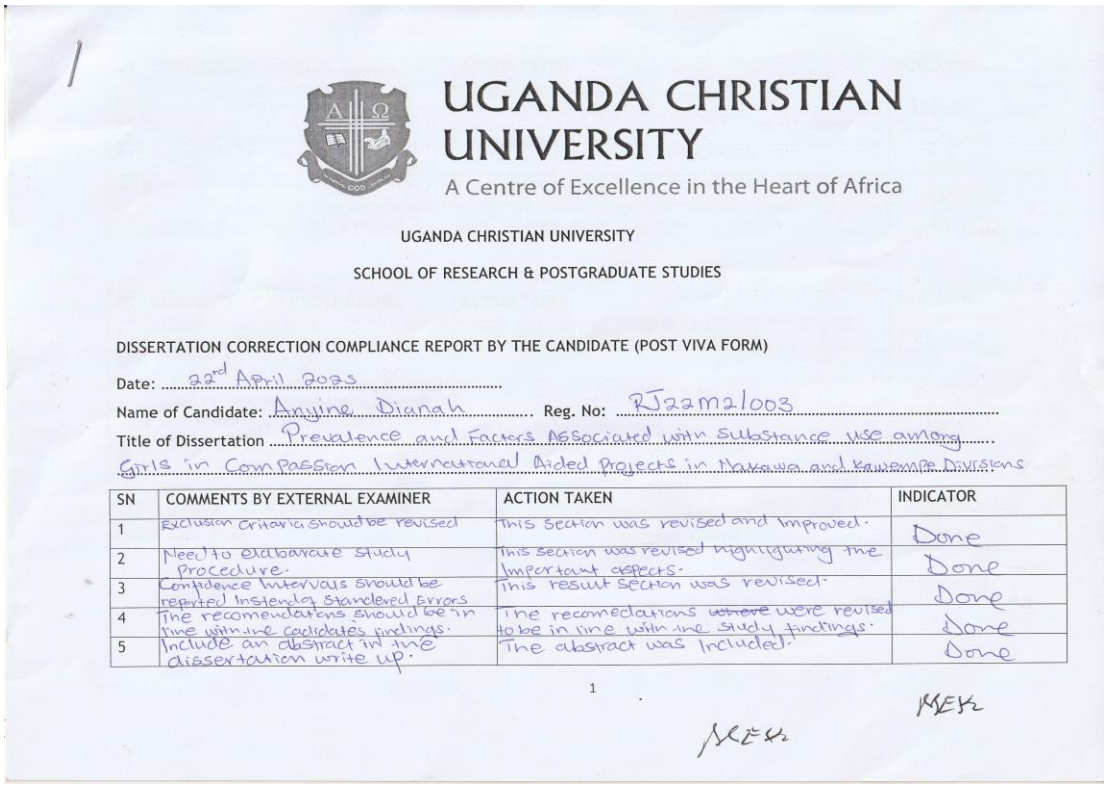
Section Two: Factors and prevalence Contributing Substance use among Girls

The following are items intended to determine the contributing factors to substance use among girls. In a scale of 1-5; where 5=strongly agree (SA); 4=Agree (A); 3= Neutral (N); 2=Disagree (D) and 1=strongly disagree (SD), please tick (√) where appropriate, the level that best explains your situation.

	Items	SA	A	N	D	SD
1	Poor relationship between girls and guardians/ parents contribute to substance use among girls					
2	Some girls learn using substances from their family members					
3	Some girls end up using substances as a way of releasing pressure from their parents and the society					
4	Lack of proper guidance and counselling from parents/ guardians leads girls to use substance.					
5	Some girls end up using substances when they lack someone to share their problems with School and					
6	Lack of proper guidance and counselling leads to girls to use drug and substance use					
7	Lack of cooperation between the parents may lead to girls to use drug and substance use					
8	The perception that substance use help you forget your problems motivates some girls to start using drugs					
9	Some girls in their earlier stages of drug and substance use do so out of ignorance on the effect of substance use					

11	Some girls tend to take excessive painkillers to counter the effect of substance use					
12	Girls from single families are more likely to use substance compared to girls with both parents					
13	Parents level of education influence substance use among girls					
14	Parenting style (authoritarian, authoritative, permissive and neglectful) influences the level of substance use					
15	Some of the girls who use substances might have suffered rejection from the members of their family					
17	Some traditional cultures may lead to substance use among girls					
18.	Some students who take drugs are ignorant on the effect substance use					
19.	Some girls who have too much pocket money in their disposal tend to use substances					
20.	Some girls tend to use substance because of lack of sleep					
21.	Some girls use substance because of influence from others (peer influence).					
22	Faith in God helps prevent use of substances among girls					
23	Going to Church may reduce the use of substances among girls					
24	Being involved in Church activities such as choir, youth groups helps prevents use of substances among girls.					

Appendix III Compliance Report.



UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

UGANDA CHRISTIAN UNIVERSITY

SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: 22nd April 2023

Name of Candidate: Anyino Dianah Reg. No: RJ22M2/003

Title of Dissertation Prevalence and Factors Associated with Substance use among Girls in Compassion International Aided Projects in Nakawa and Kawempe Divisions

SN	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Exclusion criteria should be revised	This section was revised and improved.	Done
2	Need to elaborate study Procedure.	This section was revised highlighting the important aspects.	Done
3	Confidence Intervals should be reported Instead of Standered Errors	This result section was revised.	Done
4	The recomendations should be in line with the candidates findings.	The recomendations ~~where~~ were revised to be in line with the study findings.	Done
5	Include an abstract in the dissertation write up.	The abstract was included.	Done

1

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	The problem needs to be clearly explained	I revised the problem statement to highlight the gap.	Done
2	Research methods used needs to be clearly demostrated	I revised the research section to capture key points.	Done
3	There is partial interpretation of data in the results section	The section was revised.	Done
4	Conclusion missing in the study	The conclusion is now included.	Done
5	Recomendations are not directed to specific stave holders.	The recomendations have been revised to meet the criteria.	Done.

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1	Present the crude odds ratio and confidence intervals in addition to P-value.	The following were included in the result section.	Done
2			
3	Key terms should be defined under operational definitions.	This was changed	Done
4	Coclusions to be written before recomendations.	This was revised.	Done.
5			

Anyine Dianah .... B.O.F.K. ....

Candidate's Name Signature Supervisor's Name Signature

2