

**INFLUENCE OF SUBSTANCE USE/ABUSE ON ADOLESCENTS' SOCIAL
BEHAVIOR IN PUBLIC SECONDARY SCHOOLS IN KISUMU EAST
SUB-COUNTY, KENYA**

BY

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DECLARATION

I declare that this draft thesis is my original work and has not been presented to any other institution for an award of a degree.

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DEDICATION

This work is dedicated to my dear mother Patience Teriki Kirop and my late father Joel Kirop Yano. I also dedicate it to the memory of my late sister Nancy Jemosop Kirop.

ABSTRACT

Substance use/abuse as shown by many studies is a serious problem in Kenya and world over. Studies indicate adolescents' substance use and abuse in secondary schools affect social behaviour. Strikes, stealing, running away from school, and other forms of antisocial behaviour are due to substance abuse. Kisumu County is listed by studies as leading in the use and abuse of substances among people aged 12-65years. In Nyanza, the prevalence among adolescents stands at 10%, while Kisumu County accounts for 26.8%. There has been a dearth of studies on adolescent substance use/abuse and its impact on social behaviour in public secondary schools in that area. This present study therefore, was conducted based on this existing knowledge gap. The purpose of this study was to ascertain the influence of adolescents' substance use and abuse on social behaviour in public secondary schools in Kisumu East Sub-County. The objectives of the study were to: determine the prevalence and gender disparity in substance use and abuse among adolescents in secondary schools, examine the extent to which parents, peers and the media influence adolescents' substance use and abuse, establish the influence of substance use and abuse on the adolescents' social behaviour, explore perceived strategies used to curb substance use and abuse among adolescents in secondary schools. The study was guided by Bandura's Social Cognitive Theory and a conceptual framework. Both descriptive survey and correlational research designs were used. The study's target population comprised 7528 secondary school students of ages 14-19 and 41 teachers in charge of guidance and counselling. Schools were sampled using stratified sampling technique. An acceptable representative sample of 366 adolescents was derived from Fisher's sampling formula and 12 teachers in charge of guidance and counselling automatically qualified since their schools formed the study's sample. Questionnaires and interview schedule were used to collect data. Reliability for the questionnaires was obtained through test-retest method. The two tests from the pilot study were correlated using Pearson's Product Moment Correlation and they yielded a coefficient of .780. Specialists in the Educational Psychology Department determined the research tools' face and content validity. The study employed descriptive statistics such as frequency counts, percentages, means and standard deviations to analyse quantitative data. Inferential (t-test) was used to test the gender disparity in substance use and abuse while Pearson Product Moment correlation and multiple regression models were used to establish the relationships and influence among the variables. Qualitative data was transcribed and organized as per the objectives and reported. The findings of the study indicated that there is a prevalence of 38.2% of substance use and abuse among adolescents. No significant gender difference was found in adolescents' use and abuse of substances. A positive significant relationship was found to exist between adolescents' use and abuse of substances and peers' influence ($\beta = .135$, $p = .007$). However, there was negative significant relationship between parents and media influence on the one hand and adolescent substance abuse on the other ($\beta = -.288$, $p = .000$) and ($\beta = -.153$, $p = .002$) respectively. Also, a positive significant relationship exists between use abuse of substances and adolescents' antisocial behaviour ($r = .525$, $p < .000$). Hierarchical regression results indicated that the selected factors accounted for 13.2% variance in substance use/abuse. Strategies used to counter substance use and abuse were: severe punishment to those abusing substances, incorporating in the curriculum aspects reinforcing self-esteem, assertiveness, problem solving and self-control skills as well as use of guidance and counselling. Findings of this study may be useful to MoE, students and other stakeholders like parents and teachers to develop effective strategies to mitigate substance use/abuse in secondary schools.

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LIST OF ACRONYMS

AACAP	- American Academy of Child and Adolescent's Psychiatry
APA	- American Psychiatric Association
APHR	- African Population and Health Research
CADUMS	- Canadian Alcohol and Drug Use Monitoring Survey
CBS	- Central Bureau of Statistics
DARA	- Drug and Alcohol Rehab Asia
DRSE	- Drinking Refusal Self-efficacy
DRTR	- Development Research Training Report
EMCDDA	- European Monitoring Centre for Drugs and Drug Addiction
ESSPAD	- European School Survey Project on Alcohol and other Drugs
FOCEU	- Foundation for Civic Education in Uganda
MoE	- Ministry of Education
MTF	- Monitoring The Future
NACADA	- National Authority for the Campaign against Alcohol and Drug Abuse
NIDA	- National Institute on Drug Abuse
NSDUH	- National Survey on Drug Use and Health
ONDCP	- Office of National Drug Control Policy
SAAPSA	- South African Alliance for the Prevention of Substance Abuse
UNDCP	- United Nations Drug Control Programme
UN-HABITAT	- United Nations Human Habitat
UNODC	- United Nations Office of Drugs and Crime
USA	- United States of America
WHO	- World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

This chapter covers the introduction, statement of the problem, the objectives of the study, questions and the significance and limitations of the study. It also has a section on theoretical and conceptual frameworks as well as definitions of terms.

Substances of abuse are a worldwide problem affecting rich and poor countries alike. Many nations spent millions of national resources fighting this problem. Substance use/abuse cuts across all genders and ages. Both adults and youth have used and abused substances, especially alcohol and tobacco (Musyoka, 2020). The use of alcohol and tobacco was a natural practice for the elderly during certain communal activities. Then, it was taken in minimal amounts that would not lead to dependency or changes the individual's social behavior. Today, substance use has become a normal pass time for adolescents both in school and at home (NACADA, 2017; Ngesu & Kaluku, 2017).

The abuse of illicit substances has negative effects on the individual. Abusers become victims of substance dependency. Substance use and abuse hamper the academic progress of learners. It also influences negatively social behavior. The user/abuser of substances gets involved in behaviors that do not conform to the norms of society (Newman, 2015). Substance use/abuse affects the developing brain of the adolescent which can result in decreased ability in decision-making as well as increased long-term substance effects. Understanding the etiology and effects

of these substances is pertinent in coming up with effective intervention programs or strategies (Whitesell et al, 2013)

In the United States of America, abuse many youths abuse drugs in their adolescent years. A study carried out by Sussman et al (2014) in southern California, realized high drug and substance abuse occurrences among grades 7 to 10 learners. These were students in their early to middle adolescence stage. A survey carried out by NIDA revealed that 28.5 million Americans aged 12 and above had misused marijuana and other substances like alcohol and tobacco at least once in the previous year (NIDA, 2013). The overall average age of initiation to substance use and abuse was 15 years. For tobacco and inhalants imitation age was 16 and 15 years respectively (Clemans-Cope et al, 2022). Substance use and abuse is very costly. The US government spends about USD 600 billion annually on issues related to drugs. This includes a decline in productivity, health and crime-related costs (NIDA, 2015; Kalsi, 2022)

From the results of its nationwide survey, NSDUH, (2021), reported that USA spend approximately 740 billion US dollars on substance abuse-related issues in the year 2017. In the same year, approximately 992,000 adolescents, an equivalent to 4% of adolescents aged 12 to 17 in the US suffered from substance-related disorders. According to the annual European Monitoring Centre for Drugs and Drug Addiction (EMCDDA, 2012), the United Kingdom has the highest prevalence level of drug abuse in Europe. Spain was ranked second in the same report.

The social and economic cost of substance use and abuse to the United Kingdom economy in terms of absenteeism, crime, sickness and other antisocial behaviors is in excess of 20 billion pounds a year (NIDA, 2013). In Madrid, Spain the use and abuse of substances are so rampant that cocaine traces can be found on 94% of banknotes that were in circulation (<https://www.sciencedaily.com>, 2013). The article attributes this increase in substance use and abuse to increased affluence, falling street prices and easy obtainability of cocaine and other drugs. In the same country, Arroyo & Coronas (2017) analyzed 26 research articles on substance use in Spain between 2012 and 2014 and realized a high prevalence of substance abuse in Spain (alcohol 79.%, cannabis 26.0% and cocaine 2.61%).

In India, substance abuse among the youth has risen, with 40% of the abusers being below 18 years of age. The UN convention reports estimated that by the time adolescent boys reach 9th grade, about 50% of them have tried drugs (Jiloha, 2013; Salkia & Debbarma, 2019; Srivastava et al (2021), established that about 44.38 male youths aged 15-19 have abused at least one type of substances.

Australia has witnessed a decline in substance use and abuse prevalence among teenagers, which can be attributed to an aggressive campaign by the government on the adverse effects of drugs. However, there is increased abuse of marijuana, amphetamines and alcohol among Australians in their 30s. (Scholes-Balog et al, 2013). A cross-cultural study on adolescents' substance use and abuse in Israel and France showed that cigarette smoking and the consumption of alcohol overshadowed the intake of prohibited substances (Kandel, 2014).

Africa has also experienced the effects of substance abuse. According to Zulu et al (2013), many South African students abused alcohol and other substances. Substance abuse is on the rise in both rural and urban South African schools. The South African Alliance for the Prevention of Substance Abuse , SAAPSA (2013) ranks South Africa among the world's greatest producers of cannabis, most of which is consumed locally mainly by the youth and the rest is exported.

Similarly, East Africa has faced its own predicament caused by substance use and abuse. In Uganda, substance abuse is slowly eating into the moral fabric of youths both in urban and rural schools (Foundation for Civic Education, Uganda- FOCEU, 2014). The situation is no different in Somalia that has grappled with many social issues and political instability. In addition, the country's geographical location has made it a source, consumption and transit zone for substances. Opposition groups take advantage of the country's vulnerability and the inability of the government to control the production, procurement and distribution channels of illicit drugs (FOCEU 2014).

Kenya and Tanzania have a common problem as they act as transit routes to the Eastern African hinterland. The coast of the Indian Ocean acts as the main entry point. As a result, many people especially the youth gain access to these substances (FOCEU, 2014). The youths are the most vulnerable to substance use and abuse in every society. Adolescents can become more and faster addicted to substances than adults (Lingfield et al, 2015).

Many Kenyans are concerned about adolescent substance abuse. The National Agency for the Campaign against Drug Abuse, NACADA, asked the government to declare substance abuse as a

national disaster, especially in the coastal province where youth and even young children are addicted to substances. According to NACADA (2022), the country has witnessed an escalation in the consumption of illicit drugs like cannabis (2.7%), alcohol (5.2%), Miraa (3.6%). The country-wide survey showed that at least 8.9% of the respondents admitted to having used/abused at least one substance in their lives (NACADA, 2022). A survey commissioned by NACADA in 2021 displayed a regional variation in terms of prevalence and types of substances abused. For example, Western leads in alcohol consumption prevalence (43.3%), followed by Nairobi (40.9%), Nyanza (26.8%) Central (26.3%) Rift Valley (21.9%), Coast (21.3%), Eastern (17.2%) and North Eastern (1.6%).

Adolescents abuse four main substances: alcohol, tobacco, bhang, and inhalants like glue and petrol. There is a notable gender difference in substance use and abuse with females standing at 0.1% and males at 7.5%. (NACADA 2021). Most of these studies focused on prevalence at the regional level. There is, therefore, a need to establish the gender disparity in the use and abuse of substances in a smaller geopolitical area like Kisumu East Sub-County.

In Kenya as in other African countries, alcohol is the most extensively abused substance. Brewers often lace traditional brew with chemicals such as battery acid to hasten fermentation and increase its potency. Cannabis sativa (bhang) and khat (miraa) are locally cultivated in the highland areas of East Africa, especially around the Mount Kenya region. This makes these substances accessible to the populace, particularly the youth who are most vulnerable (NACADA 2013, Cheloti & Gathumbi, 2016)

The studies cited have presented a high prevalence of drug abuse in most countries. However, studies done in Australia and Iceland showed a decline in the abuse of substances in these countries. The present investigation, therefore, endeavored to establish whether there is a rise in the use of substances in secondary schools in Kisumu East Sub-County. Likewise, some studies have linked substance use and abuse to adolescents' antisocial behaviors such as arson, the killing fellow students, rape, destruction of school property and other socially unacceptable behaviors like drunk driving, muggings, adolescent suicidal attempts and engaging in unprotected sex.

On the contrary, some researchers point to other causes of students' antisocial behavior including poor administrative skills and lack of facilities in schools (Masenga, 2017; Nyatuoro, 2013; Ngesu et al, 2017; Peltzer & Phaswana- Mafuya, 2018; Young et al, 2017; Okita, 2015). These studies indicate no clear association between adolescents' substance use and abuse and change in social behavior in schools. Moreover, most of the studies cited were done outside Kenya and outside Kisumu East Sub-County. Studies carried out in the former Kisumu District focused mainly on drug abuse and students' indiscipline. Furthermore, most of these studies were done mostly in the past decade. Time has lapsed and it is interesting to explore the current situation. The present study, therefore, aimed at filling in the prevailing knowledge gap by examining the use of substances by adolescents in secondary schools in Kisumu East Sub-County, Kisumu County and the effects of these substances on students' social behavior.

Various studies, both internationally and in Kenya cite the role of parents, friends and the media in substance abuse. The studies include Oetting and Donnermeyer, (2014), Okita (2015)

Newokabuenui (2015), Beaton et al (2020). According to Primary Socialization Theory (Oetting and Donnermeyer, 2014), there is a correlation between the part played by socialization agents such as parents, peers, teachers, community leaders and the media and adolescents' social behavior. Substance abuse by these social agents may or may not influence adolescents' decision to abuse substances. This study will establish whether parents, peers and the media influence adolescents' use and abuse of substances in Kisumu East Sub-County.

The government of Kenya has come up with stringent laws and rules in its efforts to curb the misuse of substances in schools. However, research reveals that these laws are yet to achieve any positive results. Cheloti et al (2016) examined the use of the school community as a strategy to eradicate substance use and abuse in schools in Kenya. According to their findings, this method has proved either ineffective or failed totally due to a lack of cooperation from stakeholders.

On the other hand, Njagi (2014), indicated that school administrators preferred the use of such strategies as expulsion, suspension, heavy punishment and drug education along with guidance and counselling. The Kenyan Ministry of Education proscribed the use of corporal punishment. Instead, it recommends guidance and counselling as the preferred method of handling learners' transgressions. The current study examined various strategies applied in school setups, particularly guidance and counselling and examined why these strategies have not yielded positive results. The study explored other possible strategies that are not in use but may be applied together with what already exists.

1.2 Statement of the Problem

Studies have indicated that the abuse of substances by adolescents affects their social behavior. Reports from the Nyanza Provincial Director of Education office relate riots, arson and general indiscipline in secondary schools to the consumption of substances (Education Office, Kisumu County, 2016). The report cites other antisocial behaviors associated with substance use and abuse including theft, cheating, and truancy, and low academic performance, disrespect of school authority and breaking of school rules. Studies indicate that Kisumu East Sub-County has a high prevalence rate of alcohol abuse (37.4%), cigarette smoking (9.2%), and khat/miraa (4.7%). The least abused are glue and kuber (2.9%) (Simatwa et al, 2014).

NACADA'S research report released in October 2012 in Kisumu City indicated that the former Nyanza province ranks highest among leading regions in the country with nearly half of the national prevalence in the abuse of illegal drinks and narcotics. Nyanza province also leads in the manufacturing and consumption of traditional brews like chang'aa and busaa. Nyanza has a 10% chang'aa consumption prevalence, which is above the national prevalence of 7.2%. It has also a 10.2% consumption prevalence of other local brews, putting it at par with the national average. Among students in the area under study, the overall substance abuse stands at 26.8%. The Sub-County performs poorly in national examinations and has had its share of student unrest (County Education Office, 2016). There are scanty studies done in Kisumu East Sub-county that examined the influence of parents, peers and the media on adolescents' social behavior. There is also scanty research available on the possible strategies used by schools to eradicate substance use/abuse. Additionally, there is little research on gender disparity in substance use/abuse among adolescents in the area of this study. The studies cited were carried out few years back, and

therefore, there is need to establish the current status of adolescents' substance use and abuse in Kisumu East Sub-County as per the variables of the study.. Therefore, this calls for an investigation on these issues of concern.

1.3 Purpose of the Study

The present study endeavored to assess the influence of substance abuse on adolescents' social behavior in public secondary schools in Kisumu East Sub-County, Kisumu County -Kenya.

1.3.1 Objectives of the Study

The specific objectives of this study were to:

1. Determine the prevalence and gender disparity in substance use and abuse among adolescents in secondary schools in Kisumu East Sub-County.
2. Examine the influence of parents, peers and the media on adolescents' substance use and abuse.
3. Establish the relationship between adolescents' substance use/abuse and social behavior in public secondary schools.
4. Explore the perceived strategies that can be employed in addressing substance abuse among adolescents.

1.3.2 Research Questions

1. What is the prevalence and gender disparity in substance use and abuse among adolescents in Secondary schools?
2. To what extent do parents, peers and the media influence adolescents in secondary schools to abuse substances?
3. What is the effect of substance use/abuse on the adolescents' social behavior in public secondary schools in Kisumu East sub-county?
4. What are the perceived strategies that can be employed to address substance use and abuse among adolescents?

1.4. Assumptions of the Study

The study was based on the following assumptions:

1. Adolescent students in secondary schools in Kisumu East Sub-County use and abuse substances which affect their social behavior.
2. That adolescents aged 14-19 years are students in secondary schools in Kisumu East Sub-county
3. Teachers in charge of guidance and counselling employ certain strategies used to curtail the abuse of substances among adolescent students.
4. All the respondents will be willing to divulge the elicited information on substance use and abuse in secondary schools.

1.5 Significance of the Study

The findings of this study will enlighten parents, teachers, the Ministry of Education (MOE), NACADA and other stakeholders on the prevalence, causes, types and possible ways of dealing with the abuse of substances among adolescents. The Ministry of Education may use findings of this study to formulate new policies on the issue of substance use/abuse in secondary schools. The study may be useful to school administrators on which substances are commonly used /abused by secondary school students. This will enlighten them on how to look for ways of ensuring that the source of these substances are dealt with as stipulated in the constitution of Kenya on drug abuse. The study may help parents to look for ways of better communication with their children so that when there is a problem, they may get information easily and avert substance use/abuse among their children. Moreover, the study may help parents and teachers to be keen and cautious on what the adolescents' access from the media and take appropriate measures. The study also aimed at providing necessary information and recommendations on strategies for curbing the abuse of substances among secondary school students in Kenya. A combination of these strategies may be useful in the fight against substance use/abuse among adolescents. The research findings may also be used as a resource and reference for future research in the area of teenage substance abuse and its influence on social behavior.

1.6. Scope of the Study

The study was conducted in public secondary schools in Kisumu East Sub-County; Kisumu County. It was restricted to secondary school students in their adolescent stage since most secondary school students are in that stage. .Asmawati et al (2021), state that adolescence stage

is a critical period for initiation of substance use/abuse. They continue to contend that during adolescence, the young person would like to experiment different things including substances of abuse (Asmawati et al, 2021). According to UNODC (2018), adolescence is a time of vulnerability to various influences and engagement in behaviors that may lead to negative outcomes, hence the choice of developmental stage in this study.

Many developmental Psychologists have varied and approximated age brackets for adolescence. For example, the American Academy of Child and Adolescent Psychiatry, AACAP (2013), defines middle adolescence as falling between ages 14-18. According to Spano (2014), adolescence is approximately 10-21 years of age and Goh, 2013 and Javorska & MacQueen, 2015 have put it at 12-18 years. The World Health Organization puts the adolescence stage at 10-19 years (in Hagell et al, 2015). According to health policy of the Kenyan Ministry of Health (2015), adolescence stage was put at 10-19 years. Since there is no clear-cut boundary on when exactly adolescence begins and ends, for the purpose of this study, the adolescence stage falls between ages 14-19. Students in adolescence stage are normally in secondary school. Children between the ages of 10-13 listed by some authors as part of the adolescence stage may not have joined secondary school, taking into consideration the fact that learners join Class One at the age of six and complete their primary education at the age of 13 all other factors being constant. The subjects of this study, therefore, were adolescents falling in the range of 14 -19 years of age. The study also incorporated guidance and counselling teachers. These teachers handle students with various problems in secondary schools. It was therefore important for the study to capture their views on adolescents' substance use/abuse in their schools. The researcher employed questionnaires and interview schedules to capture the experiences, opinions, attitudes and perceptions of the research subjects. The study examined the prevalence and gender disparity

among adolescents abusing substances. It was important to first examine the prevalence of substance use/abuse and gender disparity before handling the other concerns of the study since the respondents were of both genders, males and females. The prevalence level enabled the study to have an insight into substance use/abuse situation in Kisumu East sub-county. The independent variables for this study were substance use/abuse, influencing factors (parents, peers and media), while mitigating strategies were the intervening variables. The study examined use/abuse of various substances and the influence that parents, peers and the media may have on whether the adolescent used/abused substances or not. The study also looked at the possible strategies applied by schools to eradicate problem of substances. The dependent variable was adolescents' social behavior. Substance use/abuse may affect the adolescents' behavior in a negative way that will lead to socially unacceptable behaviors like bullying, stealing, cheating, truancy, disobeying teachers.

1.7 Limitations of the Study

The study faced the following limitations:

1. . The study covered only adolescents in age bracket of 14-19 years. This means that adolescents aged below 14 or 20 years and above were left out but could have had a significant contribution to the study.
2. The study was based on public day and boarding secondary schools in Kisumu East Sub-County, leaving out private secondary schools where it is possible that students abuse substances.
3. There are very many factors apart from substance use/abuse that may affect the adolescents' social behavior. Adolescence stage is normally associated with various challenges that are

likely to affect their social behavior negatively. To mitigate this challenge, the researcher has put an assumption that substance use/abuse affects adolescents' social behavior in public secondary schools in Kisumu East sub county.

4. The study covered only schools in Kisumu East Sub-County, Kisumu County. The findings of the study, therefore, may not be generalized to schools in other parts of Kenya that could be having other contributing/ influencing factors to adolescents' substance use and abuse.
5. The researcher used a questionnaire and interview schedule to assemble data from the respondents. The information gathered may have been affected by a ceiling or floor effect. To mitigate this effect, the researcher assured the respondents that their responses will be confidential and only meant for the purposes of research, hence they should strive to give accurate information as much as possible.

1.8 Theoretical Framework

The research employed Albert Bandura's Social Cognitive Theory (1986) as a theoretical guide for the study. This theory postulates that human beings function by putting emphasis on the role of cognitive, vicarious, self-regulative and self-reflective processes as an adaptation to change. People are viewed as agents of self-organizing, proactive, self-reflective rather than passive or reactive who are shaped only by environmental situations. Although humans are social beings who interact with each other in their environment, they do not just copy a behavior from others like parents, peers and from media entities. Human actions are a dynamic interplay of personal, behavioral and environmental factors. For example in the case of this study, the adolescent may interact with others and as a result of his/her own behavior, s/he gets informed and alerted by feedback from the social environment. This may in turn, inform and alter subsequent behaviors.

This is what Bandura called reciprocal determinism. Personal factors in form of cognition, emotions and biological events, behavior and environmental influences, which in the case of this study are the parents, peers and the media create interactions that result in triadic reciprocity.. According to Bandura, the individual has been crafted with certain capabilities that will enable him to reason and weigh the consequences of an action. Depending on the adolescent's understanding of the consequences, and depending on what aspect of the personal factors are involved, the adolescent may for example focus on the pleasant feelings of being high and therefore choose to use/abuse substances.. These cognitive capabilities provide the adolescents with an avenue through which they can influence and determine their own destiny. They may choose to observe what happens in their environment and decide to use/abuse substances or not. It is a matter of personal decision

The adolescent may learn gender-specific behaviors, for example dressing, social roles, and many others which may include substance use/abuse. Gender influence may lead to specific behaviors in the individual. As a product of gender identity, adolescents may be influenced to abuse substances if they observe peers of the same sex engaging in it.

Schools are social settings and adolescents are part of these settings in that environment.. These learning institutions may come up with strategies to mitigate the problem of substance abuse which the adolescent may respond to it positive by keeping off substances or may negatively respond by going against the expectations of the schools and general society. This will depend on the adolescent's understanding and meaning of the outcomes of substance use/abuse. Hence, the study assumed that adolescents in secondary schools may be involved in strategies practiced to eradicate substance use and abuse.

1.9. Conceptual Framework

A conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs research (Robson & McCartan, 2016). The framework explains either graphically, or in narrative form, the main things to be studied i.e. the key concepts, factors, or variables and their presumed relationship (See Figure 1)

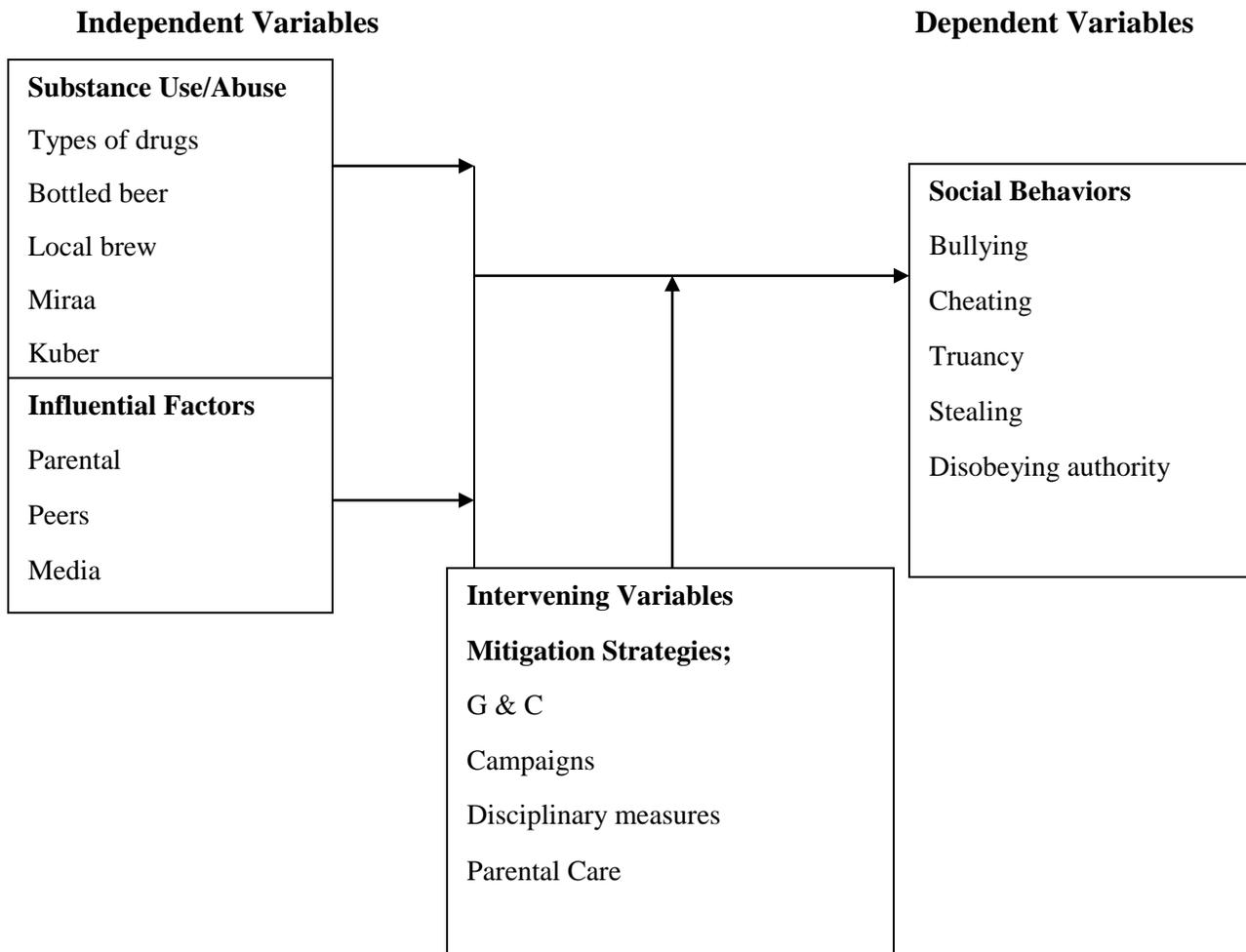


Figure 1: *Conceptual Framework Depicting Study’s Variables*

In this study, the independent variables are drug/substance abuse, selected influential factors. Substance use/abuse comprises various types of substances used by adolescents. Influential

factors involve parental influence, peer pressure, media influence. The mitigation strategies like guidance and counseling, campaigns against substance abuse, disciplinary measures, open communication, and parental care, moderate the use/abuse of substances and social behavior in a way that society expects. These strategies are, therefore, the intervening variables for this study. The dependent variable is social behavior, specifically bullying, cheating, truancy, stealing, and disobeying authority.

The independent variables, which are substance use/abuse, influential factors, expected to have a relationship with the dependent variable, which is social behavior among adolescents. Substance use/abuse can potentially impact social behavior, leading to behaviors such as bullying, cheating, truancy, stealing, and disobeying authority. Influential factors like parental influence, peer pressure, and media influence can also contribute to the development of social behaviors. In this study, mitigation strategies such as guidance and counseling, campaigns, disciplinary measures, open communication, and parental care are intervening variables which when implemented are likely to mitigate the effect of substance use/abuse and the influential factors (parents, media, peers) on social behavior. By examining these independent variables, the study aims to understand how they relate to and influence the observed social behaviors among adolescents in public secondary schools in Kisumu East Sub-County, Kenya. The findings could guide interventions and policies to reduce substance use/abuse and promote positive social behavior.

1.9 Operational Definition of Terms

Antisocial behavior: Recurrent infringements on societal regulations, disobedience of school authority, abuse of the rights of other students, theft, dishonesty, verbal abuse, bullying, assaulting other students, being disrespectful to teachers, vandalizing and destroying school property, refusing to follow instructions, rape, truancy, aggressive behavior, engaging in reckless sexual behavior

Behaviors: Actions and mannerisms depicted by an adolescent towards themselves or towards other people in a school environment.

Ceiling effect: This is when a respondent gives exaggerated information in a questionnaire

Floor effect: This is when respondents may withhold vital information when responding to a questionnaire

Gender disparity: A descriptive observation of the difference in numbers between male and female adolescents in substance abuse.

Illicit substances: Illegal substances or inappropriately used legal drugs.

Impact of substance: Measure of tangible effects of adolescent abuse of substances.

Mid-adolescent: A teenager 14-19 years who is enrolled in a public secondary school.

Media: These are communication channels like television, radio and print whose messages may have some positive or negative influence on the adolescent

Parent: An adult who is responsible for the care and upbringing of the adolescent

Peers: Refers to adolescents who are generally of the same age and are in secondary school.

Prevalence of Substance: This is a statistical concept referring to the extensiveness of the misuse of substances among adolescents in public secondary schools.

Social Behavior: It is behavior stimulated or directed to another person and has some effect on that person.

Societal norms: Rules and ways of behaving expected of every member of a given community including schools.

Substance abuse: Use of certain substances and chemicals for purposes other than were initially meant for and in excessive or contraindicated amounts and frequency that may harm the abuser and others in his/ her environment.

Substance use: It is taking a chemical or substance for a reason but only occasionally.

Strategies: These are methods and plans of action used in secondary schools to bring desired solutions in eradicating adolescents' use and abuse of substance

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, available literature based on the themes derived from the research objectives was reviewed. These themes include the prevalence and gender discrepancy in the abuse of substances among secondary school students at the adolescent stage, the parents', peers' and the media's contribution towards adolescents' abuse of substances and the impact of illicit substance consumption on adolescents' social behavior, and the strategies that have been employed to mitigate the menace.

2.2 Prevalence and gender disparity in Substance Use and Abuse among Adolescents

Substance abuse has become a universal menace. From olden times, people from various communities consume drugs for reasons such as entertainment and self-elation, or to feel “high” or “good” (Weiten, 2013) In contemporary times, many people use and abuse substances as a way of reducing stress, anxiety and depression caused by the demands of modern lifestyles (NACADA 2021). Although the majority of adolescents possess sufficient knowledge about substance abuse (Otieno & Ofulla, 2015; Frobel et al, 2022; Nehbinani, et al, 2013), research indicates that despite this knowledge, the abuse of substances is high among the youth (NACADA, 2014, 2017, 2022; Frobel, 2022). Research shows that substances alter the brain functions of adolescents. It also interferes with the adolescents' modes of socially acceptable behavior (Weiten, 2013).

The United Nations Office on Drugs and Crimes (UNODC, 2021) reports that at least 275 million people throughout the world regularly use and abuse substances. According to their

report, the most abused substances are alcohol, tobacco, and cannabis, which are legal and socially accepted in some countries (UNODC, 2021). Studies carried out in the US in 2010 by the National Survey on Drug Use and Health (NSDUH) and Monitoring the Future (MTF) found that among 46,482 learners in grades 8, 10, and 12 from 396 private and public schools, 12.0% of them had driven while drunk at least once in the 12 months before the inquiry. The same study showed that the use of illicit substances remained unchanged from 2009 to 2010. However, there was an increase in daily use of marijuana among the learners in grades 8, 10, and 12 from 2009 to 2010. Substance use and abuse was associated with motor accidents, suicide, and other antisocial behaviors like the use of guns, muggings, and theft (NSDUH, 2013)

The Canadian Alcohol and Drug Use Monitoring Survey, CADUMS (2014), carried a nationwide survey from 2008 to 2012 which involved 10 provinces. The target population was 27,767,855 Canadians aged 15 and above. The sample comprised 11,090 respondents. The survey collected data using telephone interviews. The results showed that the prevalence of past year cannabis use among those aged 15 and above was 10.2% in 2012, not so much difference from that of 2011 results (9.1%). The prevalence of past year cannabis use in 2012 was lower than in 2008 among males (13.7% versus 18.2% and females (7.0% versus 10.2%). For youths aged 15-24 it was 20.3% versus 37.0%). Abuse of at least one of the following illegal drugs: cocaine, speed, hallucinogens, heroin and ecstasy was at 2%. These findings were not different from those of 2011 that showed 1.9% abused at least one of those drugs. The abuse by youths which stood at 6.5% was five times higher than those of adults (1.2%). These findings showed a slight decrease in general use/abuse of substances in Canada in the years the survey was done (2008-2012). Their study was different from the current one because of differences in

methodology. Their study was a country-wide survey that lasted four years while the current study was a short duration descriptive and correlational study covering a smaller population. The other difference is that their data was collected using telephone interviews while the current study used self-administered questionnaires and in-person interviews. It significant for this study to investigate if schools in Kisumu East Sub-county will indicate a decline in adolescent use/abuse of substances as in the CADUMS study

According to the annual European Monitoring Centre for Drugs and Drug Addicts (EMCDDA, 2021), Britain has a greater level of cocaine drug abuse than any other European country. Spain came second with 8.3% of those between 15 and 64 years, and 14.9% of those between 15 and 34 years having abused cocaine. From the results of this survey, there is a high prevalence of substance abuse in the countries that participated in the study. The EMCDDA (2021) study was a survey that involved several European countries on the status of substance abuse by the youth. In contrast, the current study was done in a Sub- county covering a smaller area and population in Kisumu East sub -county. This study also examined the gender disparity in adolescent use/abuse of substances. Furthermore, the current study used questionnaires administered by the researcher while the EMCDDA survey used self-administered questionnaires downloaded from the internet. In another research, involving 72-item cross-sectional survey administered to students in 17 public secondary schools in Gaborone, Botswana by Riva et al (2018), the study sought to characterize dangerous drinking behavior among students. Their study employed the World Health Organization's (WHO) Alcohol Use Disorder Identification Test (AUDIT). They used Jessor's Problem Behavior Theory (PBT) as a conceptual framework to culturally adapt items from previously validated measures to assess risk and protective factors for alcohol and drug use. The risk and protective factor differences across groups were compared using univariate

binomial and multinomial-ordinal logit analysis. The relative hazards of alcohol and drug use were determined by demography, with high risks and low safeguards. Models demonstrating the link between risk and protective factors and student alcohol and illegal drug use were developed using multivariate ordinal-multinomial cumulative logit analysis, multivariate nominal-multinomial logit analysis, and binomial logit analysis. All analyses used Generalized Estimating Equations (GEE) to account for clustered data. 816 (42.1%) of the 1936 students polled acknowledged alcohol usage, and 434 (22.4%) satisfied the threshold for hazardous alcohol use. 324 students (16.7%) reported illicit drug use, with motokwane (marijuana) being the most often used drug. Alcohol availability, individual and social vulnerability characteristics, and poor peer modeling were identified as risk variables more significantly connected with alcohol and drug use. The above mentioned study used the WHO Alcohol Use Disorder as an instrument of data collection while the current study used a modified WHO 1980 Methodology Questionnaire for Student Drug Use Surveys. Additionally, the survey applied Jessor's Problem Behavior theory (PBT) while the current study used Social cognitive theory and conceptual Framework. This study explored substance use/abuse problem in Kisumu east Sub-county having both urban and rural demographics unlike the Riva et al study that was done in Gaborone, having an urban outlook.

In Mokwena et al study, (2021), they sought to examine substance abuse among high school students in rural Education District in Free State. The study involved 629 students from public schools who were in grades 10 and 11. It sought to determine the prevalence and factors influencing substance abuse. Self-developed questionnaires were used to collect data. Prevalence of substance abuse among the respondents was high at 47% (n=295). Alcohol, cigarettes and dagga smoking were the most abused substances. From the methods and results of the study, it is

evident that the current study and the Mokwena et al study (2021), used self- developed research instruments to collect data. This study used WHO (1980) questionnaire. Moreover, the scope of their study were students in the 10th and 11th grade while this study looked at substance use among adolescents 14-19 years old. They did not examine the influence of parents, peers and the media as the current study did.

Anderberg & Dahlberg study (2018) discussed the similarities and variations in numerous risk variables between girls and boys who undergo outpatient therapy at the Maria clinics in Sweden. Potential hypotheses and consequences were also examined. This cross-sectional study was based on interviews with 2169 teenagers acquired from outpatient clinics in 11 Swedish cities over three years. Girls appeared to have more difficult family and childhood circumstances than boys, and they are more likely to have academic challenges, substantial substance misuse problems, and severe mental health problems. Boys' criminal conduct is substantially higher. According to the study, females undergoing treatment have much more risk factors than boys, resulting in more widespread problems in several parts of life, which raises the chance of having serious drug and alcohol problems in adulthood. The study backs up the gender-paradoxical relationship in which fewer girls than boys seek treatment for substance abuse, even though girls have more difficult life circumstances. This study is similar to current study because they both examine the gender aspect in substance use/abuse. The point of diversion is that it was done outside Kenya in Sweden which may have different socio-cultural underlying causes to adolescent substance use/abuse.

Olenrewaju et al (2023) in their study on prevalence of substance abuse among secondary school students in Lagos state, Nigeria, sampled 422 students using multistage sampling technique. The study used descriptive cross section design. Data was collected through questionnaires and was analyzed using Pearson's Chi square and Fisher's exact test to determine the relationship between variables. The overall prevalence stood at 8.3% and the commonly abused substances were opiates (11.6%), tranquilizers (9%), hallucinogens (5.6%), and amphetamines (5.3%). Substance abuse influencers were family friends (31.4%), parents (22.9%), and peers (22.9%). Olenrewaju et al (2023) study was descriptive research survey design while the current study used mixed research designs of descriptive and correlational approaches. Their study used Fisher's Exact Test to address inferences among variables while the current study applied Pearson's product moment correlation.

A study by Rugendo (2022), assessed substance use among secondary school students in Kendu Zone, Homabay, the researcher used students from three secondary schools. The study applied school-based descriptive cross-sectional methodology. The findings showed that 61% males and 39% females used and abused substances. The study also found that students whose fathers abused substance, too became substance abusers. This study was done in Homabay County and although it involved secondary school students, it was different from the current study which focused on adolescents aged 14-19 years and also examined gender disparity in adolescents' substance use/abuse.

Tshitagaro & Tosin (2016) explored substance use among secondary school students in rural settings in South Africa including prevalence and possible contributing factors. They used descriptive survey research design. Instruments for data collection were adopted from the 2011 High School Youth Risk Behavior Survey (YRBS) of the Centre for Disease Control and

Prevention. The instruments were self-administered by the respondents. Analysis of data was done using SPSS 21.0 software of Microsoft excel. Descriptive data was analyzed using frequencies, percentages and mean. Results showed that most of the respondents were aware of the effects of substance abuse. It indicated that majority had never used substances standing at 94% for males and 98% for females. Majority reported starting use/abuse of substance between ages 15-20. Most students (71.5%) did not have any member of the family who used/abuse substances. From the findings, a small percentage of males (6%) and females (2%) said they ever used/abused substances. It also revealed that more males than females used/abused substances but the gender differences were minimal. This study was done in a rural setting in South Africa and that is why probably a high percentage of students said they have never used/abused substances (94% males and 98% females). This study (Tshitagaro and Tosin, 2016), had different target population in a rural area while the current study covers Kisumu East Sub-county that has urban and peri-urban characteristics. The study is also different from the current study because of instrumentation. They used Youth Risk Behavior Survey (YRBS) adopted from the Centers for Disease Control and Prevention while the current study used a WHO (1980) questionnaire for Student Drug Abuse Surveys. Their study revealed that the gender gap in substance use/abuse was minimal. The current study will establish if the gender difference is also small as in Tshitagaro's and Tosin's study (2016).

Orende et al (2021) , carried out a study on household predictors of drug and substance abuse among high school student in Kisumu East Sub-county secondary schools. Target population were secondary school students aged 15-25 years old. The study applied descriptive survey and sampled 434 students through various sampling techniques including snow ball, systematic

random, stratified sampling, and cluster sampling techniques. Validity and reliability were achieved through piloting of the instruments. Data analysis was done using descriptive statistics like frequencies and percentages presented in tables. Inferential statistics applied Chi square and logistic regression analysis.. Their study attributed the rise in substance use and abuse in Kisumu East Sub-County to sociocultural issues. According to their study, the major economic activities in the Sub-County are quarry mining, boda boda and small-scale businesses. This is an indicator that a major reason for the abundant availability of drugs is poverty which could also impact on learning among adolescent secondary school students. Both girls and boys are affected by the problem of drug and substance abuse in Kisumu East Sub-county. They report that most parents do not discuss about the consequences of drugs and substances with their children. They recommend that parents should create time to bond with, communicate and monitor movement and friends of their children. The study found that some of the strategies used by parents and teachers include punishment, prayers, monitoring the children, giving rewards and guidance and counselling. Although Orende et al study (2021), was done in the same area of study as the current one, they looked at household predictors of drug and substance abuse unlike the current study that examined the influence of parents, peers and media in adolescents' substance use/abuse. The target population for their study were students aged 15-25 while current study dealt with adolescents of ages 14-19. Another difference is that the sample comprised of students only while current study focused not only on students but also teachers in charge of guidance and counselling. One of the strategies they found being used by parents was prayer. It is of interest to this study to explore whether this is also applied by schools in Kisumu East Sub-county.

NACADA (2016), notes that the most commonly used and abused substances are the legal ones like tobacco, alcohol and miraa. Although these substances are legal in Kenya, they are as

addictive as other more potent substances. NACADA (2014), also contends that although bhang is proscribed in Kenya, people still grow it clandestinely in many parts of the country, where it eventually ends up in the hands of the youth who use and abuse it. According to Atwoli et al (2011), the occurrence of substance consumption among college students have a lifetime prevalence rate of substance abuse. The prevalence rate for cigarette use was 42.8% in males and 28.9% in females, having statistical significance higher rates of <0.05 than that of females.

According to the National Survey on Drug Use and Health, NSDUH (2014), amongst individuals aged 12 years and above, the rate of intake of illicit substances was 11.2% for males and 6.8% for females. Thus, males were more predisposed to becoming current consumers of illicit substances than females. As per the study, the substances used include marijuana (9.1% vs 4.7%), cocaine (0.8% vs 0.4%), hallucinogens (0.6% vs. 0.3%), and psychotherapeutic drugs (0.3% vs 0.5).

A study commissioned by the National Agency for the Campaign against Drug Abuse (NACADA, 2015) in Western Province, Kenya among adolescents aged 10-24 revealed that 43% used alcohol. It also showed a bigger probability of males than females abusing alcohol. Similarly, a survey done by the African Population and Health Research and Shelter Afrique Centre (2013) in the Nairobi slums, discovered that adolescent males were five times more likely to have a go at alcohol than females. An investigation carried out in Nairobi by Otieno and Ofulla (2015) established that out of the 5311 secondary school students surveyed, 2246 (70.1%) smoked cigarettes and out of this 38.6% were male while 17.9% were female.

The reviewed literature reveals a high prevalence of substance abuse among secondary school adolescents worldwide. Some of the literature established a significant gender disparity in substance abuse while a few showed no meaningful difference (Otieno and Ofulla 2015;

NSDUH 2014; UNODC 2021 & Tshitagaro & Tosin, 2016). These studies do not depict distinctly substance use as majorly a male challenge. Other studies reviewed indicated that male students used and abused substances more than females. It was, therefore, necessary to investigate the prevalence and gender disparity in adolescents' use/abuse of substances in secondary schools Kisumu East Sub-county.

2.3 The Influence of Parents, Peers and the Media on Adolescents' Substance Abuse

Every child grows up within the social context of his/her environment. Two theories explain the role played by the social environment on the individual's development: The Primary Socialization Theory (Oetting & Donnermeyer, 2014) and the Peer Cluster Theory (Oetting, & Beauvais, 2013).

The Primary Socialization Theory highlights the part socialization forces play in the life of a child. As stated by this theory, socialization forces such as parents, teachers, peers and the media influence behavioral outcomes because of the interactions between the child and environmental circumstances (Oetting & Donnermeyer, 2014). The theory, however, ignores individual traits and predispositions as direct contributors to the person's use and abuse of substances. Peer Cluster Theory (Oetting & Beauvais, 2013) focuses on the impact of social forces on learning. According to the theory, peer clusters of bosom friends wield considerable sway on the advancement and approval/non-approval of behavioral norms. Peer Cluster Theory denotes that adolescents are more susceptible to substance use and abuse in cases of peer cluster approval of behavior. With the foregoing in mind, it was important to review the available literature on the role played by parents, peers and the media on adolescents' substance use/abuse.

2.3.1 Role of Parents in Adolescents' Substance Abuse

Abuse of substances by parents disrupts the natural development of an adolescent. It also exposes the adolescent to various emotional, physical and mental health issues. Parents who abuse alcohol and other substances have higher chances of getting involved in domestic violence, separation and divorce, and unemployment. These and other unlawful activities may severely compromise their parenting effectiveness. The probability for adolescents from such families to experiment with substances is 3 to 4 times. Children of substance abusers often experience difficulties in school due to conflicts at home. They are also more liable than their mates to play truant and engage in antisocial activities such as vandalism, deceitfulness, stealing, bullying other children, cheating and many other undesirable behaviors (Oetting & Donnermeyer, 2014).

A study was done by Latendresse et al (2016) about Parenting Mechanisms in Links between Parents' and Adolescents' Alcohol Use Behavior. The study identified adolescence as a critical period with regard to the initiation and early escalation of alcohol use. Additionally, research on familial risk and protective processes offers independent support for multiple domains of parental influence on adolescent drinking; including parents' own drinking behaviors, as well as the practices they employ to socialize their children. The study used data from 4,731 adolescents and their parents to test the nature of associations between (a) parents' frequencies of alcohol use and intoxication, and lifetime alcohol-related problems, (b) adolescents' perceptions of the parenting that they receive, and (c) adolescents' prevalence of alcohol use and intoxication at 14 and 17½ years of age. Multiple mediation modeling was used to assess whether parental alcohol use behaviors influence adolescent alcohol use directly, or if they operate through indirect associations with various aspects of parenting that subsequently influence adolescent use. It was found that examination of simple associations demonstrated that maternal and

paternal alcohol use behaviors were positively linked with adolescent use behaviors at 14 and 17½ years of age. Likewise, several parenting behaviors were independently associated with both parental and adolescent drinking. Examined collectively, multivariate path analyses indicated that associations between parents' and adolescents' alcohol-related behaviors were mediated, in part, by adolescents' perceptions of the parenting that they received, especially at 14 years of age. Furthermore, perceived parental monitoring and discipline had unique mediating capabilities, net the effects of all other parenting behaviors. The study therefore concluded that parenting is an important mediator of the association between parental and adolescent drinking practices.. This study involved adolescents generally not necessarily in school. The findings indicate that children of parents abusing substance too will be substance abusers. The study was done in a set up that is different from the current study. It also involved a different age set of the indolence of 14 -17 ½ years while the current study sample was adolescents aged 14-19. Their study involved only students while current study involved both students and teachers in charge og guidance and counselling. This study will also investigate whether parental use/abuse of substances will affect their children to be users/abusers of substances in Kisumu East Sub-county.

Kosterman et al (2015) did a longitudinal study involving 808 adolescents interviewed annually from ages 10-16 and 18. The study found that adolescents brought up by parents who are abusers of substances have higher chances of early initiation. According to the study, proactive parents can defer or delay initiation. The study also indicated that well-defined family standards, values and proactive management of family affairs are important in deferring alcohol and marijuana use. Kosterman et al (2015) study was a longitudinal survey that investigated whether parental

care delayed or deferred the onset of substance use/abuse initiation, while the current study was a one stop investigation on use/abuse of substances among adolescents in school.

McMorris et al (2013) carried out a study on 1945 7th-grade male and female learners from different states in the US. The study presented similar results despite policy differences. The results established that an alcohol intake environment supervised by adults led to higher levels of injurious alcohol effects. They also differed from predictions derived from the HARM policy, which stipulates that the youth can take alcohol under their parents' guidance. The study contradicted the general belief that HARM reduces the onset of adolescent drink-related issues since adults oversee their alcohol consumption. This study was carried out in a different cultural setting in America that may be different from those of the current study. Hence the need carry out this investigation in Kisumu East Sub-county.

Kilpatrick et al (2013) carried out research on 4023 adolescents aged 12 to 17 from family backgrounds with alcohol and substance use difficulties. The study found that adolescent children from such families had an increased risk for current substance use. An article entitled "Do Parents Still Matter?" noted that parents wield an enormous impact on alcohol consumption among fresh High School graduates. Wood and colleagues (2014) carried out an email survey to investigate the parental influence and peer variables on alcohol use issues in 556 late adolescents during the summer period immediately preceding their entry to college. The results indicated a major relationship between alcohol involvement and parental influence. As per the study, parental influences moderated the drinking behavior of adolescents. A closer parental engagement resulted in negligible adolescent alcohol-related problems. The research findings suggest that parents play a significant part in the drinking behavior of adolescents. The study showed the important role parents play in their child's life in whether they will abuse or not

abuse substances. The aim of this study was to determine the influence of parents in the adolescents' substance use and abuse. The current study takes cognizant of the period the above studies were done, hence, there is need to establish the present situation of substance use/abuse in secondary schools in the area of study.

Chapia et al (2021) investigated the influence of parents on drug and substance abuse among secondary school students in Kinango Sub-County, Kwale County. Erickson's social development theory and Bandura's Social Learning Theory (SLT) aided in understanding the study's findings. The study used a survey research approach, with a total population of 4,964 people including all secondary school students, heads of guidance and counseling departments, and deputy principals in the Kinango sub-county. Stratified random sampling was used to choose four public secondary schools. The sample size was made up of four deputy principals, four heads of guidance and counseling departments from the participating schools, and 384 students chosen at random. Questionnaires and an interview schedule were used to collect data. It was established that parental impact on drug and substance misuse among secondary school students in Kinango sub-County had a statistically significant effect. Chapia's et al (2021), study was done in Kenyan Secondary schools to investigate role of parents in substance use. But unlike the current study whose scope was adolescents aged 14-19 years old in secondary schools, their study did not focus on the ages of the respondents. Apart from that, their study was done in Kinango in Kwale which might be having different socio-economic and cultural settings.

2.3.2 Role of Peers in Adolescents' Substance Use and Abuse

Perception by peers is one of the most important facets of many adolescents' lives. Some adolescents will do all it takes to fit in a peer group; and exclusion from the group means stress, frustration, sadness and rejection. Therefore, they will do anything to conform to the peer group's

expectations. They become highly susceptible to social influences, especially from their peers given their developmental stage (Morton & Farhat, 2013; Whitesell et al, 2013).

The purpose of Picoito et al (2019) study was to look into gender disparities in substance use and initiation patterns in male and female adolescents, as well as to assess individual, family, peer, and school-related factors that influence these patterns. To characterize different profiles of substance use and initiation for boys and girls, and to identify factors associated with latent class membership, The study used latent class regression analysis on a Portuguese representative population sample of 1551 15-year-old adolescents drawn from the 2010 'Health Behavior in School-Aged Children' survey, stratifying the associations analysis by gender. Non-Users (boys [B] 34.42%, girls [G] 26.79%), Alcohol Experimenters (B 38.79%, G 43.98%), and Alcohol and Tobacco Frequent Users (B 21.31%, G 10.36%) were found in both genders, with two additional unique classes: Alcohol Experimenters and Tobacco Users in girls (18.87%) and Early Initiation and Poly-Substance Users in boys (5.48%). Poor school satisfaction, bullying, fighting, and a higher family income scale score formed a common core of linked characteristics of substance use, however these correlations differed by gender. Family characteristics were connected with higher problematic substance use in girls but not in boys. The girl's Alcohol and Tobacco Frequent Users (gATFU) class (OR 3.78 CI 1.18-12.11) and Alcohol Experimenters and Tobacco Users (AETU) class (OR 3.22 CI 1.4-7.44) were both related to not living with both parents. Poor contact with mother was also linked to ATFU class membership (OR 3.82, CI 1.26-11.53) and AETU class membership (OR 3.66, CI 1.99-6.75). Furthermore, ATFU class membership was related with a greater level of psychological symptoms (OR 1.16, CI 1.02-1.31). The findings of this study point to the influence of the peers in the individual's use/abuse

of substances. The study used Latent regression analysis while the current study used Pearson's Moment Product correlation and t-test to analyze the data.

Muhia (2021) study's goal was to determine the influence of peer influence on substance misuse among students in public day secondary schools in Thika Sub-County, Kiambu County. The study's specific objectives were to determine the type of drugs abused by students in public day secondary schools in Thika Sub-County; to establish the impact of peer influence on drug use by secondary school students in Thika Sub-County; to determine the relationship between gender and drug abuse by secondary school students in Thika Sub-County; and to evaluate the role of counseling in reducing substance abuse in secondary schools in Thika Sub-County. The descriptive research design was adopted in the study. 720 public day secondary school students were the intended audience. The sample size was 72 pupils from six public day secondary schools in Thika Sub-County in Form 3. The sample size was determined using random sampling procedure. A questionnaire was used to obtain primary data. The data was analyzed with SPSS version 20 using both descriptive and inferential statistics. The results indicated that there is a positive and substantial link between peer influence and substance abuse in secondary schools based on the correlation data. Muhia's study is similar to current study in that it involved secondary school students and used questionnaires to collect data. However, current study not only examined the influence of the peer group but also looked at the influence of parents and the media.

According NACADA (2016) National survey on alcohol and drug abuse among secondary school students in Kenya, adolescents said they have a substance abusing family member, or a bosom friend taking drugs, have a higher possibility of use/abuse of substances. The NACADA survey (2016), comprised of a country wide sample unlike the current study. It also did a blanket

study of secondary school students while this study looked at specifically adolescents 14-19 years old.

According to Morton & Farhat (2013), the peer group contributes to adolescents' substance use and abuse by enabling access, opportunity and reinforcement. In Kenya, peer pressure contributes greatly to adolescents' abuse of substances. Kimani (2013), did a study in Kiambu County, involving 100 students chosen from 5 secondary schools in Kiambu, Central Kenya. The researcher collected data using questionnaires and focused group discussions, Data was analyzed using descriptive analytical methods and inferential statistics. The study revealed that family, parents, peer associations has substantial influence on the students' abuse of substances. Kimani's study (2013) did not use age bracket of the students unlike the current study. Therefore the scope of this study is different from the reviewed study. The sample size was small consisting of only 100 respondents. While the current study sampled 366 adolescents. This may hamper a possibility of generalizing the research findings to other regions in Kenya.

Substance use and abuse among school-going adolescents lead to school dropout and engagement in antisocial behaviors such as mugging and stealing. The Task Force on Students' Discipline and Unrest in Secondary Schools (NACADA, 2016), names external school environment: parents, peers, the media and other members of the society as contributing to substance use and abuse in secondary schools. This view was supported by Tshitagaro's & Tosin's study (2016); Riva's et al (2018); Morton's & Farhat's (2013); Picoito's et al (2019); Olenrewaju's et al (2023).

2.3.3 Role of the Media on Adolescents' Substance Use and Abuse

The media plays an important role in the socialization of the individual. Goode (2013) observed that the media creates a lot of interest in the engagement of adolescents with some drugs. For example, some media campaigns pinpoint the usefulness of some drugs to potential customers without disclosing fully the effects of the drugs on the user. Many users are hooked to the “new miracle” before its harmful effects are discovered.

Tucker et al (2013), observed that other than parents and peers, “super-peers” like music, television and the internet sway adolescents quite considerably into substance abuse. According to Tucker, adolescents spend 8.6 hours daily on electronic media and 1.2 hours a day on books and magazines. She also raised concerns about the content of movies watched. Tucker stated that 93% of adolescents watch movies that depict alcohol use and 22% watch movies that allude to illicit drugs. Tucker noted that according to the Office of National Drug Control Policy- ONDCP, alcohol appears on 77% of the episodes on television. Alcohol surfaces every 14 minutes on music videos (ONDCP in Tucker, 2013). Tucker’s study points at media influence on substance use/abuse in America. This study will examine if the media plays a role in adolescents’ use/abuse of substances in the sampled respondents.

Davis et al (2019) examine the long term associations between substances use-related media exposure, descriptive norms and alcohol use from adolescence to young adulthood in South California, USA. Web-based surveys were used to collect data from three districts. Respondents were of two groups of students in 6th and 7th grade in 2008 and followed later in 2018. The average age of respondents was 13. 2 years old. Data was analyzed using an Auto-regressive Cross-lagged T(ARCL) model. Findings indicated cross adolescents’ and young persons’

exposure to substance related media content was linked to an increased consumption of alcohol and other drugs. This study involved not only adolescents but also young adults. It was a longitudinal survey lasting 10 years. The survey also used Web method of data collection and analyzed data using Auto-regressive Cross-lagged (ARCL) model. The current study used descriptive and correlational research designs and data was collected using WHO (2018) moderated questionnaires and interview schedules. Furthermore, current research involved adolescents 14-19 years in public secondary schools in Kisumu East Sub-county.

Jackson et al (2018), reviewed literature on media/ marketing influences on adolescent and young adult substance use. They found that adolescents have a higher potential to be exposed to substance abuse. The traditional media of print, point of sale advertisements and broadcasts have been replaced by readily available digital media that has instant content. These findings concur with findings from several other studies (NACADA, 2016; Otieno & Ofulla2015, Simatwa et al 2014, Wakoli 2019). The Jackson et al study (2018), involved review on existing literature on media/marketing influences on drug abuse among adolescents and young people, hence it did not carry out primary investigation but used secondary data from other studies. It is unlike the current study that collected first hand data from respondents in Kisumu East secondary schools.

Strasburger (2013) sought to explore the role of the media in drugs and substances of abuse among youths in America using questionnaires downloaded from email. He observed that many parents, schools and the Federal Government try to get children and teenagers to “Just say No” to drugs. However, more than 25 billion dollars’ worth of advertisements on cigarettes, alcohol and prescription drugs, effectively get adolescents to “Just say Yes” to these substances. In addition, TV programs and movies contain appreciable amounts of content that foster substance use and abuse. Consequently, adolescents end up receiving mixed messages about substance use and

abuse. Thus, the findings found that media contributes significantly to adolescents' engagement in illicit substances. This study was a large survey involving various states in USA. The Population included students and their parents. It was different from current study because of methodology and scope. The current study used questionnaires and interviews to collect data only from students and teachers in charge of guidance and counselling on the role of the media in adolescents' substance use/abuse.

Wakoli (2018), examined the relationship between exposure to mass media and drug abuse among adolescent students in secondary schools in Bungoma Central Sub-county. The study involved 370 students sampled through simple random sampling. Data was collected from students, teacher counsellors and principals of the selected schools. To determine the relationship between mass media and drug abuse, the researcher used Pearson's correlation. The results showed a correlation close to 1 from the positive pointing an exposure of the students to mass media. The study concluded that drug abuse behavior among secondary school students is greatly due to exposure to mass media. These includes videos, Television advertisements, movies, novels and magazines. Wakoli (2018) study used descriptive research design whereas the researcher in the current study applied both descriptive and correlational survey research designs. It also used questionnaires and interviews to collect data from respondents. The study however, only examined media influence unlike the current study that looked not only media influence but also examined parents' and peers' influence. Moreover, the current study explored the issue of gender disparity and the influence of substance use/abuse on social behavior.

The literature reviewed shows that parents, peers and the media contribute to adolescents' substance use/abuse. However, there is little literature on the relationship between these variables and the social behavior of adolescents in secondary schools in Kisumu East Sub-County. In

addition, most of the studies available were carried out in western countries and other parts of the world with different cultural and economic-political setups. Moreover, there was also scanty information on the influence of parents, peers and the media on adolescents' substance use/abuse in secondary schools in Kisumu East Sub-County. This study, therefore, supplemented the existing literature and filled the knowledge gap on substance use and abuse in Kisumu East Sub-County.

2.4 Influence of Substance Use and Abuse on Adolescents' Social Behavior

The abuse of substances among adolescents often affects their social behavior and resulting in antisocial behavior.

A study was conducted by Fosco, et al (2014) on family relationships and parental monitoring during middle school as predictors of early adolescent problem behavior. It examined the specific role of parental monitoring and of family relationships (mother, father, and sibling) that are all critical to the deterrence of problem behavior in early adolescence. The sample size comprised 179 ethnically diverse 6th-grade (46% female) students who were followed through 8th grade. The results indicated that parental monitoring and father–youth connectedness were associated with reductions in problem behavior over time, and conflict with siblings was linked with increases in problem behaviors. Whereas the study linked social problems to siblings, the study was carried out on learners who were at the edge of inception to adolescent stage and hence could not fully make a clear generalization on adolescent learners. In Fosco's et al study, (2014), focus was on parental monitoring as a deterrence to drug abuse and adolescent problem behaviors like fighting with siblings and picking quarrels with others. The current study's focus was the influence of parents, peers and media on adolescents' substance use/abuse. It also looked

at the effect of substance use/abuse on social behavior. The above mentioned study was done outside Kenya and outside the scope of the current study hence there could have been other salient socio-political factors that are different from those that affected the population of this study.

Young et al (2017), carried out a longitudinal study in Scotland on alcohol use and antisocial behavior among 2586 students aged 11-15. The study used self-administered questionnaires to collect data. The study concluded that abuse of alcohol was the main predictor of antisocial behavior among adolescents. The study further determined that alcohol use and abuse among adolescents, and some aspects of the environment contributed to adolescents' antisocial behavior.. According to this study, alcohol has an “aggravating” effect: it can amplify underlying aggressive inclinations or grant extra salience to trivial annoyance among the juvenile offenders. It showed a close correlation between adolescent drug use and dangerous crime.. Adolescents who begin experimenting with drugs before the age of 15 have higher chances of developing drug-related problems or engaging in antisocial behavior than youths who kick off the habit at age 19 or later (Young et al, 2017). This study (Young et al (2017), was a longitudinal survey in Scotland involving a different age cohort from the current study. Also notable difference was in methodology as this study used descriptive and correlational research survey design and involved a smaller scope and target population. It is therefore pertinent that we explore the effects of substance on adolescents' social behavior in Kisumu East sub- County.

Amaro et al,(2012), carried out a review integrating the existing evidence on relevance of gender for substance use /abuse prevention research. They reviewed trends in substance abuse, gender differences in risk factors and theoretical models that are relevant to substance use/abuse among adolescents. These findings (Amaro et al, 2012) revealed no statistically significant variation in

the abuse of drugs based on gender and other socio-demographic considerations. According to them the traditional gender gap in substance abuse has decreased. This could be explained that there is probably a hidden causal factor(s) associated with the narrowing gap between females and males in use and abuse of substances. This study was carried out in USA, meaning that the scope and population was different from the current study.

According to NSDUH-National Survey on Drug Use and Health (2014), in a country wide survey in 2013, using a self-administered web questionnaires , found that 17.7%of adolescents aged 12-17 reported they have been involved in serious fights at school or at home in the past year. Another 11% had participated in inter-group fights, 3% had carried hand guns at least once, 2.8% had stolen or tried to steal something and 2.4% traded in illegal drugs in the past year. This was an American nationwide survey that used web-based questionnaires mainly self-administered type. The current study was a small scale descriptive and correlational survey design and therefore had a limited scope and different sample of respondents. The areas of study varied greatly geographically and culturally. Moreover, the NSDUH survey was done some years back in 2013. It is therefore pertinent that this study examines the current situation of substance use/abuse and its effects on social behavior.

In Kenya, there are many reports on substance use and abuse and indiscipline in secondary schools. Some of the major incidences reported in the media include the March 2001 deaths of 58 students of Kyanguli Secondary School in Machakos in a dormitory inferno started by fellow students. In 1991, the media reported the deaths of 19 girls at St Kizito Secondary School in Meru from sexual assault and pandemonium instigated by invading boys from a neighboring boys' secondary school. In March 1998, the media recounted the deaths of 23 students and injuries to 18 others at Bombolulu Girls School when a fire burned their dormitory (NACADA,

2004). There are many other antisocial behaviors associated with the misuse of substances. According to NACADA (2014) substance abuse can lead to aggressive, quarrelsome or criminal behavior. In other words, substance use and abuse can cause arson, rape, vandalism and even death in Kenyan secondary schools. Apart from these behaviors, substance-abusing adolescents are likely to be absent from school, perform poorly in class, and get involved in stealing, muggings and cheating (NACADA, 2017). In addition, adolescents who misuse substances are likely to engage in arson, theft, bullying of others, suicide and suicidal attempts and unprotected sex with multiple partners.

Murigi et al (2020), conducted a research on the influence of drug abuse on students' violence in public secondary schools in Vihiga and Sabatia Sub-counties. The study used descriptive research survey and correlational design. The study's population was 54 principals, 54 guidance and counselling teachers, and 10,000 students. Data was collected using questionnaires and interviews. Data was analyzed using frequencies, percentages and mean and tabulated. The qualitative data was reported as they emerged in themes and sub-themes. The study observed that majority of the teachers' perceptions were that substance abuse influenced students' violence in schools as shown by $M=4,03$ and $SD=,212$. Findings indicated students directed their violent behavior to teachers, support staff and fellow students. The study concluded that abuse of drugs in secondary schools in Vihiga sub-county led the students to engage in violent behaviors. Students bullied their colleagues, sneaked out of school and threatened others. The Murigi et al study (2020), examined the role drugs played in student violence in secondary schools. In the present study substance use/abuse was examined whether it affects social behavior of the adolescents in schools. Hence violence is just one of the effects of substances on social behavior. The other difference between their study and the current one is the scope of the study which was

carried out in rural settings unlike the current study. Their study was done in Vihiga and Sabatia which have rural characteristics that may have influenced the trajectory of their findings.

In another study, Ndolo & Simatwa (2022), examined the influence of drug abuse on students' sexual harassment in secondary schools in Vihiga Sub- County. The study applied descriptive research survey and correlational designs, The study's population was 54 principals, 54 GnC teachers 10,000 students and one county Quality Assurance and Standards officer. Sampling was done using stratified random sampling to get 39 principals, 39 GnC teachers and simple random sampling was used to get 385 students for the study. Data was collected by means of questionnaires, interviews and document analysis. To achieve reliability the study applied Cronbach's Alpha using 9.25% of the schools not involved in the main study. Data was analyzed using frequencies, percentages and mean which was presented in tables. The study revealed that students who abuse drugs were involved in sexual harassment behaviors like writing sexual toned messages to others, watching pornographic movies, forcefully hugging and kissing without consent from the victim. From this findings, it is evident that substance use/abuse negatively affects behavior. This study deals with harassment which is only one factor of social behavior that can result from use/abuse of substances.

Despite the rich data from previous studies, there is no evidence to prove that use/abuse of substances leads to adolescents' delinquent behavior in secondary schools in Kisumu East Sub-County. This study draws parallels from earlier studies embarked on by various researchers reviewed in the literature available. However, there is knowledge gap in the variables handled by these studies. Some examined the role of parents, others the role of peers and others media

influence. The current study covered not only prevalence and gender disparity, but also examined influence of parents, peers and the media in adolescents' use/abuse of substances. A wide range of adolescents' social behaviors like cheating, bullying, disrespecting authority, truancy, theft and vandalism of school property were of interest in the present study. The studies covered in the literature review happened at different times and in different geographical areas with salient cultural and socio-economic influencers. The literature also involved different research subjects.

2.5 Strategies Employed in Addressing Substance Use and Abuse among Adolescents in Secondary Schools

Many scholars have carried out studies on substance abuse and recommended various strategies for curtailing the menace. Researchers at Stanford University, USA determined the importance of self-regulation as a strategy in substance abuse control (Bandura, 1999; Hellerstein et al, 2013). People can only realize a positive change in their behavior if they are convinced that the actions they take will produce the preferred results. Adolescents may have few incentives for discontinuing the consumption of substances. Self-efficacy belief stimulates preferred transformation by means of cognitive and choice procedures (Bandura, 1986). Perceived self-efficacy touches on all phases of a person's transformation, for instance, initiation of endeavors to overpower the misuse of substances, recovery from relapse and living a substance-free life. Other recommended strategies include teaching adolescents to avoid peer pressure (Sabah et al 2022; Winkel, 2012 & Das et al, 2016). These are short-term strategies for the reduction of substance intake and they may be insufficient for the prevention of long-term substance consumption. Other prevention strategies embedded in the curriculum such as Drinking Refusal

Self-Efficacy (DRSE) aim at influencing skills development. Drinking Refusal Self-Efficacy is more effective than other methods of substance reduction because it is likely to enhance knowledge of substance use. Young adolescents often misjudge the alcohol consumption rates of their peers. They also disregard alcohol-based programs that aim at modifying their beliefs such as social norm information. Higher DRSE skills are essential for a low rate of alcohol use and abuse (Baldwin, et al, 2013). These strategies are divided into long-term and short-term goals in the fight against substances of abuse. Some of the programs are fused in the regular curriculum in schools. The current study will explore whether such programs exist in schools in Kisumu East Sub-county.

Iceland got world attention for reversing substance use among teenage youths. According to Milkman & Gudberg (2019), from 2008 to 2018, the percentage of 15 to 16 year olds who were involved in drinking alcohol in the past 30 days dropped from 42% to 5%. Daily cigarette smoking dropped from 23% to 3% and cannabis fell from 17% to 5%. The study used multilevel Developmental Framework. To achieve this, Iceland used what has come to be known as “Icelandic Model”. The model has three pillars of success, namely: Evidence based practice, and creating dialogue among research fraternity, policy and practice. These three pillars are supported by research and political good will (Milkman & Gudberg 2019). The Icelandic study used mail self-administered questionnaires to carry out a national survey on teenage substance use while the current study involved a small population of about 7000 students. Therefore, the two studies have different scope and used different types of methodology. Furthermore, the Icelandic survey was done outside Kenya with socio-economic and cultural differences. The reduction of teenage substance use is associated with the Icelandic Model. It is interesting to find

out whether the strategies being applied in schools in Kisumu East sub- County are likely to yield positive results in dealing with the problem of substance use/abuse.

Das et al (2016) conducted systematic reviews to assess the effectiveness of treatments to prevent teenage substance misuse. They analyzed findings from 46 studies of therapies for smoking/tobacco, alcohol use, drug use, and mixed substance addiction. According to their findings, smoking/tobacco interventions, school-based prevention programs and family-based intensive interventions that primarily focus on family functioning are beneficial in reducing smoking. Mass media campaigns are also effective when conducted at a fair intensity over a long period. School-based alcohol prevention programs have been linked to lower frequency of drinking, whereas family-based interventions have a minor but durable effect on alcohol usage among adolescents. School-based interventions involved a combination of social competence and social influence techniques that have been demonstrated to be effective in preventing drug and cannabis use. School-based primary prevention programs are among the most effective interventions for mixed substance abuse. This study reviewed empirical studies on drug abuse intervention strategies in USA. They found that Media based, school and family based strategies were most effective in managing drug issue among young people. This studies looked at the most applied strategy –guidance and counselling and other possible strategies that may yield more positive results so far. The Das et al (2016) study, is different from the current study due to differences in scope and methodology. They reviewed already available data unlike the current study that collected raw data from adolescents and teachers in charge of guidance and counselling and used questionnaires and interviews to collect data.

Griffin & Botwin (2014), examined evidence-based interventions for preventing substance use disorders in adolescents in USA. The study involved various states and used self-administered web questionnaires. The findings indicated that the effective school-based strategies were premised on cognitive conceptual model which states that people make decisions about substance use/abuse based on their knowledge of the adverse consequences involved. The study also found that more effective contemporary approaches associated with school-based prevention, are derived from psychosocial theories on the cause of adolescent substance use. These approaches are social resistance skills, normative education and competence enhancement skills training. These strategies can be combined to yield effective ways of managing substance use/abuse. Students are taught to recognize situations that are likely to cause exposure to substance abuse. Resistance skills include content to increase students' awareness of techniques used in advertisements to promote the sale of cigarettes and alcohol. They are taught counter – argument techniques to attractive but dangerous messages of advertisements. Normative education involves content and measures to correct wrong perceptions on high prevalence of substance use/abuse. Adolescents underestimate the prevalence and eventual consequences of substance use/abuse. Competence enhancement approaches train on combination of general problem solving and decision making skills, general cognitive skills for resisting interpersonal or media influences and lastly skills for improving self-control and self-esteem. Apart from these, adaptive coping strategies for dealing with stress and anxiety through use of cognitive- coping skills or behavioral relaxation skills are also important. General social skills as well as general assertive skills can be used by adolescents when faced with drug situations. Griffin's & Botwin's study (2010), richly explored various strategies that can help schools and adolescents deal with

substance use/abuse issues. The current study will establish if any of these strategies are being applied in secondary schools in Kisumu East Sub-county.

Sabah et al (2022), in their study on the effectiveness of life skills training on assertiveness, self-esteem and aggressive behavior carried out in Egypt, sampled 74 patients using purposive sampling technique. The study's methodology was quasi-experimental design. There was a highly statistical improvement in both self-esteem and assertiveness skills among the participants after life skills training than before training at $p < 0.001$. Also, there was a highly statistically significant reduction in aggressive behavior among the participants after the life skills training than before at $p < 0.001$. The study concluded that life skills training significantly improved self-esteem, assertiveness and decreased aggressive behavior. This study was a quasi-experimental that used patients who reported to hospital due to disorders associated with substance abuse. Their scope and methodology was different from the current study. Despite the difference in scope and methodology, the findings of their study is relevant to the current study on strategies. It is interesting to explore whether for example self-esteem and assertive skills are taught in any of the schools involved in this study.

Macharia et al (2022), looked at the challenges, opportunities and strategies for addressing drug and substance abuse in selected counties of Murang'a, Nyamira, Isiolo and Kajiado. The study used purposive sampling technique of previous abusers, current abusers and county officials totaling 255 respondents. Data was collected using in-depth interviews. Data analysis was done using computer package QSR NVIVO 12. The strategies identified by the study include self-driven, social support, law enforcement and rehabilitation. Self-driven strategies include keeping oneself busy, keeping away from bad company and reducing consumption of drugs. This study looked at strategies that can help people addicted to drugs change their habit. The study involved

mainly adult drug abusers in the four counties that participated in the study. However, their recommendations can be applied also to students in secondary schools. Their study is relevant to the current study as it examined strategies despite their study involving large scope of four counties while the current study focused on public secondary schools in Kisumu East Sub-county.

Muhati (2017) sought to explore the strategies used to address drug abuse problems in Nairobi Provincial boys' secondary schools. The study involved 144 respondents sampled through random sampling. Questionnaires were used for data collection. Data was analyzed using frequencies and percentages presented in tables. Findings indicated that schools used certain prevention and interventions as well as action related strategies and programs to fight drug abuse problem. Despite use of these strategies, schools continue to experience substance use/abuse problems. They concluded that strategies in place have not been fruitful, hence there is need to explore other possible strategies on top of the existing ones. Muhati's study involved a sample of 8 schools 24 teachers and 120 students unlike the current study that sampled 12 schools, 366 students and 12 teachers. There was also a methodological difference between Muhati's study and current one. Muhati (2017) used only descriptive statistics like frequencies and percentages to analyze the data. The current study employed not only descriptive statistics but also used Pearson's product moment correlation to establish relationships between variables. Muhati avers that the strategies are haphazardly applied by schools without active involvement of the larger school community as well as the surrounding populations around the school. The current study strived to establish the strategies being applied by schools and it is interesting to note if it involves all the schools' stake holders.

The National Academy of Sciences Committee (2011), however, states that no single treatment approach or modality is superior to others. According to the authors, the treatment or handling of other difficulties in life that drive the individual into substance use or abuse will improve the outcome of the chosen strategy. Another strategy proposed by Beck et al (2014) stresses the use of cognitive processes, such as the Alcoholics Anonymous warning against alcohol consumption - "stinking thinking". In other words, changing adolescents' beliefs about substances is essential in substance use and abuse. For example, some adolescents take substances to feel high or to win acceptance from peer groups. The youth "convince" themselves that they cannot do without using and abusing substances, or that their friends will reject them. The cognitive approach helps people to confront the issues that produce emotional anguish. It also helps the individual to develop strong systems of internal controls (Bandura, 1999). The approach is essential in battling agents of addictive behaviors like depression, anger and anxiety that may drive the adolescent to use/abuse substances.. Beck et al (2014), proposed the development of skills that control the temptation of indulging in substances. The skills may reproduce situations that stimulate a craving for a substance and then rehearse control behaviors. For instance, the abuser may be asked, "If someone offered you cocaine, what you would do?" The individual will imagine ways of declining the offer. This may involve engaging in some pleasurable activities such as visiting a friend, a religious person, or going dancing. Another approach draws on willpower in a deliberate desire or conscious decision and effort to decline or delay substance use. These literature mainly dealt with the behavioral based strategies that is hinged on the individual's willingness to avoid substances of abuse. This may be effective if the individual is trained in assertiveness skills so that a "NO" remains a "NO". But in a situation involving peer pressure, most adolescents would not want to go against the general attitude friends hold on substance

use/abuse. Despite the challenges, it would be interesting to explore this line of thought if it is practiced in schools in Kisumu East Sub-county to eliminate and discourage adolescents from substances of abuse.

Njeru and Ngesu (2014), explored the causes and effects of drugs and substance among secondary school students in Dagoretti Division, Nairobi. The study used survey research design and used questionnaires to collect data. Data was analyzed using SPSS computer program. It recommended the enforcement of guidance and counselling in schools. According to them, teachers should establish strict disciplinary actions and apply guidance and counselling to eliminate the vice. They also proposed the vetting of school principals in terms of good leadership styles. Njeru and Ngesu study (2014) looked at the causes and effects of substance use among secondary school students and proposed use of heavy punishment and guidance and counselling to fight substance use/abuse in schools. . However, it is different from the current study that explored strategies beyond heavy punishment and guidance and counselling.

Njagi (2014), examined strategies secondary school principals prefer to curb drug abuse in Naro Moru Division, Nyeri County. The study used mixed research design. The research instruments were self-developed questionnaires for students, Principals and Deputy Principles of the 8 schools sampled through stratified random sampling. In total there were 184 respondents. Data was analyzed using frequencies, percentages and presented in tables and bar graphs. For inferential statistics SPSS version 20 was used. According to the findings principals prefer expulsion, suspension, drug education and hefty punishment. Also it was found that the interventions applied were ineffective in mitigating drug abuse in Naro Moru secondary schools. Conclusions were made suggesting that drug abuse and its consequences should be included in

the school curriculum. Njagi's study is relevant to this current study as it examined the strategies school principals prefer to use in dealing with substance abuse. However, Njagi's study was done in another county that might be having unique factors making students to abuse substances. The other difference is time span. The investigation was done some years back in 2014. Therefore there is need to examine the perceived strategies being used in Kisumu East Sub-county.

The literature reviewed explored strategies used for mitigating substance use and abuse. Studies demonstrate that not all these strategies are used in combination. The National Academy of Sciences (2011), Cheloti (2016), Macharia et al (2022), Sabah et al (2022) and Griffin & Botwin (2010) all assert that no one strategy can effectively eliminate substance abuse. Most of the studies report the selective use of these strategies. Moreover, the use of combined strategies has mainly been reported in western countries. This study, therefore, examined the commonly applied strategies. It also tried to establish if there are strategies that are not being applied in secondary schools in Kisumu East Sub-county. Some of the strategies reviewed in the literature may not be applicable in an African cultural set-up, and so this study sought culturally appropriate strategies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter designates the research methodology. It covers the research design, research area, study's population, sampling techniques, instruments for data collection, validity and reliability of instruments, piloting of instruments, data collection method, data analysis techniques and lastly ethical considerations.

3.2 Research Design

This investigation employed mixed methods with the incorporation of both descriptive survey and correlational research designs. The descriptive method involves assembling information from sampled individuals using interviews or questionnaires. The design was preferred due to its appropriateness for extensive research and a high degree of confidentiality (Bloomfield & Fisher, 2019, Coe et al, 2017). The use of the descriptive survey design allowed the researcher to gather data on the opinions and attitudes of students and teachers of guidance and counselling in secondary schools in Kisumu East Sub-County on the impact of substance use and abuse on adolescents' social behavior. Correlational research design involves finding the strength of a relationship between two or more variables. It was also used to determine the influence of substance use/abuse on adolescents' social behavior. Both quantitative and qualitative approaches were used. The quantitative approach employed close-ended questionnaires to collect data. The qualitative approach employed an interview schedule to collect data on substance abuse and its impact on adolescents' social behavior (Kennedy, 2019).

3.3 The Study Area

The study was conducted in Kisumu East Sub-County. The sub-county covers 557.7 km square. It borders Nyando Sub-County to the east, Nandi East Sub-County to the North East, Emuhaya Sub-County to the North, Kisumu West Sub-County to the West and Rachuonyo Sub-County to the South. Across, Lake Victoria lies within longitude 34 degrees, 10 degrees East and 35 degrees, 20 degrees East and latitude 0 degrees, 20 degrees South and 0 degrees, 50 degrees South.

Kisumu East Sub-County has a population of 473,649 people. Out of this population, 237,923 are female and 235,676 are male. The population density is 847 people per square km (Kenya National Bureau of Statistics, 2012). Kisumu is the third largest city and the major mercantile, fishing, manufacturing, communication and administrative hub of Lake Victoria Basin. The growth rate of Kisumu City is estimated at 2.8% per annum. The city is connected to other East African countries by rail, road, water and air. Kisumu boasts of an abundance of skilled and unskilled workers. Unemployment stands at thirty per cent. Fifty-two per cent of the working class is engaged in informal activities (UN-HABITAT, 2015).

According to the Central Bureau of Statistics, CBS (2013), Kisumu has the country's poorest inhabitants with 60% of the population living in informal settlements. The mean poverty incidence level for Kisumu City in 2009 was estimated at 62% compared to the national level of 53%. Nyanza Province where Kisumu East Sub-County is located has one of the highest poverty occurrence rates in Kenya at 63% (CBS, 2013). The high poverty levels have negatively affected many people in the sub-county leading to a lack of basic amenities, malnutrition, lack of clean

drinking water, child labour and substance abuse because of the numerous changáa brewing dens and bars in the sub-county. Due to the high poverty level in the sub-county, many inhabitants are engaged in activities associated with the sale and consumption of substances (Maoulidi, 2013; UN-HABITAT, 2015).

3.4 The Study Population

The population of the study comprised adolescent students aged 14-19 and guidance and counselling teachers in public secondary schools in Kisumu East Sub-County. The Sub-County has 41 public secondary schools. There were 7528 adolescent secondary school students aged 14-19 in Kisumu East Sub-County. Out of this figure, 4124 were males and 3404 were females (Source: Kisumu East County Education Data 2015).

3.5 Sample and Sampling Techniques

Hammond and Wellington (2021), describes sampling as the procedure used to decide on units from a population. The researcher studies the sample and can generalize the results objectively to the population. The study applied a stratified random sampling technique. According to Hammonds & Wellington (2021), this sampling technique entails stratification or segregation, and random selection of subjects from each stratum. Using stratified random sampling, the researcher achieved the desired representation of the various sub-groups (Lambert, 2019). The study stratified schools as purely boys' boarding schools, girls' boarding schools and mixed-day secondary schools. From the 41 secondary schools in Kisumu East Sub-County, 12 schools representing 30% of all the secondary schools in the Sub County were proportionately selected for the study as follows: three boys' boarding schools, three girls' boarding schools and six mixed-day secondary schools, arriving at a ratio of 3:3:6. To sample schools from their different

strata, the researcher used systematic sampling technique whereby every kth school is chosen from the original list of secondary schools in Kisumu East Sub-County provided by the Sub-County Education Office. This means that rather than changing the listing of schools, the researcher used the list provided by the CEO's office. Fisher's Formula (adopted from Lambert (2019); Kennedy (2019) was employed .to get a sample size of 366 adolescent students. Twelve teachers in charge of guidance and counselling whose schools formed the selected schools qualified automatically. The total population of a selected school defined the number of students sampled. Amin's table adopted from Krejcie and Morgan (1970) was employed to settle on the sample size of students for each school.

3.6 Research Instruments

The study used a questionnaire and interview schedule for the collection of data. The questionnaire was preferred in the study because of its appropriateness for the large and representative sample used. Compared to other techniques, the questionnaire was more suitable because of the wide geographical area of study (Lambert, 2019; Hammonds & Wellington, 2021).

3.5.1 Adolescents' Questionnaires (AQ)

Questionnaire may consist of a number of questions and possible answers from which the respondent will choose the appropriate answer. Respondents have to answer questions personally (Kothari, 2004; Lambert, 2019). The students' questionnaire (AQ) was in a structured form of the Likert type adopted from the World Health Organization: A Methodology Questionnaire for Student Drug-use Surveys (WHO, 1980) was used and targeted only the

students. This questionnaire was adapted and modified to suit the conditions of the study's subjects. Questions directed to students in the WHO document were adopted as they were. However, a modification was done to some of the questions asking the student whether they have taken opium or amphetamine. The questions were instead modified to capture the drugs common to the Kenyan situation like chang'aa, busaa or Khat. The WHO questionnaire had a section for adults or parents of the youth. This section was omitted since the present study's focus was a questionnaire for the students. Therefore, only those sections that captured data from the adolescents were adopted. The WHO document was seeking a YES or NO responses from the respondents. However, the questionnaire was modified to the Likert scale type to capture the adolescents' incisive views, attitudes, opinions and perceptions on substance use and abuse.. Another modification was made to the period/duration taken to investigate the adolescents' exposure to substances. The WHO questionnaires had two periods, one for the last 12 months and another for the last 30 days. The questionnaire for the last 12 months was discarded since the duration was too long for the subjects to clearly remember facts well. Therefore, to avoid vagueness, this study locked the period to the last 30 days. The questionnaires were organized into six sections. Section one captured the demographic information of the respondents. Sections two to five captured the themes of the objectives of the study. The second, third, fourth, and fifth sections of the adolescents' questionnaires were aimed at collecting data on the prevalence of substance abuse and gender disparities in the misuse of substances. The sections captured the extent to which parents, peers and the media influence adolescents to use and abuse substances. It also had questions on the influence of substances on adolescents' social behavior and the perceived strategies that can mitigate the abuse of substances by adolescents in secondary schools. The questionnaires comprised conceivable alternatives from which the respondents

picked their responses. These alternatives ranged from *Strongly Agree*, *Agree*, *Not Sure*, *Disagree* to *Strongly Disagree* (Likert type of questions, See Appendix A).

A sample questions from the questionnaire for collecting data from the adolescents:

- i. Have you ever used or abused substances?

SA [] A [] NS [] D [] SD []

- ii. Have you used or abused bhang or heroin in the last 30 days?

SA [] A [] NS [] D [] SD []

- iii. I learned to use and abuse substances from my close friends.

SA [] A [] NS [] D [] SD []

(See Appendix A)

3.5.2 Interview Schedule for Teachers (IST)

The interview method of data collection involves presentation of oral-verbal questions and reply should be in form of oral responses. It requires the interviewer to ask questions more often face-to-face with the interviewee. The interviewer has to initiate the process in order to collect information needed (Kothari, 2004; Lambert, 2019). This study employed a structured interview schedule to assemble data from the teachers of guidance and counselling. Interview schedules enabled the researcher to get in-depth information on adolescents' substance use and abuse and its impact on social behavior. It also enabled the teachers to give free responses on issues relating to adolescent substance use/ abuse. The interview schedule had questions on the prevalence and gender disparity, and the influence of parents, peers and the media on adolescents' substance abuse. The schedule had questions on adolescents' substance use and abuse and its impact on social behavior in schools. Finally, there were questions about proper strategies for curtailing

substance abuse in secondary schools. The following are samples of the interview schedule questions to teachers in charge of Guidance and Counselling:

- i. Do you think substance use and abuse is a serious problem among secondary school adolescents in your school?
- ii. In your opinion, do you think substance use and abuse has a direct impact on adolescents' antisocial behavior in your school?
- iii. What are the strategies that can be used to eradicate the menace of substance use and abuse in your school? (See Appendix B).

3.5.3 Pilot Study

A pilot study was carried out to test and refine the research instruments before the actual research. According to Kennedy (2019), piloting ensures the proper statement of the research instruments in order to convey the same message to the respondents. The pilot study was conducted in a school in Kisumu East Sub-county that was not part of the 12 sampled schools. The pilot study was critical in establishing the efficacy of the instruments in measuring what they were meant to measure and the respondents' accurate understanding and interpretation of the questions. The school used for the pilot study was selected randomly and 37 students participated. This was in line with Kennedy's (2019) observation that 10% of the sample size respondents is acceptable. The sample included one teacher in charge of guidance and counselling and 37 students. The errors found in the first pilot study included similarity of items that brought confusion and also it was discovered that respondents were affected by primacy effect where they tended to respond to the first choice of the Likert scale. The questions that

were not clear were redone again using clear simple language. The primacy effect was dealt with by explaining to the respondents the importance of reading first all the choices in the Likert scale before giving genuine responses. The researcher repeated the pilot study in the same school after two weeks after correcting the aforementioned errors in the instruments.

3.5.4 Validity of the Research Instruments

Validity is the extent to which the outcome attained from the data characterizes the subject under study (Coe et al 2017; Bhushan & Shashi, 2017). The researcher ensured the validity of the instruments through face and content validity involving experts from the department of Educational psychology who studied the instruments and made corrections to avoid vagueness and enhance clarity.

3.5.5 Reliability of Research Instruments

Haradhan (2017) describe reliability as an instrument's capacity to measure consistently the phenomenon the instrument is designed to gauge. Reliability was used to detect errors that may result from inaccurate framing of questions, inaccurate coding and piloting. This study used the test-retest method to ensure the reliability of research instruments. The piloting method entailed administering the instrument twice to the same research subjects. The instruments were first dispensed to the respondents to detect any ambiguities. They were administered for the second time two weeks after the first pilot study. Pearson's product moment correlation was used to determine the reliability of instruments. The results yielded a correlation coefficient of 0.780 for the students' questionnaires. Since the accepted coefficient for social science is 0.70, the instruments were found to be reliable. The interview schedule for teachers in charge of Guidance

and Counselling was not subjected to reliability test due to the subjective nature of the questions which were meant to capture opinions, attitudes and perceptions of the research subjects. To avoid any ambiguities the researcher or a trained research assistant conducted the interviews personally and elaborated or rephrased any question that was not clear to the interviewees.

3.6 Data collection procedure

Upon the acceptance of the research proposal by the School of Graduate Studies, the researcher applied for a research permit from the National Council for Science and Technology, Directorate of Research, Maseno University. A permit and an introductory letter were duly granted and the researcher was at liberty to seek permission from the County Commissioner and the County Education Officer, Kisumu to collect data.

With permission granted, the researcher visited the research stations to introduce herself and to develop rapport with the principals, guidance and counselling teachers and students. This was necessary for a fruitful relationship during the study. The researcher and the research assistants visited the respondents on agreed dates to administer the questionnaires to students and conduct interview schedules with guidance and counselling teachers. The exercise took 21 days in addition to the two days spent in training the research assistants on data collection and processing., the questionnaires and interview schedules were checked for completeness before data was entered, after which corrections were made to improve the quality of data.

3.7 Data Analysis Techniques

Data analysis is the process of systematically searching and arranging field findings for presentation (Mertler & Charles, 2011). Upon completing data collection exercise, all completed instruments were edited to eliminate errors that may have been made by the respondents. Coding of data was done to classify the responses into categories for proper analysis. Quantitative data underwent tests of linearity, normality and homoscedasticity to meet the assumptions of linear regression model. The quantitative data collected through a Likert type of scale involving five choices of strongly agree, agree, not sure, disagree and strongly disagree were collapsed into only three options of agree, not sure and disagree. This was done to avoid clumsiness in the data analysis process. Data for this study was analyzed in two levels namely: descriptive statistics such as frequency counts, percentages and means. Inferential statistics was used to establish the degree of relationship between the parents', peers' and media influence on adolescents' substance use and abuse as well as the degree of relationship between adolescent substance use and abuse and social behavior. Correlation and regression methods were also used to establish the relationship among these variables. Pearson Product Moment Correlation was used to establish whether a correlation existed between perceived causes and use/abuse of substances and also use/abuse of substances and social behavior. Hierarchical regression model was used, first to establish the influence of perceived causes on use/abuse of substances and secondly, to determine the impact of use/abuse of substances on social behavior.

Independent sample t-test was also used to test whether there was significant difference in the use/abuse of substance between male and female students under gender disparity in use of substances. The analyzed data was presented in form of tables where applicable. Qualitative data was organized according to the objectives of the study as they emerged and reported in a narrative form.

3.8 Ethical Considerations

The rights and confidentiality of any person is very crucial in research. The researcher took time to explain to the respondents the purpose of the study so that they can make informed and independent decision to participate or not. They were therefore informed that they can choose to opt out if they feel uncomfortable responding to the questionnaires or interview schedules. To ensure anonymity, respondents were not allowed to write their names or admission numbers on the questionnaires. Respondents were issued with an informed consent form for questionnaires (Appendix C). The respondents went through the consent form and were allowed to ask the researcher or research assistants any questions regarding their participation. They were assured that no one will be victimized based on the information given. Also, the presentation of the research findings were not done based on specifics of any school.

CHAPTER FOUR

RESULTS ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter deals with the analysis and discussion of the data collected based on the study objectives. The study aimed at ascertaining the prevalence and gender disparity of substance use/abuse among adolescents in secondary schools; determining the extent to which parents, peers and the media influence adolescents' substance use and abuse; investigating the influence of substance abuse on adolescents' social behavior, and interrogating perceived strategies that can be employed to mitigate substance use/abuse among adolescents.

4.2 Bio data of the respondents

It was necessary to capture the bio data of the respondents to ensure that there was gender parity in the respondents sampled. The subjects of the study therefore, were both male and female students and Guidance and Counselling teachers from public secondary schools in Kisumu East Sub-County. The demographic information is shown in Table 4.1:

Table 4.1 :Bio Data of the Respondents

Gender	Adolescents			G and C Teachers	
	Age	Frequency	%	Frequency	%
Female	14-19	162	44.26	7	58
Male	14-19	204	55.74	5	42
Total		366	100	12	100

Source: Research Data 2021

Table 4.1 indicates a near-equal gender representation of adolescent students sampled for the study with males representing 55.73% and females 44.23%. For the teachers in charge of guidance and counselling, females and males were 58% and 42% respectively. From the table, the males were 204 (55.7%) and the females were 162 (44.3%). These figures reflects the general outlook of enrolment of male students being more than the female students in secondary schools.

4.3 Instruments return rate

The researcher administered 366 questionnaires to adolescents in the area of study. An interview schedule was carried out with 12 Guidance and Counselling teachers. Out of the 366 questionnaires, 162 were given to female students and 204 were given to male students. The return rate of the instruments was 99.45% equivalent to 364 respondents.. Only 0.55% or 2 of the questionnaires were not returned. This high return rate was possible because the research team personally administered and collected the questionnaires.

4.4 Prevalence and gender disparity in substance use and abuse among adolescents in secondary schools

The study sought responses from the respondents on various constructs of substance use and abuse in order to establish their knowledge of and prevalence of substance abuse among adolescents in public secondary schools. The study wanted to establish if the respondents had used/abused substances in the last 30 days.

Table 4.2: Knowledge on Substances of Abuse

Knowledge of Drug Substances	F(%)
Have Knowledge	354 (97.3%)
Not sure	4 (1.1%)
Don't have knowledge	6 (1.6%)
Total	364(100%)
Whether have used drug last 30 days	
Yes	236 (64.8%)
No	10 (2.7%)
Not sure	118 (22.4%)
Total	364(100%)
Knowledge of Others who use drug abuse	
Many	331(91.0%)
Not sure	14 (3.8%)
No	19 (5.2%)

Source: Research Data 2021

The findings established that majority of the respondents 354 (97.3%) had knowledge about substances. 4 (1.1%) were not sure and 6 (1.6%) disagreed. The findings on whether the respondents had used or abused drug substances indicated that 236 (64.8%) had used or abused substances. 10 (2.7%) were not sure and 118 (22.4%) disagreed. From these findings, it emerged that majority of the students had used or abused substances. The study also strove to ascertain adolescents' level of knowledge on the number of their colleagues who used or abused substances. As per the findings, the majority of the respondents, 331(91.0%) acknowledged that many adolescents were involved. 14 (3.8%) were not sure and 19 (5.2) disagreed.

The study established the substances that were most commonly abused by the respondents in the past 30 days. These include local brews such as busaa or changáa, bottled beer, miraa, bhang, heroin, kuber, glue and other inhalants and sleeping pills. Table 4.3 present the findings using frequency counts, mean and standard deviation.

Table4.3: Prevalence of Substance Abuse among Adolescents

Common drugs used	SA	NS	D	Mean	SD	Prevalence
	f (%)	f (%)	f (%)			Percentage
Busaa or Changáa	188(51.7)	8 (2.2)	168 (46.2)	2.05	.989	41.0
Bottled Beer	204(55.5)	11 (3.0)	151 (41.5)	2.15	.975	43.0
Local brew or Miraa	175(48.1)	11 (3.0)	178 (48.9)	1.99	.986	39.8
Bhang or Heroin	147(40.4)	5 (1.4)	212 (58.2)	1.82	.978	36.4
Kuber	103(28.3)	7 (1.9)	254 (69.8)	1.59	.901	31.8
Glue or any Inhalants	95 (26.1)	16 (1.4)	253 (69.6)	1.57	.877	31.4
Sleeping pills	217(59.6)	8 (2.2)	139 (58.1)	2.21	.967	44.2
Overall Mean and SD				1.91	.34	38.2

Source: Research Data 2021

The findings in Table 4 3 indicate that the substance that was most heavily consumed was sleeping pills with a mean of 2.21 and standard deviation of 0.967, and the highest prevalence of 44.2%. The second highly abused drug was bottled beer with a mean of 2.15, a standard deviation of 0.975 and a prevalence of 43%. Other drugs were busaa and chang’aa (mean=2.05, sd=.989, prevalence =41%), local brew or miraa (mean=1.99, sd=0.986, prevalence =39.8%) as shown in Table 4.2. The drug with the least prevalence was glue and any inhalants (mean=1.57, sd=0.877, prevalence=31.4%)

Additionally, findings show that bhang and heroin were used by 147 (40.4%) of the respondents. 212 (58.2%) disagreed to have used or abused the substances with a mean and standard deviation of (M=1.82, SD=.978) showing an average use. Sleeping pills were used by 217(59.6%).

139(38.1%) of the respondents disagreed. Of all these drugs and substances, sleeping pills were the most highly used as revealed by the majority of respondents, 217(59.6%). The high prevalence is shown by means and standard deviation (M=2.21, SD=.967).

The findings, however, indicated that Kuber (M=1.59, SD=.901) and glue or any other inhalants (M=1.57, SD=.877) had low usage among the students with 254 (69.8%) and 253(69.6%) disagreeing. The overall usage of these drugs and substances was low (M=1.91, SD=.34), as revealed by means and standard deviation with an index of 0.634. This implies that the occurrence of substance abuse was 38.2% among the adolescents in our area of study.

The qualitative data sourced from Guidance and Counselling teachers concur with the data collected from the students. Respondent R 001, in response to whether substance abuse is a grave issue in secondary schools said:

“It is a real problem. We grapple with it quite often. For instance, we have had several students suspended and two sent home for parents to come to school. Prevalence is high because the same situation prevails in neighboring schools. Many of my colleagues in charge of Guidance and Counselling in other schools have issues with students’ abuse of substances. The most abused substances are alcohol, bhang and sleeping pills pain killers, khat and kuber”.

Similarly, Teacher R 04 stated:

The use and abuse of substances is rampant among secondary school students. We hardly complete a term without having to deal with issues of drug abuse in school. We are concerned about this problem. It seems like the more we fight it, the more the students continue abusing drugs. I think there is a drug problem in society at large. This is a situation that should not be left to teachers alone. We should all fight it.”

Findings show that although adolescents have knowledge about substances, they are not able to perceive the consequences of these substances. This concurs with UNODC's (2021) report on youth perception of drug use. The report indicates that there is a need to address the disparity between perception and reality in drug use. Findings on prevalence (overall mean of 1.91 (38.2%)) are significant as they show that substance abuse is a monstrous problem among adolescents in secondary schools. These findings reflect NACADA'S (2016) report which showed substance abuse among adolescents in learning institutions at 40%. Atwoli et al (2011) reported a prevalence of 69.8% among college students in Eldoret municipality. Atwoli et al study was done in Eldoret - a different geographical area, and involving an older demographical group and a different time span. This may have caused the prevalence in the study slightly higher than in the current study. We could attribute this slight difference in prevalence to socio-economic changes and the cultural set-up of the respondents. Kisumu East Sub-County is an area that is both in rural and urban centers. This unique geographical and socio-economic outlook of Kisumu East Sub-County may have contributed to this scenario of a high prevalence rate.

Another possible reason for the high prevalence rates of substance abuse could be the county's poverty level. Kisumu's poverty level stands at 39.9% (Kenya Bureau of Statistics, 2017). Most households and youths do not have a stable source of income. Many families depend on quarry mining, motorcycle business, small-scale trading, subsistence farming, brewing and selling of alcohol and dealing in illicit drugs (Orende et al, 2021). The easy availability of these drugs renders the youth vulnerable.. Simatwa et al (2014) and Orende et al (2021) assert that there are homes that sell bhang and other substances cheaply in Kisumu East Sub-county. Therefore, with this scenario in mind, the poverty level combined with easy availability of substances of abuse

may lure many adolescents to sell these substances as a way of earning money for upkeep and in the process, they too may consume their wares of trade.

The study also sought to examine gender disparity in adolescents' substance abuse in the schools in the area of study. Frequency counts, means and standard deviations and an independent sample t-test were used to make an analysis of gender disparity in adolescent substance use and abuse. The findings are shown in Table 4.4:

Table 4.4: Gender Disparity on Use and Abuse of Substances

Variable	Use and substance abuse					
	Agree		Undecided		Disagree	
	F	%	F	%	F	%
1. Is by male students	320	87.9	12	3.3	32	8.8
2. Is by female students	178	48.9	45	12.4	141	38.7
3. Is higher males than in females	297	81.6	27	7.4	40	11.0
4. Is exposed more to male	308	84.6	25	6.9	31	8.5
5. Is by both male and female	320	87.9	12	3.3	32	8.8
6. Has no gender difference	299	82.1	25	6.9	40	11
7. Is not used by most females	241	66.2	35	9.6	88	24.2
8. Is used by more females than males	156	42.9	52	14.2	156	42.9
9. Is more rampant among boys	294	80.8	32	8.8	38	10.4

Source: Research Data 2021

The research findings in Table 4.4 present the respondents' views on gender disparity in substance use/abuse. The study established that the majority, 320(87.9%) agreed that both male and female students used and abused drugs. 178 (48.9%) independently revealed that more females used and abused substances. The results show distinctly that majority, 297(81.6%) of the respondents reported that substance use and abuse is higher in males than in females. 308 (84.6%) were of the opinion that male adolescents were more exposed to substances than female adolescents. 299 (82.1%) denoted no gender difference. Furthermore, the findings revealed that

241(66.2%) of the respondents believed that most females did not use or abuse drugs. 156 (42.9%) stated that more female adolescents than males used and abused substances. However, the findings from the majority, 294(80.8%) of the respondents portrayed that drug use and abuse were more rampant among boys.

In addition to the findings on descriptive statistics, the study presented results on whether any significant differences existed between girls and boys in substance use and abuse. The researcher carried out an independent sample t-test to assess these discrepancies. The researcher used group statistics to establish the means. The findings are presented in Table 4.5 below:

Table 4. 5: *Difference in the use/abuse of Substances between Boys and Girls*

t-test	n	Mean	Sd	t	Difference	sig
Total	364	1.91	.34	.62	.023	.536
Male	204	1.92	.337			
Female	160	1.90	.358			

Key: n-sample size, Sd-Standard Deviation, t-statistic, sig difference

Source: Research Data 2021

The group statistics in table 4.5 reveal a small disparity in the abuse of substances between girls and boys. From the findings, boys had a slightly higher degree of use/abuse of drugs as indicated by (mean =1.92) as compared to the girls (mean=1.90). The mean difference, in this case, was 0.023. It was therefore necessary to establish whether this difference was statistically significant. The findings in Table 4.5 indicate a lack of significance in the difference. There is, therefore, a lack of enough evidence that there exists a statistically significant variance in the use/abuse of substances between adolescent boys and girls in schools, $t(364) = 0.620$, $p > .05$, i.e., $p = 0.536$.

This implies that there was no significant disparity in the abuse of substances in gender, meaning that boys and girls used/abused these substances in almost equal amounts.

These findings concur with Atwoli et al. (2011) who established that substance use/abuse among their study's sample was 42.8% for males and 28.% for females. From Atwoli's et al study, it was evident that the gender gap was small with only 14% gender difference. Tshitagaro & Tosin (2016) found the gender gap in adolescents' substance use/abuse was minimal (males at 6% and females at 2%). Despite similarity of the findings with current study, Tshitagaro's & Tosin's study unlike the current study was done in schools in rural area in South Africa. The rural setting may have affected the results considering that rural areas are not very much exposed to certain influencing factors like media or technology. This also concurs with Marais's study that sought to establish current trend of drug abuse among secondary students. There was concurrence with the findings of the current study that use/abuse of substances was rampant among the students irrespective of gender. Amaro et al (2012) findings revealed no statistically significant variation in the abuse of drugs based on gender and other socio-demographic considerations. According to Amaro et al, the traditional gender gap in substance abuse has decreased. This could be explained that there seems to be a hidden causal factor associated probably with female gender empowerment happening lately in society.

4.5 Influence of parents, peers and the media on adolescents' substance use and abuse

The study also aimed at determining the extent to which parents, peers and the media influence adolescents' substance use and abuse. Frequency counts, percentages and means were therefore sought in the first stage. The findings for parental influence are shown in Table 4.6 below:

Table 4.6: Parental Influence on Adolescents Substance Use and Abuse

Category	Agree	Not Sure	Disagree	Mean	SD
	f (%)	f (%)	f (%)		
Introduced by parents	104 (28.6)	16(4.4)	244 (67.0)	1.62	.900
Father used	168 (45.9)	16 (4.7)	180 (49.4)	1.97	.979
Mother used	105 (28.9)	31 (8.0)	228 (62.6)	1.66	.896
Overall mean and SD				1.74	.66

Source: Research Data 2018

The study findings in Table 4. 6 show that while 105 (28.7%) of the respondents indicated that they copied the use and abuse of substances from their mothers, 31(8.0%) were undecided and 228(62.6.7%) disagreed that they learned to use and abuse substances from their mothers with an overall mean and standard deviation of (M=1.66, SD=.896) on the statement. It is also clear that 168 (45.9%) acquired the habit from their fathers. 180 (49.4%) disagreed that they attained the practice from the father while 16(4.7%) were undecided with an overall mean and standard deviation of (M=1.97, SD=.979) on the statement. Findings, therefore, show 244 (67.0%) of the respondents denied that they were introduced to the use and abuse of substances by their parents, also supported by mean and standard deviation of (M=1.62, SD=.99). The highest proportion (close to three quarters) of the respondents denied that they learnt the habit from their parents with close to half also denying that they learnt the habit from their mothers.

The study findings show a divergent view from the findings in the reviewed literature. Oetting & Donnermeyer (2014), found that adolescents whose parents abused substances are more likely to abuse substances than those whose parents do not. Kilpatrick et al (2013), too established that among their sample of adolescents aged 12 to 17, from family backgrounds with alcohol and

substance abuse problems, there was an increased risk for current substance use/abuse. Latendresse's et al (2016) contradicted the findings of current study. According to them, parents' behaviors influence adolescent alcohol use directly or may be indirectly linked with various aspects of parenting which eventually lead to substance use/abuse in adolescence stage. Another study whose findings differed from those of the present study was Chapia et al (2021). They established that parental influence on substance use/abuse among secondary school students had a statistically significant impact. Adolescents in this study may have been influenced by cultural beliefs that compel children to speak well of their parents. Thus, adolescents who learned to abuse substances from their parents may have deemed it convenient to negate it.

The findings on the extent of peer influence on drug use or abuse among adolescents were presented as frequency counts, percentages and means, as indicated in table 4.7:

Table 4.7: Peer Influence on Adolescents Substance Use and Abuse

Category	Agree f (%)	Not Sure f (%)	Disagree f (%)	Mean	SD
My friends use	305 (83.8)	18 (4.9)	41 (11.3)	2.73	.652
Close friends and I use	234 (64.3)	8 (2.2)	124 (34.1)	2.30	.945
Learnt from close friends	229 (62.9)	3 (0.8)	132 (36.3)	2.27	.961
Friends in school Use	302 (83.0)	25 (6.9)	37 (10.2)	2.73	.634
Overall mean and SD				2.50	.47

Source: Research Data 2021

The findings on table 4.7 show that more respondents (83.8%, n=304), agreed that they used and abused substances because their friends did the same. 18(4.9%) of them were not sure, while 41(11.3%) disagreed that their friends use or abuse substances with a mean and standard

deviation of (M=2.73, SD=.65). It emerged clearly that majority used substances because their close friends used them as indicated by 234(64.3%). 124 (34.1%) disagreed and only 8 (2.2%) were not sure, with an overall mean of (M=2.30, SD=.95). Furthermore, the findings revealed that 302 (83.0%) used and abused substances because friends in school used them while 25(6.9%) in the same category were not sure, with a mean and standard deviation of (M=2.73, SD=.634) on the statement. Only 37(10.2%) disagreed. Finally, the findings also showed that 229 (62.9%) of adolescents agreed that they learnt about substance use and abuse from close friends. 3 (0.8%) were not sure and 132 (36.3%) disagreed, with an overall mean and standard deviation of (M=2.27, SD=.961) on the statement. The overall mean and standard deviation (M=2.50, SD=.47) on all the statements implied that the impact of peer influence was significant.

From the qualitative data, respondents were of the opinion that the adolescents' peers have an immense influence on them. Respondent code named N 011 said:

“In the adolescence stage, peer group decisions and actions take center stage. The group dictates what members should do, what actions they should be involved in and which ones to ignore. So, when it comes to substance abuse, peers may have a lot of influence on adolescents' abuse of substances.”

Another interviewee code named R 005 opined:

“These students follow what their peers do. The parents or teachers are not heeded as they are seen to be their source of trouble. Here in school, if one student is caught with substances of abuse, it follows that the friends too possess substances of abuse”

From the interviews, it emerged from the Guidance and Counselling teachers that adolescents are immensely swayed by their peers to engage with substances.

The results from the students' questionnaire and interviews from teachers concur with reviewed literature, for instance, Morton & Farhat (2013), assert that the peer associations contribute to adolescents' substance use/abuse by enabling access, opportunity and reinforcement. Kimani (2013) echoes the same in their findings that family members, parents and the peers play a substantial role in students' use/abuse of substances. The findings of the current study mirror those of Muhia (2021) whose findings showed that there is a positive correlation between peer influence and adolescents' use/abuse of substance. NACADA (2016) in their survey in secondary schools in Kenya, found that adolescents who abused substances had a family member or a bosom friend taking substances. Otieno & Ofulla (2015), in their findings showed that adolescents' substance use/abuse was associated with peer pressure. This view was also supported by Bandura's theoretical perspective that the adolescent is likely to model gender-specific behaviors practiced by the group (Bandura, 1986).

The researcher also enquired from the respondents about the extent to which the media fostered adolescents' engagement with substances. The findings are presented in Table 4.8.

Table 4.8:Media Influence on Adolescents Substance Use and Abuse

Category	Agree	Not Sure	Disagree	Mean	SD
Media Influence	f (%)	f (%)	f (%)		
Learnt from Media	214 (58.8)	10 (2.7)	140 (38.5)	2.20	.966
Media offers a lot	311 (85.4)	9 (2.5)	44 (12.1)	2.73	.662
Students learn from media	327 (89.8)	12 (3.3)	25 (6.9)	2.83	.529

Source: Research Data 2021

The study findings in table 4.8 revealed that 58.8% (n=214) agreed that they learnt about the use and abuse of substances from the media, with a mean and standard deviation of (M=2.20, SD=.966). 311(85.4%) denoted that the media offered a lot in relation to the misuse of

substances, with a mean and standard deviation of (M=2.73, SD=.662) while 327 (89.8%) agreed that the students indeed learnt from the media (M=2.83, SD=.529) on the statement.

In addition to these findings, the study used Pearson Product Moment Correlation to establish the correlation between perceived factors/causes (parents, peers and the media) and adolescents' substance abuse (Table 4.9).

Table 4.9: Correlation between Causes (Parents, Peers and Media) and Substance Use and Abuse

	Drug use	Parental influence	Peer influence	Media influence
Drug use	1			
Parental influence	-.336**	1		
Peer influence	.167**	-.189**	1	
Media influence	-.160**	.060**	.151**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data 2021

The findings in Table 4.9 indicate that adolescents' progression in their involvement with substances was negatively correlated with parenting (r= -.336, p<.05). This implies that higher scores in parental influence was associated with lower scores in adolescents' use and abuse of substances. The findings revealed positive correlation between substance use and abuse and peer

influence ($r=.167$, $p<.05$), such that the more the peer influence, the more the use or abuse of substances. Finally, the findings revealed a negative correlation ($r=-.160$, $p<.05$) on media influence. This implies that higher media influence was associated with lower adolescents' use and abuse of substances. The findings on the extent to which media influences adolescents' use/abuse of substances contradict those of Davis et al (2019). A survey done in the State of California, USA, found that adolescents' and young persons' exposure to substance related media content was linked to increased consumption of alcohol and other drugs. The same applies to Jackson's et al (2018) study, whose aim was a review of literature on media/marketing influences on adolescent and young adult substance use in the United States of America. They found that adolescents' have a higher potential of exposure to substance abuse. Their study also pointed that the traditional media of print, point of sale advertisements and broadcasts have been replaced by the more appealing digital media that produces instant content. Another study whose results was contradicted by the current study's results was Strasburger, (2013) whose aim was to explore the role of the media in drug and substance abuse among youths, found that Television programs and movies contained a great amount of content that encouraged use/abuse of substances. Wakoli's study (2018), also found that substance abuse among secondary school students was to a great extent blamed on media exposure. These media exposure came from videos, movies, advertisements, novels and magazines. This unique phenomenon in this study could possibly be attributed to media campaigns success against substance use/abuse that the government is aggressively engaged in. It is also possible that the adolescents focused mainly on the positive influences of the media like fostering arts and music as well as presentation of positive educational material. However, the variation of the findings on media influence in

adolescents' substance use/abuse of the present study is a unique and rare occurrence that future researchers may want to explore further.

The study has found a positive correlation between peer influence and adolescents' use/abuse of substances (.167, $p < .05$). This concurs with various reviewed studies for example Muhia (2021) whose study found that peer group played major role in adolescents' abuse of substances. Morton & Farhat (2013) too, attributed adolescents' substance use/abuse to the peer group because they provided access, opportunity, reinforcement and protection. According to G. Stanley Hall, adolescents face storm and stress occasioned by the biological and brain development which makes them to want to go against advice and control from people in authority (Arnett, & Cravens, 2006). The adolescence stage exposes the young person to peer influence as their attention and interest is in the peers' activities like what they do, how they dress, what music to listen to and even engaging in substance use/abuse.

Before the quantitative data were subjected to hierarchical regression analysis, it was necessary to subject them to diagnostics for regression. This involved tests of linearity, normality and homoscedasticity to meet the assumptions of a regression model. The diagnostics showed that the data could be used for regression analysis. The findings on the regression model for the effect of parents, peers and the media on adolescents' substance abuse are shown in Table 4.11 below. In the hierarchical regression model, the researcher controlled for gender and age in the first and second step of the model. The independent variables were introduced and controlled for in the third step of the model (Table 4.10).

Table 4.10: Hierarchical Regression Model Coefficients on the Effects of Parents, Peers and Media on Substance use/abuse

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.947	.060		32.270	.000
	Gender	-.023	.037	-.033	-.620	.536
2	(Constant)	2.275	.110		20.716	.000
	Gender	-.025	.036	-.035	-.680	.497
	Age	-.128	.036	-.183	-3.547	.000
3	(Constant)	2.520	.164		15.404	.000
	Gender	-.046	.034	-.065	-1.343	.180
	Age	-.081	.034	-.117	-2.375	.018
	mean of parental influence	-.150	.026	-.288	-5.736	.000
	mean of peer influence	.099	.037	.135	2.699	.007
	mean of media influence	-.122	.039	-.153	-3.107	.002

a. Dependent Variable: mean of drug use

Source: Research Data 2021

The findings in Table 4.10 indicate that gender had no noteworthy effect on substance abuse. However, after controlling for it, age was introduced in the model. The findings indicate that age had a significant unique contribution to the model, with a negative effect ($\beta = -.183$, $p = .000$). Thus, the higher the age, the less the learners used and abused substances. Age was also controlled for in order to evaluate the net contribution of parent, peer and the media. Therefore, after controlling for the effect of gender and age, parental influence was found to be the strongest unique contributor to the model. This implies that when the effects of gender and age are eliminated, then both media and parental influence would negatively influence learners from using the drugs/substances. The findings also showed that the peer influence ($\beta = -.135$, $p = .007$)

was a strong contributor to the adolescents' use/abuse of substance as indicated in the hierarchical regression model.

The findings on summary model results on the percentage change in substance use and abuse are shown in Table 4.11 after controlling for the effect of gender

Table 4.11: Model Summary Results on Hierarchical Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.033 ^a	.001	-.002	.34891	.001	.384	1	362	.536
2	.186 ^b	.035	.029	.34346	.034	12.581	1	361	.000
3	.409 ^c	.167	.155	.32038	.132	18.957	3	358	.000

a. Predictors: (Constant), gender

b. Predictors: (Constant), gender, mean of peer influence, mean of media influence, mean of parental influence

Source: Research Data 2021

The findings in table 4.11 indicate that gender did not account for a significant percentage of the substance use and abuse variance. However, both gender and age accounted for a total significant percentage change or variance of 2.9%, as indicated by (R Square=.029) whereas after removing the effect of gender, age accounted for 3.4% change in substance use and abuse (R square change =.034, p=.000). Parental, peer and media influence accounted for 13.2% after controlling for the effect of gender and age (R square change =.132, p=.000). This is a drop of 1.8% from 15% accounted for by parents, peers and the media without controlling for gender and age. This implies that age hinders parental and media influence on adolescents' drug use and abuse.

The findings in this section contradicted studies in the reviewed literature, for example, the Primary Socialization Theory (2010) that highlighted the importance of socialization forces like parents and peer groups in the process of learning good or bad things. This theory explains the role of individual differences in learning. It is likely that parents' abuse of drugs did not influence their children to become substance abusers. The reason to this could be children may have experienced traumatic episodes of substance abusive parents that made them be aversive to the habit. The same explanation may also apply to the role of the media in adolescents' substance abuse. The findings presented by current study contradict many of the studies reviewed in the literature (Simatwa et al, 2014; Muhia, 2021; Otieno & Ofulla, 2015; Simatwa et al, 2014, Latendresse et al, 2021, Mokwena, 2021 & Wakoli, 2019). The findings of this study has negated the general belief on the pivotal role of parents and media in the young individual's life. It has given impetus to the social cognitive theory which states that people are agents of their own lives and make appropriate decisions without blindly copying what others do (Bandura, 1986).

These findings on peer influence concur with the perceptions of Guidance and Counselling teachers. For example, a teacher code named R 0011 said:

“The peer group is a very powerful agent of socialization for adolescents. This is the stage they place more premium on what their peers say and do. So, if it happens that the peer group abuses substances, chances are very high that the adolescent will likewise do the same”.

From the aforementioned, the study's findings correspond with studies by Goode (2013), Kosterman et al (2017), Kimani (2013) who found in their studies that peer group played a vital role in adolescents' substance use/abuse. Morton & Farhat (2013) too, asserted in their findings that the peer contributed to adolescents' substance use and abuse by enabling access, opportunity

and positive reinforcement. Picoito, et al (2019) found that the peer associations has great influence on the adolescent substance use. These researchers found that peer groups influenced students' abuse of substances. The Peer cluster theory (2010) also supports the findings that peer influence causes adolescents' abuse of substances. The role of the media in the findings revealed a very interesting result. Media did not positively contribute to adolescents' substance abuse. This was in contrast with what one interviewee thought of the media:

“Media plays a big role in adolescents' substance abuse. Most celebrities here in Kenya and abroad shamelessly adore substance use. They give young people the impression that it is fashionable and cool to use substances. To make matters worse, social media is free for all. Anybody can post there anything they feel like. It offers new and exciting but dangerous opportunities. The youth are very vulnerable to these social networking sites”.

The findings contradict data from the reviewed literature, for instance, Otieno & Ofulla (2015), Acierno, et al (2012), McMorris et al, (2011), and Kimani, (2013), whose studies found that the media influenced use/abuse of substances among adolescents. However, these unique findings of the present study can be explained. It is possible that adolescents were conscious of the important role the media plays in social networking and as a means of enlightening them on the happenings around the world. Hence, the focus may have been on the positive aspects of the media. Adolescents may also view the media positively because the Government and other stakeholders use it to campaign against drug peddling and use.

4.6 Influence of substance use and abuse on adolescents' social behavior

In objective three, the researcher examined the impact of adolescents' substance use and abuse on social behavior. Data for this objective was diagnosed against various forms of social behavioral ailments or antisocial behaviors using frequency counts as shown in Table 4.12:

Table 4.12:Adolescents Social Behaviour

Category	Agree	Not Sure	Disagree	Mean	SD
Adolescents behavior					
Indiscipline and Substance Use and Abuse	316(86.8)	16(4.4)	32 (8.8)	2.78	.590
I harass or bully other students in school	319 (87.6)	13 (3.6)	32 (8.8)	2.79	.587
I have problems with teachers in school.	321 (88.2)	13 (3.6)	30 (8.2)	2.86	.503
I engage in truancy.	336 (92.3)	4 (1.4)	24 (6.6)	2.74	.651
I get involved in unrests in school.	301 (82.7)	14 (3.8)	49 (13.5)	2.69	.695
I steal other students' property in school	312 (85.7)	10 (2.7)	42 (11.5)	2.69	.695
I am rude to my teachers	301 (82.8)	14 (3.8)	49 (13.5)	2.56	.785
I abuse or fight in school	317 (87.1)	19 (5.2)	28 (7.6)	2.79	.564
I cheat or lie in school	320 (86.4)	11 (3.0)	31 (8.6)	2.79	.591
I have participated in destroying School Property	271 (74.4)	26 (7.1)	67 (28.4)	2.60	.563

Source: research Data, 2021

Findings in Table 4.12 show that 316 (86.8%) with a mean and standard deviation of $M=2.78$, $SD=.590$ of the adolescents agreed that they ever had indiscipline issues at school, while 32(8.8%) disagreed with an overall mean and standard deviation of $M=2.79$, $SD=.590$. Findings regarding substance induced bullying revealed that the majority, 319(87.6%) of the adolescents had harassed or bullied other students in school as confirmed by a mean and standard deviation of $M=2.79$, $SD=.587$. A majority, 321 (88.2%) have problems with teachers in school $M=2.86$, $SD=.503$ while 336 (92.3%) have engaged in truancy ($M=2.74$, $SD=.651$). More findings on indiscipline revealed that a majority of the adolescents had engaged in these cases. This entails 301(82.7%) who agreed to have been involved in unrests in school, (85.7%) with a mean and

standard deviation of (M= 2.69, SD=.695); those who engaged in stealing 312 (85.7%) with a mean and standard deviation of (M=2.96, SD=.69), 320 (86.4%) have cheated or lied (M=2.79, SD=.59), 271 (74.4%) have participated in destroying school Property, (M=2.60, SD=.56), and 317(87.5%) had insulted others or fought in school (M=2.79, SD=.56). The findings indicate that the use and abuse of substances influences adolescents’ social behavior in a negative manner (82.7% - 92.3%).

Table 4.13 presents the results on the correlation between substance use/abuse and adolescent social behavior using Pearson Product Moment Correlation.

Table 4.13: *Correlation between Substance use/abuse and Adolescent Social Behaviour*

	substance use/abuse	Adolescent behaviour	social
	1		
substance use/abuse	366		
adolescent social behaviour	.525**	1	
	.000		
	366	366	

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Research Data, 2018

The correlation table 4.13 reveals a moderate positive linear relationship between substance use/abuse and adolescent social behavior (r=.525, p=.000). This implies that adolescent social behavior is significant positively associated with substance use/abuse. Thus, the more adolescents abuse substances, the more their behavior changes. The study endeavored to ascertain the degree of change in social behavior occasioned by adolescents’ substance use and abuse. Table 4.14 shows the model summary results on the percentage change:

Table 4.14: Model Summary Results on Impact of Substance use/abuse on Adolescent's Social Behaviour.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.525 ^a	.276	.267	.48333	.276	28.990	1	76	.000

a. Predictors: (Constant), Substance use/Abuse

Source: Research Data, 2021

The model summary (Table 4.14) brings out a correlation between substance abuse and adolescent social behavior ($r=.525$, $p=.00$). According to the model summary, the fitted model explains only 27.6% of the actual responses, meaning that substance use/abuse contributes to 27.6% change in adolescents' social behavior.

Table 4.15 below presents Model coefficient results on the effects of substances on adolescent social behavior:

Table 4.15: Coefficient on Effect of Substance use/abuse on Social Behaviour Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	1.187	.186		6.375	.000
	Substance use/abuse	.426	.079	.525	5.384	.000

a. Dependent Variable: social behavior

Source: Research Data, 2021

The table 4.15 shows the exclusive influence of substance use/abuse on adolescents' social behavior. The results designate that without any other variables, a change will still be noticeable

in the adolescents' social behavior as a result of a constant change of 1.187. The introduction of substance use/abuse, however, uniquely contributes to the change in adolescents' social behavior ($\beta=.525$, $p=.000$). Thus, one standard deviation changes in the abuse or an increase in usage/abuse of substances would lead to 0.525-unit increase/change in the behavior.

The study sought to determine qualitatively (from their in-depth views) whether substance use and abuse were serious problems among secondary school adolescents in the sampled schools. From the interviews, one of the Guidance and Counselling teachers coded as R010 was quoted saying:

“In my opinion, substance use and abuse is a serious problem among the students, especially those that come from backgrounds whose parents use the same. Last week we had a case where one of the form three students was expelled for allegedly sneaking out of the school compound and coming back drunk. Others are yet to be identified. These drugs, particularly alcohol, have interfered with the learners' studies.”

From the findings above, it is clear that some adolescents go to an extent of sneaking from their institutions in search of substances. This leads to indiscipline as explained by the teacher. Sometimes, the behavior leads to the expulsion of the culprits to prevent them from influencing other learners, and this may terminate their studies. Most of the guidance and counselling teachers held that substance abuse has a negative influence on the social behavior of secondary school learners and other adolescents. From these findings, it is clear that the misuse of substances has adverse effects on adolescents' social behavior.

The findings concur with those of Young et al (2017) which found that alcohol use/abuse among adolescents was influenced by the peer associations together with some aspects of the

adolescents' environment. This contributed to antisocial behaviors, According to their study, alcohol has some "aggravating" effect because it can amplify aggressive tendencies in the individual. Another similarity was found in Fosco's et al (2014), results which showed that substance use/abuse may cause problems to the adolescent like sibling fights, quarrels and behavior problems in school. In NSDUH (2013) survey on drug abuse in America, the study revealed that among adolescents aged 12-17, 17.7% reported that they have been involved in serious fights at school or at home in the past one year. Another 11% were involved in inter-group fights while 3% had carried guns at least once. 2.4% had stolen at least once or attempted to steal. 2.4% traded in illegal substances in the past year. The findings also concurred with those of Otieno and Ofulla ()2015 , Mokwena et al (2021), whose findings associated students' use/abuse of substances with behavioral problems like physical fights, problems with teachers, parents and friends, poor academic achievement ,being in trouble with the police and having unprotected sex. Murigi et al (2020) concurs with findings of the current study that substance abuse affects the social behavior of the adolescent. Their study revealed that students abusing drugs will engage in violent behaviors like physical fights, bullying, sneaking out of school and threatening others. Another very similar findings were those of Ndolo & Simatwa (2023), which showed that students who abused substances were involved in sexual harassment behaviors like writing sexual messages to other students, watching pornographic movies, forcefully hugging and kissing without consent and involvement in sexual gestures. All these actions are anti-social behaviors that adolescents taking substances are likely to engage in. The findings of these studies reported a positive correlation between substance use/abuse and change in students' social behavior. The change in behavior occasioned by substance abuse can affect the users' nervous

systems such that their understanding of societal standards and expectations is lowered Graffin & Botwin, 2013).

4.7 Strategies for the management of substance use and abuse

Objective four of the study attempted to determine the respondents' opinion on the appropriate strategies for managing the use and abuse of substances by secondary schools. 364 respondents representing 99% of the respondents attended to the items in the section. Their views were given as **SA** for Strongly Agree, **A** for Agree, **U** for Undecided, **D** for Disagree and **SD** for Strongly Disagree. The findings were categorized into five main domains which are school factors (items 1, 9 and 10), guidance and counselling (items 2 and 3), curriculum (items 6 and 7), family (item 4) and ministry (item 8). Frequencies and percentages were used to analyze the data. The results are presented in Table 4.16.

Table 4.16: Strategies for Managing Use and Abuse of Substances

	SA	A	U	D	SD
	f (%)	f (%)	f (%)	f (%)	f (%)
1. Severe punishment ought to be meted out on peddlers of substances	235(64.9)	82 (22.7)	27 (7.5)	10(2.8)	8 (2.2)
2. G & C greatly reduces use and abuse of substances	220(60.8)	107(29.6)	17 (4.7)	8 (2.2)	10(2.8)
3. Every school to have a trained guidance and counselling specialist	244(67.4)	96 (26.5)	10 (2.8)	2 (.6)	10(2.8)
4. Parents to be very close to their children in order to understand them	244(67.4)	80 (22.1)	25 (6.9)	5 (1.4)	8 (2.2)
5. Teachers to institute strict disciplinary measures	197(54.4)	82 (22.7)	39(10.8)	34(9.4)	10(2.8)
6. Enhance self-esteem of adolescents in secondary schools	228(63.0)	105(29.0)	11 (3.0)	10(2.8)	8 (2.2)
7. Teach decision-making skills and assertive skills to counter peer pressure	242(66.9)	87 (24.0)	17 (4.7)	4 (1.1)	12(3.3)
8. MOE to Carry out campaigns on dangers of substance use and abuse	239(66.0)	83 (22.9)	18 5.0)	16(4.4)	6 (1.7)
9. Encourage alternative positive ways of spending leisure time in schools	250(69.1)	80 (22.1)	16 (4.4)	12(3.3)	4 1.1)
10. Open communication between adolescents, teachers and parents	252(69.6)	75 (20.7)	19 (5.2)	8 (2.2)	8 (2.2)

Source: Research Data 2021

The findings in Table 4.16 above show that for discipline 235(64.7%) strongly agreed, 82(22.7%) agreed, 27(7.5%) were unsure, 10(2.8%) disagreed while 8(2.2%) strongly disagreed that severe punishment should be meted out on individuals who peddle substances to adolescents in secondary schools. Also, 250(69.1%); 252(69.6%) strongly agreed, 80(22.1%); 75(20.7%) agreed, 16(4.4%); 19(5.2%) respondents were undecided, 12(3.3%); 8(2.2%) disagreed and 4(1.1%); 8(2.2%) strongly disagreed respectively that encouraging alternative ways of spending leisure time in secondary schools should be introduced and open communication between adolescents, teachers and parents should be encouraged in secondary schools.

The findings show that 220 (60.8%) strongly agreed on the provision of guidance and counselling in secondary schools as a strategy. 107(29.6%) agreed, 17(4.7%) were undecided, 8(2.2%) disagreed and 10(2.8%) strongly disagreed that guidance and counselling would greatly reduce the misuse of substances by adolescents in secondary schools. Additionally, 224(67.4%) strongly agreed, 90(26.5%) agreed, 10(2.8%) were undecided, 2(6%) disagreed and 10(2.8%) strongly disagreed that every school should have trained guidance and counselling specialist to help adolescents on issues or problems affecting them. During the interviews on what should be applied to get rid of substance abuse in schools, one respondent said:

“In my opinion, the best strategy is guidance and counselling. These are adolescent people who have so many issues to deal with. I, therefore, think that guidance and counselling should start immediately after the child joins Form One. We should not wait until we see a problem. Also, I feel the current situation is a challenge to the Guidance and Counselling teachers because it is expected that they carry a full load of teaching, making guidance and counselling a peripheral job. The government should make it a full-time job in secondary schools”.

The study purposed to ascertain the importance of the inclusion of the enhancement of self-esteem, decision-making and assertive skills in the curriculum. The findings show that 8(2.2%) and 12(3.3%) strongly disagreed, 10(2.8%) and 4(1.1%) disagreed, 11(3.0%) and 17(4.7%) were undecided, 105(29.0%) and 87(24.0%) agreed, and 228(63.0%) and 242(66.9%) strongly agreed respectively that enhancing adolescents’ self-esteem and teaching decision making and assertiveness skills in secondary schools can counter pressure among the peers.

The teachers were in agreement that the curriculum should include aspects of decision-making, and reinforcing self-esteem assertive skills, as stated:

“There are other things that could be included in the curriculum that will strengthen the students’ position when faced with peer pressure. The curriculum should go beyond academic content to make the adolescent capable of making informed decisions. Things like teaching the students about decision-making, self-assertiveness, self-esteem and self-awareness would make a huge difference. In fact, this should start even early when the child is still young in grade one in primary school.”

The study collected data on the strategies adopted by the curriculum and the Ministry of Education on the management of substance use and abuse. Findings show that 6 (1.7%) strongly disagreed, 16(4.4%) disagreed, 18(5.0%) were undecided, 83(22.9%) agreed with 239(66.0%) strongly agreed that they should carry out campaigns about the consequences of substance misuse on adolescents in secondary school.

The study also collected data regarding the parents’ role in adolescents’ interaction with substances. The results disclose that 8(2.2%) strongly disagreed, 5(1.4%) disagreed, 25(6.9%) were undecided, 80(22.1%) agreed and 244(67.4%) strongly agreed that parents should be very close to their children in order to understand them better. This is supported by the opinion of one of the guidance and counselling teachers in the interview schedule questions code named R 004 who stated:

“Nowadays, parents have absconded their responsibilities. They do not know what their children do during the day. They do not know their children’s friends. They need to be close to their children. When there is a good relationship with parents, children are likely to be freer to share their concerns with them. In fact, parents have left all the work to teachers who have too much work in school. The teacher can only do so much....”

The study revealed that 317 (87.1%) of the respondents strongly agreed/agreed that teachers should institute strict disciplinary measures on adolescents who use and abuse substances. This concurs with qualitative response from one of the teachers who said:

“These children can only listen or behave well when they know that the teachers and school administration is very strict on misbehavior including use/abuse of substances. But as teachers we face lack of support from some parents who protest when their child is punished or suspended for drug related issues”

Findings also revealed that the majority 244 (67.4% or two in every three) opined that self-esteem, decision-making and assertive skills should be enhanced in the curriculum. In their view, each secondary school should engage the services of guidance and counselling professionals to help bring down the drug menace. Severe penalties should be meted out on peddlers of abusive substances. Other measures include encouraging parents to get close to their children in order to understand their problems, promoting alternative ways of spending leisure time, and practicing open communication between adolescents, teachers and parents.

One respondent code named R 007 stated:

“Most of these young people are easily influenced by their friends, especially because they are in the adolescence stage. They flow with the current. In my opinion, they need to be empowered with assertive skills and decision-making skills so that a ‘no’ remains a ‘no’ and a ‘yes’ remains a ‘yes’. This will protect them from getting swayed by group decisions.”

Based on the level of acceptance, the best strategy for managing the use and abuse of substances is having trained guidance and counselling specialists, followed by the enhancement of adolescents’ self-esteem in secondary school and the encouragement of alternative ways of spending leisure time in school.

These results are in agreement with Murigi et al (2020), Orende et al (2021), Otieno & Ofulla (2015), Kamani (2013), Rugendo, (2022), Ngesu & Kaluku, (2017) and the American

Psychological Association (2014) who proposed the strengthening of guidance and counselling as a means of curbing adolescent drug abuse. The findings echo the suggestions made by various studies in the reviewed literature, Griffin & Botwin (2010); the Kenya Scouts Association (2012); Sabah et al (2022); and Macharia et al (2022); all of which proposed empowering of learners in decision-making and assertiveness skills, enhancement of adolescents' self-esteem, self-control and self-driven strategies like keeping away from bad company, keeping oneself busy and just saying "NO" to substances of abuse. These strategies were proposed to mitigate the problem of drug abuse in schools.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter five draws a summation of the results presented as per the objectives of the study.

5.1.1 Prevalence and gender disparity in Substance Use and Abuse among Adolescents

Objective one aimed at examining the prevalence of substance abuse among adolescents. The findings revealed that 97.3% of the adolescents had knowledge about substance use and abuse, had used or abused drugs before and had been involved in the use and abuse. The findings also revealed a prevalence level of 38.2% in substance use and abuse. The highest prevalence occurred in the use of sleeping pills at 44.2% while the lowest prevalence occurred in the use and abuse of glue or any inhalants at 31.4%. Generally, the level of prevalence was above 30% for all substances used and abused.

The findings determined that students of both genders in secondary schools in Kisumu East Sub-County used/abused substances. An analysis of gender differences in substance use indicated minimal gender disparity between the groups' mean for boys (1.92) and for girls (1.90). The means show no difference between sexes as revealed by an independent sample t-test [$t(384) = 0.620$, $P < .05$ i.e., $p = 0.536$].

5.1.2 Influence of Parents, Peers and the Media on Adolescents' Substance Use and Abuse

Objective two sought to examine the magnitude of the parents, peers and the media influence on adolescents' involvement with substances in secondary schools in Kisumu East Sub-County. Findings showed a negative significant relationship between parents influence, media influence and adolescents' use/abuse of substances. The higher the scores of parental and media influence, the lower the scores for adolescents' substance use/abuse. The findings revealed a negative significant media association with adolescents' abuse of substances.

The findings showed that the abuse of substances by peers of the respondents impacted positively on the adolescents' engagement with substances. Pearson's Product Moment Correlation findings indicated that the higher the scores for peer influence, the higher the scores were for adolescents' use/abuse of substance. The more the peer influence on the adolescent, the more the use/abuse of substances.

5.1.3 Influence of Substance Use and Abuse on Adolescents' Social Behavior

Our third objective was aimed at scrutinizing the influence of substance abuse on adolescents' social behavior. Findings revealed that adolescents' use and abuse of substances influenced their social behavior negatively. Over 86% of the adolescents believed that substance abuse caused disrespect to teachers. It also led them to deviant acts such as theft and deception. The study also revealed a positive association between substance abuse and antisocial behaviors such as bullying other students, engaging in indiscipline cases, being discourteous to teachers, vandalism of school property, stealing and truancy. However, more than 50% of the respondents were of the view that substance use and abuse contribute to students' participation in school strikes. Pearson

Product Moment Correlation disclosed a positive significant correlation ($r=.525$, $p=.000$) between substance use/abuse and antisocial behavior while the simple linear regression model disclosed that substance abuse accounted for 27% variation in the adolescents' social behavior.

5.1.4 Strategies for Management of Use and Abuse of Substances

Objective four of the study endeavored to determine the possible perceived strategies for the mitigation of substance abuse in secondary schools in Kisumu East Sub-County.

According to the study, over 50% of the respondents strongly agreed that teachers should institute strict disciplinary measures on adolescents who use and abuse substances. Two in every three respondents opined that the curriculum should improve self-esteem and enhance decision-making and assertive and self-control skills. According to them, secondary schools should employ the services of guidance and counselling professionals to help in the fight against substance abuse. They advocate for severe penalties for peddlers of abusive substances to adolescents, the establishment of a cordial relationship between parents and their children, the development of alternative ways of spending leisure time and initiating open communication between adolescents, teachers and parents.

5.2 Conclusions

From the results, the present inquiry drew the following conclusions:

5.2.1 Prevalence and Gender Disparity in Substance Use and Abuse among Adolescents in Secondary Schools.

The study established a high prevalence of substance abuse among adolescents in public secondary schools in the area of study regardless of gender. The most abused substances by over half of the respondents were sleeping pills and local brews such as chang'aa and busaa, bottled beer, miraa (khat) and cigarettes.

5.2.2 The Influence of Parents, Peers and the Media in Adolescents' Substance Abuse

The study findings revealed that peer influence was a significant positive contributor to adolescent use and abuse of substances. Parents' use/abuse of substances had a negative significant influence on their children's use/abuse of substances. Similarly, media was a negatively significant influencer of adolescents' use and abuse of substances.

5.2.3 The Influence of Adolescents' Substance Use and Abuse on Social Behavior.

The findings divulged that there was a positive significant relationship between adolescents' substance use/abuse and change in social behavior. This means adolescents' use and abuse of substances negatively impacted their social behavior. Inebriated adolescents engaged in antisocial behaviors such as theft, bullying, insolence, truancy and the exhibition of other socially unacceptable behaviors.

5.2.4 Perceived Strategies Likely to Mitigate Substance Use and Abuse by Adolescents in Secondary Schools.

Guidance and counselling and taking disciplinary actions against abusers are the main strategies applied in schools. The study, however, found that respondents felt that the government should come up with severe penalties against drug peddlers. Parents and teachers should create avenues for open communication with adolescents. The school curriculum needs to provide ways of instilling self-discipline/ control and improving self-esteem, assertive and problem-solving skills among adolescent students.

5.3 Recommendations

From the findings, the researcher came up with the following recommendations:

- i. Prevalence of substance use/.abuse is still high in secondary schools. There is need to put up more efforts and more effective strategies to reduce this problem in schools. Similarly, it is imperative to engage adolescents from both genders in activities that may reduce their chances of getting ensnared with substances.
- ii. The child's peer group has great influence on their use/abuse of substances. There is therefore need for interventions to focus on peer relations since they have a profound effect on adolescents.
- iii. Substance use/abuse has a negative impact on the adolescents' social behavior. It is recommended therefore that teachers and parents should be keen in monitoring adolescent's social behavior. Any unusual behavior should be observed keenly because it is possible the child could be using/abusing substances.

- iv. It is recommended that apart from using guidance and counselling in schools, which has not yielded positive results that could eradicate substance use/abuse, schools should incorporate other strategies with guidance and counselling. These strategies may include a school curriculum that teach aspects of self-esteem, assertive skills, self-control and problem solving strategies right from primary school and all the way to secondary school level.

5. 4 Recommendations for Further Research

- i. Investigate the moderators in the relationship between parental substance use and adolescent use of substances.
- ii. A longitudinal study on adolescents' use/abuse of substances and its impact on social behavior.

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APPENDICES

APPENDIX A: ADOLESCENTS' QUESTIONNAIRE (AQ)

This questionnaire is purely for the purpose of research. Therefore, any information you give will be treated as confidential and will not be used for other purposes other than for research only.

Hence please feel free and answer the questions to the best of your knowledge.

Tick (✓) appropriately in the boxes provided.

Section A: Biodata

1. State your gender
Female () Male ()
2. State the type of school you are attending
 - a) Girls Boarding ()
 - b) Boys Boarding ()
 - c) Mixed Day ()
3. Are you a Day Scholar or a Boarder?
Day Scholar [] Boarder []
4. How old are you?

Section B: Questions on Prevalence and gender disparity in Substance Use and Abuse among Adolescents in Secondary Schools

Please tick the answer you think is appropriate.

**KEY: SA-Strongly Agree A-Agree NS-Not Sure D-Disagree
SD-Strongly Disagree**

1. Do you know what is “substance use and abuse”?
SA [] A [] NS [] D [] SD []
2. Have you ever used or abused substances?
SA [] A [] NS [] D [] SD []
3. Many adolescents in my school are involved in substance use and abuse.

SA [] A [] NS [] D [] SD []

4. Have you used or abused busaa or changáa in the past 30 days?

SA [] A [] NS [] D [] SD []

5. Have you used or abused bottled beer in the past 30 days?

SA [] A [] NS [] D [] SD []

6. Have you used or abused any other local brew or miraa in the last 30 days?

SA [] A [] NS [] D [] SD []

7. Have you used or abused bhang or heroin in the last 30 days?

SA [] A [] NS [] D [] SD []

8. Have you used or abused kuber in the last 30 days?

SA [] A [] NS [] D [] SD []

9. Have you used or abused glue or any inhalants in the last 30 days?

SA [] A [] NS [] D [] SD []

10. Have you used or abused any sleeping pills in the last 30 days?

SA [] A [] NS [] D [] SD []

Questions on Gender Disparity in Adolescents' Substance Use and Abuse

1. In my opinion, male adolescent students in secondary schools use and abuse substances more than female adolescents.

SA [] A [] NS [] D [] SD []

2. Female students use and abuse substances than male students.

SA [] A [] NS [] D [] SD []

3. Substance use and abuse is higher among male adolescents than among female adolescents.

SA [] A [] NS [] D [] SD []

4. Most male adolescents in secondary schools are exposed to substance use and abuse than do female adolescents.

SA [] A [] NS [] D [] SD []

5. Both male and female adolescents in secondary schools use and abuse substances.

SA [] A [] NS [] D [] SD []

6. There are no gender differences in substance use and abuse among adolescents in secondary schools.

SA [] A [] NS [] D [] SD []

7. Most female adolescents in secondary schools do not use and abuse substances compared to male adolescents.

SA [] A [] NS [] D [] SD []

8. In secondary schools, more female adolescents use and abuse substances than do male adolescents.

SA [] A [] NS [] D [] SD []

9. Substance use and abuse is more rampant among adolescent boys in secondary schools than among girls adolescents.

SA [] A [] NS [] D [] SD []

10. Substance use and abuse is more common in day secondary schools than in boarding secondary schools.

SA [] A [] NS [] D [] SD []

Section C: Questions on the Role of Parents, Peers and the Media in Adolescent Substance Use and Abuse

1. I was introduced to substance use and abuse by one or both of my parents.

SA [] A [] NS [] D [] SD []

2. My father uses and abuses substances.

SA [] A [] NS [] D [] SD []

3. My mother uses and abuses substances.

SA [] A [] NS [] D [] SD []

4. My peers use and abuse substances?

SA [] A [] NS [] D [] SD []

5. I and my close friends have used and abuse substances.

SA [] A [] NS [] D [] SD []

6. I learned to use and abuse substances from my close friends.

SA [] A [] NS [] D [] SD []

7. I learned to use and abuse substances from the media

SA [] A [] NS [] D [] SD []

8. The media has a lot of in adolescents' substance use and abuse.

SA [] A [] NS [] D [] SD []

9. Do your friends in school use and abuse substances?

SA [] A [] NS [] D [] SD []

10. Most students learn to use and abuse substances from the media.

SA [] A [] NS [] D [] SD []

Section D: Questions on Adolescents' Social Behaviour in School.

1. I have issues of indiscipline in school.

SA A NS D SD

2. I harass or bully other students in school

SA A NS D SD

3. I have problems with teachers in school.

SA A NS D SD

4. I engage in truancy.

SA A NS D SD

5. I get involved in unrests in school.

SA A NS D SD

6. I destroy school property

SA A NS D SD

7. I steal other students' property in school.

SA A NS D SD

8. I am rude to my teachers

SA A NS D SD

9. I abuse or fight in school

SA A NS D SD

10. I cheat or lie in school

SA A NS D SD

Section E: Questions on Strategies that can be used to Eliminate Adolescents' Substance Use and Abuse in Secondary Schools

1. In your opinion, do you think severe punishment should be meted on those selling substances to adolescents?

SA A NS D SD

2. Guidance and counselling adolescents in secondary schools will greatly reduce use and abuse of substances

SA A NS D SD

3. Do you think every school in Kenya should have a trained guidance and counselling specialist to help adolescents with issues or problems?

SA A NS D SD

4. Parents should be very close to their adolescent children so that they understand their problems.

SA A NS D SD

5. Strict disciplinary measure should be instituted in schools by teachers to eliminate substance use and abuse.

SA A NS D SD

6. Enhancing self-esteem of adolescents in secondary schools will reduce substance use and abuse.

SA A NS D SD

7. Teaching adolescents decision-making skills and assertive skills to counter pressure from peers to use abuse substances will greatly reduce drug menace.

SA A NS D SD

8. Ministry of Education should carry out campaigns on the dangers of substance use and abuse in secondary schools.

SA [] A [] NS [] D [] SD []

9. Alternative ways of spending leisure time should be encouraged among secondary school adolescents in order to reduce the temptation of use and abuse of substances.

SA [] A [] NS [] D [] SD []

10. Open communication between secondary school adolescents and their teachers as well as their parents will greatly reduce substance use and abuse among students.

SA [] A [] NS [] D [] SD []

Thank you for answering to these questions.

APPENDIX B: INTERVIEW SCHEDULE FOR TEACHERS (IST) OF GUIDANCE AND COUNSELLING IN SECONDARY SCHOOLS

This interview schedule is designed to establish the impact of substance use and abuse on adolescents' antisocial behaviour in public secondary schools in Kisumu East District.

Absolute confidentiality is guaranteed on any information given.

1. Do you think substance use and abuse is a serious problem among secondary school adolescents in your school?
2. What are the commonly used and abused substances by secondary school adolescents in your school?
3. In your opinion, do you think parents, peers and media are to blame for adolescents' substance use and abuse in secondary schools?
4. Who is the likely perceived role mode in adolescents' substance use and abuse?
5. According to records of the cases handled by your office, do you think adolescents' use and abuse of substances make them engage in antisocial behaviour?
6. In your opinion, do you think substance use and abuse has a direct impact on adolescents' antisocial behaviour in your school?
7. What are the strategies that can be used to eradicate the menace of substance use and abuse in your school?

Thank you

APPENDIX C

Informed Consent Form for Questionnaire

Informed Consent Form for PhD research entitled: Influence of Substance use and abuse on adolescents' social behavior in public secondary schools in Kisumu East Sub-county.

By: Lenah Chebet Kirop

This Informed Consent Form has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

You will be given a copy of the full Informed Consent Form

Part I: Information Sheet

Introduction

I am a PhD student at Maseno University. I am doing research on Substance use and abuse on adolescents' social behavior in public secondary schools in Kisumu East Sub-county. I would like to invite you to be part of this research. You do not have to participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain.

Purpose of the research

Research has shown that use and abuse may affect the adolescents' social behavior. In other words substance use and abuse influences individuals' social behavior in a negative way or in ways that are socially unacceptable by society. The current study is to ascertain the relationship of substance use and abuse and the adolescents' social behaviour in public secondary schools in Kisumu East Sub-county, Kisumu County, Kenya.

Participant Selection

You are being invited to take part in this research because I feel that you can contribute much to our understanding and knowledge of the impact of substance use and abuse on adolescents; social behavior among secondary school students.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not.

Procedures

I am inviting you to fill out a survey which will be provided by me and collected by me. If you do not wish to answer any of the questions included in the survey, you may skip them and move on to the next question. The information recorded is confidential, your name will not be included on the forms, only a number will identify you, and no one else except me will have access to your survey.

Duration

The research may take up to one and half hours of your time in total.

Benefits

There will be no direct benefit to you, but your participation is likely to help us find out more about the impact of substance use and abuse on adolescents' social behavior in public secondary schools in Kisumu East Sub-county and this information may be useful to stakeholders who are responsible for developing programs and interventions for mitigating use and abuse of substances in secondary schools.

Reimbursements

You will not be provided any incentive to take part in the research.

Confidentiality

Your personal information will not be shared with anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number on it instead of your name.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so. You may stop participating at any time that you wish.

Who to Contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me using the following: [Lenah, 0722654199 OR Email: leechebet@gmail.com]

Part II: Certificate of Consent

I have been invited to participate in research on Influence of Substance use and abuse on adolescents’ social behavior in public secondary schools in Kisumu East Sub-county.

(This section is mandatory)

I have read the information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands what the research is about.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I

confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this informed consent form has been provided to the participant.

Print Name of Researcher/person taking the consent_____

Signature of Researcher /person taking the consent_____

Date _____

Day/month/year

**APPENDIX D : RESEARCH PERMIT FROM MASENO UNIVERSITY ETHICS AND
RESEARCH COMMITTEE (MUERC)**

**APPENDIX D: RESEARCH PERMIT FROM MASENO UNIVERSITY ETHICS
REVIEW COMMITTEE (MUERC)**



MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 822 Ext: 3050
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya
Email: masuo-secretariate@maseno.ac.ke

FROM: Secretary - MUERC

DATE: 4th October, 2018

TO: Lenah Chebet Krop
PG/PHD/0101/2011
Department of Educational Psychology
School of Education, Maseno University
P. O. Box, Private Bag, Maseno, Kenya

REF: MSU/DRP/MUERC/00418/17

RE: Substance Use/Abuse and Adolescents' Social Behaviour in Public Secondary Schools in Kisumu East Sub-County, Kenya. Proposal Reference Number MSU/DRP/MUERC/00418/17

This is to inform you that the Maseno University Ethics Review Committee (MUERC) determined that the ethics issues raised at the initial review were adequately addressed in the revised proposal. Consequently, the study is granted approval for implementation effective this 4th day of October, 2018 for a period of one (1) year.

Please note that authorization to conduct this study will automatically expire on 3rd October, 2019. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 15th September, 2019.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 15th September, 2019.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advise MUERC when the study is completed or discontinued.

Thank you.

A handwritten signature in blue ink over a circular official stamp. The stamp contains the text 'MASENO UNIVERSITY SECRETARY' and '01 OCT 2018'.

Dr. Bonuke Anyona,
Secretary,
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee.

MASENO UNIVERSITY IS ISO 9001:2008 CERTIFIED



APPENDIX E: MAP OF KISUMU EAST SUB-COUNTY

APPENDIX E: MAP OF KISUMU EAST SUB-COUNTY



Source: <https://www.researchgate.net/figure/Map-of-Kisumu-East-Subcounty-Kenya-showing-area-of-the-study>