

**INFLUENCE OF PSYCHO-SOCIAL PREDISPOSING ISSUES ON SUBSTANCE
ABUSE PREVENTIVE MEASURES AMONG SECONDARY SCHOOL
STUDENTS IN KAKAMEGA COUNTY, KENYA**

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**A Thesis Submitted in Partial Fulfillment of the Requirements for the Award of the
Degree of Doctor of Philosophy in Educational Psychology of Masinde Muliro
University of Science and Technology**

November, 2024

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DEDICATION

This thesis is dedicated to my husband, Jairus Okacha and my children for their encouragement, moral, material and spiritual support throughout my research study.

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ABSTRACT

The World Health Organization has observed that substance abuse is both an international and national challenge that require urgent attention due to the alarming rate of involvement of youth. Alcohol prevalence among secondary school students in Kakamega has reached 23.4%, a figure that is higher than the national average of 12.2%. Several psychosocial issues combine to aggravate and sustain substance abuse in schools. Schools have put in place preventive measures essential to curb substance abuse but little change has occurred. This raises concern about the effectiveness of substance abuse preventive measures. The study sought to investigate influence of psycho-social predisposing issues on effectiveness of substance abuse preventive measures among secondary school students in Kakamega County. Objectives of the study were to: establish the influence of co-curricular issues on effectiveness of substance abuse preventive measures among students in Kakamega County, evaluate the influence of peer issues on effectiveness of substance abuse preventive measures among students; determine influence of family issues on effectiveness of substance abuse preventive measures among students and examine influence of personality issues on effectiveness of substance abuse preventive measures among secondary school students. This study was informed by Social Cognitive Theory by Albert Bandura. It adopted a mixed and correlational research design. Target population comprised of 12 Sub County Directors of education, 530 guidance and counselling heads of department, 1,080 class teachers and 59,675 form three students drawn from 491 secondary schools. It adopted Convergent parallel mixed methodology. Multi-stage sampling and purposive sampling techniques were adopted. Sample size consisted of 381 form three students, 108 class teachers, 53 guidance and counselling heads of department and 12 sub-county directors of education. Questionnaires, focus group discussion guide and interview guide instruments were piloted. The validity of these instruments was ascertained through face, content and construct validity. Construct validity was tested using factor analysis test, while reliability of the instruments was tested using split half method and Cronbach's alpha of reliability coefficient index for data collection instruments was above 0.8 coefficient score both for teachers and students. The average response rate was 68.3%. Hypothesis testing using correlation and simple linear regression established that co-curricular, peer, family and personality issues, had statistically significant influence on effectiveness of substance abuse preventive measures among secondary students. Critically the study concluded that co-curricular, peer, family and personality predisposing issues have limiting influence on effectiveness of substance abuse preventive measures. Further conclusion of the study is that imitating behaviour, risk-taking behaviour, social pressure, weak family cohesion and competitive games strongly predispose students to substance abuse while, nature of co-curricular, peer to peer talk, role modeling and one-on-one counselling are the most limited preventive measures. The study recommended that the current substance abuse preventive measures should be restructured in a way to minimise the influence of psychosocial predisposing issues. Knowledge generated is critical in improvement and sustainability of effectiveness of substance abuse preventive measures and therefore provide a baseline for improvement of students' behaviour with regard to substances.

TABLE OF CONTENTS

TITLE PAGE.....	i
STATEMENT OF PLAGIARISM.....	ii
DECLARATION.....	iii
DEDICATION.....	iv
COPYRIGHT.....	v
ACKNOWLEDGEMENTS.....	vi
ABSTRACT.....	vii
TABLE OF CONTENTS.....	viii
LIST OF TABLES.....	xii
LIST OF FIGURES.....	xiv
LIST OF APPENDICES.....	xv
LIST OF ABBREVIATIONS AND ACRONYMS.....	xvi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Overview.....	1
1.2 Background to the Study.....	1
1.3 Statement of the Problem.....	6
1.4 Purpose of Study.....	7
1.5 Specific Objectives of Study.....	7
1.6 Research Hypothesis.....	8
1.7 Basic Assumptions of the Study.....	8
1.8 Scope of the Study.....	9
1.9 Limitations of the Study.....	9
1.10 Justification of the Study.....	10
1.11 Significance of Study.....	11
1.12 Theoretical Foundation of the Study.....	12
1.12.1 Social cognitive theory developed by Bandura in and modified in 2000.....	13
1.13 Conceptual Framework.....	15
1.14 Operational Definition of Key Terms.....	18

CHAPTER TWO: LITERATURE REVIEW.....	20
2.1 Introduction.....	20
2.2 Status of Substance Abuse.....	20
2.3 Rationale of Effectiveness of Preventive Measures of Substance abuse.....	24
2.4 Psychosocial Predisposing Issues.....	26
2.5 Co-curricular Issues and Substance Abuse.....	26
2.6 Peer Issues versus Substance Abuse.....	30
2.7 Family Issues versus Substance Abuse.....	32
2.8 Personality Issues versus Substance Abuse.....	34
2.9 Preventive Measures in the Perspective of Psychosocial Issues.....	37
2.10 Summary of the Knowledge of Gaps.....	45
 CHAPTER THREE: RESEARCH METHODOLOGY.....	 48
3.0 Introduction.....	48
3.1 Research Paradigm.....	48
3.2 Research Design.....	49
3.3 Study Area.....	50
3.4 Study Population.....	51
3.5 Sampling Procedure.....	52
3.6 Sample Size.....	54
3.7 Research Instruments.....	55
3.7.1 Class Teachers' Questionnaire.....	56
3.7.2 Students' Questionnaire.....	56
3.8 Interview Guides.....	57
3.8.1 Interview Guide for HoD Guidance and Counseling.....	57
3.8.2 Interview Guide for Sub County Director of Education.....	57
3.9 Focus Group Discussion Guide for Students.....	58
3.10 Pilot Study.....	58
3.11 Validity of the Research Instruments.....	59
3.11.1 Content Validity.....	60
3.11.2 Construct Validity.....	60

3.11.3.1 Normality Test.....	63
3.12 Data Collection Procedure.....	67
3.13 Data Analysis.....	67
3.14 Ethical Considerations.....	69

CHAPTER FOUR: PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS..... 71

4.1 Introduction.....	71
4.2. Response Rate.....	71
4.3. Demographic characteristics of Respondents.....	72
4.3.1. Students and Teachers by Gender.....	72
4.3.2 Distribution of Students by Age.....	73
4.3.3. Teachers' Experience.....	75
4.3.4 School Category.....	76
4.3.5 Distribution of Schools by School-Type.....	76
4.3.6. Distribution of Students by Religion.....	78
4.3.7. Knowledge in the Area of Substance Abuse.....	79
4.4 Descriptive Analysis.....	80
4.4.1 Objective One: Influence of Co-curricular predisposing Issues on Effectiveness of Substance Abuse Preventive Measures.....	81
4.4.2 Commonly Abused Substances in the study area.....	82
4.4.3 Hypothesis Testing.....	101
4.4.4. Regression Analysis for Co-curricular Issues.....	102
4.5. Peer Issues Vs Effectiveness of Substance Abuse Preventive Measures.....	105
4.5.1 Peer Issues on Effectiveness of Substance Abuse Preventive Measures.....	106
4.5.2 Influence of Peer Issues on Effectiveness of Substance Abuse Preventive Measures.....	111
4.5.3. Regression Analysis for Peer Issues on Effectiveness of Substance Abuse Preventive Measures.....	115
4.6. Family Issues Vs Effectiveness of Substance Abuse Preventive Measures.....	117
4.6.1. Family Predisposing issues.....	118

4.6.2. Influence of predisposing Family Issues on Effectiveness of Substance Abuse Preventive Measures.....	122
4.6.3. Regression Analysis for Family Issues.....	128
4.7. Personality Issues Vs Effectiveness of Substance Abuse Preventive Measures.....	130
4.8. Descriptive statistics for Personality Issues.....	131
4.8.1 Personality Predisposing Issues Vs Substance Abuse.....	131
4.8.2. Descriptive Statistics for Effectiveness of Substance Abuse Preventive Measures.....	138
4.8.3. Influence of Personality Issues on the Effectiveness of Substance Abuse Preventive Measures.....	143
4.8.4 Regression Analysis for Personality Issues.....	143
 CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS..	151
5.1 Introduction.....	151
5.2 Summary of the Findings.....	151
5.2.1 Influence of Co-curricular Issues on Effectiveness of Substance Abuse Preventive Measures among Students.....	151
5.2.2 Influence of Peer Issues on Effectiveness of Substance Abuse Preventive Measures among Students.....	152
5.2.3 Influence of Family Issues on Effectiveness of Substance Abuse Preventive Measures among Students.....	152
5.2.4: Influence of Personality Issues on Effectiveness of Substance Abuse Preventive Measures Among Secondary School Students.....	153
5.4 Recommendations.....	156
5.5 Suggestions for Further Research.....	157
REFERENCES.....	158
APPENDICES.....	176

LIST OF TABLES

Table 3.1: Sampling Matrix for Respondents and Sample Size.....	54
Table 3.2: Summary of Reliability Analysis.....	62
Table 3.3: Tests of Normality.....	64
Table 3.4: Multi-collinearity Tests.....	64
Table 4.1: Response Rate per cluster of Respondents.....	72
Table 4.2: Students, Teachers and Sub county directors by gender.....	73
Table 4.3: School Category.....	76
Table 4.4: Ranking of substances abused by students.....	82
Table 4.5: Co-curricular issues predisposing students to substance abuse.....	89
Table 4.6: Cocurricular issues vs limiting influence on Effectiveness of substance abuse preventive measures.....	97
Table 4.7: Correlation Matrix between the Outcome Variable and its Correlates.....	102
Table 4.8: Model summary.....	102
Table 4.9: ANOVA of Co-Curricular predisposing issues and Preventive Measures.....	103
Table 4.10: Ranking of Peer issues Predisposing Students to Substance Abuse.....	107
Table: 4.11: Peer Issues Vs Effectiveness of Substance Abuse Preventive Measures....	112
Table 4.12: Model Summary.....	116
Table 4.13: ANOVA of Peer Issues and Effectiveness of Substance Abuse.....	116
Table 4.15: Predisposing family issues vs Effectiveness of Substance Abuse Preventive Measures.....	123
Table 4.16: Model Summary.....	128
Table 4.17: ANOVA of Family Issues and Effectiveness of Preventive Measures.....	129

Table 4.18: Personality predisposing issues on substance abuse.....	132
Table 4.19: Personality issues Vs Effectiveness of Substance Abuse Preventive Measures	
138	
Table 4.20: Linear Regression Analysis Between Personality Issues and Effectiveness of Preventive Measures.....	143
Table 4.21: ANOVA of Personality Issues and Preventive Measures.....	144
Table 4.22: Model Summary.....	146
Table 4.23: ANOVA a.....	147
Table 4.24: Coefficients of Regression Equation.....	148
Table 4.25: Results of Hypotheses Tests.....	150

LIST OF FIGURES

Figure 1.1: Conceptual Model.....	17
Figure. 4.1: Distribution of Students by Age.....	74
Figure. 4.2: Teachers’ Experience.....	75
Fig.4.3: Distribution of Schools by School-type.....	77
Figure.4.4:Distribution of Students by Religion.....	78
Figure 4.5: Knowledge in the area of Substance Abuse.....	79

LIST OF APPENDICES

Appendix I: Letter of Introduction to the Respondents.....	176
Appendix 11: Participant Informed Consent Form.....	177
Appendix I11: Self administered Questionnaire for Students.....	178
Appendix IV: Self administered Teachers Questionnaire.....	184
AppendixV:Interview Guide for Guidance and Counseling HOD.....	189
AppendixV1: Interview Guide for Education Officer.....	193
Appendix V11: Focus Group Discussion Guide.....	194
Appendix VIII: The Target study population of secondary schools in Kakamega County.....	197
Appendix IX: Krejcie and Morgan (1979:608).....	198
Appendix X: Map of Kakamega County.....	199
Appendix XI: The Target study population of secondary schools in Kakamega County	200
Appendix XII:Form three enrolment in Kakamega County.....	219

LIST OF ABBREVIATIONS AND ACRONYMS

ALERT	Adolescent Learning Experiences in Resistance Training
CED	County Education Director
CGPA	Cumulative Grade Point Average.
DCC	Drug Control Commission
GAP	Global Assessment Programme
GOK	Government of Kenya
GAC	Guidance and Counseling
HOPE	Healthy Outcomes through Prevention Education
IG	Interview Guide
INCB	International Narcotics Control Board
KIPPRA	Kenya Institute for Public Policy Research and Analysis
LSP	Slang names: sugar, trips, and cubes, brown dot, sunshine and acid
LSD	Lysergic acid diethylamide
LIB	Living in Balance
MOE	Ministry of Education
MOEST	Ministry of Science and Technology
MOH	Ministry of Health
NACADA	National Agency for Campaign against Drugs
NACD	National Advisory Committee on drugs
NSDUH	National Survey on Drugs Use and Health
NGOs	Governmental Organizations
NIDA	National Institute on Drug Abuse
OSAP	Office of Substance Abuse Prevention

Independent Variables

Co-curricularActivities

Organized sports games
Non supervised activities
School –based activities
Mixed gender
School sponsored

ASSIST

Family background

Parental model
Weak cohesion
Deficient parental monitoring
Family structure
Siblings
Sociolization

WDR

W H O

ADD HEALTH

Personality

Outgoing anger frustration
Boredom
Impulsiveness rebellioeness
Sensation seeking

Perceived Behavioral control

Preventive measure

Substance abuse

Substance Abuse Mental Health

Smoking, and Substance Involvement

School-based extracurricular activities

Sustainable Development Goals

Statistical Package for Social Sciences

United Nations Drug Control Programme

United Nations Office on Drugs and Crime

World Drug Report

World Health Organization

National Longitudinal Study of Adolescent Health

DependentVariables

Effectiveness of preventive intervention

Abstinence reduced
Truancy reduced
Increased self esteem
Retention in school
Reduced school drop out

Improve grades

Low grade

T

School leadership

Peer counseling

Public governance

Age

Legal restriction Unawareness

Altitudde mental health reliogion

Gender

Residencial area

Education level

Intervening Variables

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter presents the background information to the study, statement of the problem, objectives of study, justification and significance of the study, assumptions, scope of the study, limitations of the study, theoretical and conceptual framework and operational definition of terms.

1.2 Background to the Study

The rising prevalence of youth involvement in substance addiction is a global and national problem that needs immediate response (World Health Organization WHO, 2014). Substance abuse is perceived as the self-administration or introduction of abnormal quantities of psychoactive substances into one's body through chewing, sniffing, snuffing, sucking and smoking or rubbed on one's body, if not injected, for wrong intentions, a definition which this study adopted (WHO, 2016).

Helmer et al. (2014) & Tavoracci et al. (2016) report that European student alcohol and cigarette consumption rates are the highest in the world. Substance abuse among adolescents is associated with negative outcomes in physical and mental health (Rooke et al., 2013; Catalano *et al.*, 2012; Brown et al., 2008) as well as social problems (Skala & Walter, 2013), according to data published by the US Substance Abuse and Mental Health Services Administration (SAMHSA, 2012). North American research indicates that there were fewer than 5,000 deaths in the United States attributable to cocaine use in 2013, but that number increased to over 10,000 by 2016. The rise is a clear sign of more people taking the drug for its adverse effects (UNODC, 2018). The percentage of Pakistanis who began using heroin

between the ages of 15 and 20 was reported to have increased by over 24% in 2014 (UNODC, 2014). While the usage of all drugs is higher among boys than girls in most locations, alcohol, cigarettes, and cannabis continue to be the most commonly used substances among teenagers around the world (United Nations, 2015). High school marijuana use has been steadily rising in Argentina (National Drug Control Agency of Argentina, 2014), and South Africa's drug consumption (cannabis, cocaine, and tik) ranks highest in Africa (World Drug Report, 2014).

Substance abuse among kids in schools is increased and maintained by multiple psychosocial factors. Many different factors contribute to students' substance abuse, including the student themselves, their immediate environment (Global Health Next Generation Network, 2017; Mokwena, 2015; Seggie, 2012), the student's extracurricular activities (Moore, Hill & Catalano, 2013) and the student's ability to make new friends (Gil, 2011). Although these factors do not directly cause substance abuse, they might set the stage for or heighten a person's vulnerability to it (Azeez, et al., 2020). According to Foo, Tam, and Lee (2013), the impact of peer and family concerns on substance abuse among young people in the present day in Malaysia, found that young people's substance usage is strongly influenced by their peers, social environment, family, and individual characteristics. Peer pressure has been shown to play a significant role in both the onset and continuation of substance misuse (Miller & Hendrie, 2011). The World Drug and Substance Report (2014), reported that substance abusers like everyone else try to win the approval of their peers by influencing others to take up their habit.

Similarly, a Zimbabwean study on substance misuse revealed that, when compared with pupils who had constant parental monitoring, those who had less frequent supervision were

more likely to drink. Those who were regularly monitored by their parents were far less likely to experiment with alcohol (Kristjánsson & ÍlgeirLogi, 2010). Long-term traumatic parental absence, severe discipline, lack of emotional communication, and parental substance use have all been linked to adolescent substance misuse (WHO, 1993; Cheloti, 2013). However, Foxcroft and Tsertsvadze (2012) study revealed that family intervention is the most effective preventive intervention for teenage substance misuse. The programmes save money in the long run because they help families create and practice new ways of communicating and interacting with one another that have a favorable effect on their children's growth and development (Miller & Hendrie, 2012).

In the perspective of prevention, The United Nations Office of Drugs and Crime (2017) confirms that nations around the world are taking action to curb substance abuse before it may spread to a wider population. Allen et al. (2016) supports that various programmes aimed at reducing teenage substance abuse have been shown to be successful. Adebisi et al., (2010); Chikere & Mayowa, (2011); Fareo, 2012) highlighted the importance of addressing the issue of substance abuse prevention in Nigeria. Despite extensive efforts, the war on drugs has made little progress in the country (The World Drug Report, 2012). This lends credence to the argument made by (Cheloti, 2013) that substance abuse is a complex issue that calls for a wide range of strategies to solve and that no single approach, no matter how well-structured, is capable of effectively addressing substance abuse across the board in educational institutions. Poudel et al., (2017) observes that early-onset of drug abuse by adolescents places them at higher risk for psychosocial problems including disruptive behavior patterns, psychiatric disorders, strained peer relations, negative impacts to recreational activities, when compared to late-onset drug users. Equally, early intervention

for drug abuse, among other preventive measures, is essential. Studies show that persons who get involved in early drug use are more likely to abuse them later in life where it becomes much more difficult to quit (Youth. Gov, 2019).

Substance abuse is rampant among school-aged youth in Tanzania, making the country second only to Kenya in the East African region (Mwakyus, 2015). The government has implemented substance abuse programs like substance abuse awareness, resistance skills, peer support, co-curricular and life skill programmes in response to the estimated number of drug addicts in the country (GoK, 2018). Still further, the ongoing interventions in Kenya to prevent and reduce substance abuse take the psychological approach, which includes enabling the youth to say "NO" to substance abuse (Otingi, 2012; Donaldson, et al., 1994). Pere, (2016) noted that a good number of pupils should participate in preventive programmes so as to own it when implementing any preventive method to the children. This is done with the knowledge that true transformation originates from within. Kakamega was among 25 counties surveyed by KIPPRA & NACADA (2019) to develop policy guidelines for reducing children's exposure to and prevalence of alcohol and drugs. It was found that majority of standard five and eight pupils obtain alcohol and local brew from their homes, an activity associated with poverty. These same students move on to secondary schools, where they are exposed to an environment where substance abuse exist and should therefore be aggressively combated.

Kakamega County contribute the highest proportion (4.8%) to the national poverty index which is significantly a contributing factor to the consumption of the local brew (GOK, 2017). Schools that have been in existence for long are popularly known for specific co-curricular activities such as soccer, rugby, drama among others and some of these activities

provide networks that predispose students to substance abuse. However, Lambert, (2017) supports that the preventive benefits of participating in sports have been recognized by researchers and policymakers. Further still, Szabo et al., (2018) highlight the importance of sports in preventing cigarette and alcohol usage. Kakamega County is also in the neighbourhood of Busia County which experiences an upsurge of international narcotic drug trafficking. Recent reports from Kakamega County Education Office indicates that despite several preventive measures, secondary school is increasingly becoming an avenue for students' predisposition to substances and experimentation of substance abuse (CEO, 2015). NACADA (2013) indicates that the most widely abused substance by secondary students in Kakamega County includes alcohol: spirit 36%, chang'aa 30%, busaa 15%, beer 6% and others 13%. In the recent past there has been an upsurge in the abuse of busaa and changaa in Western Kenya inclusive of Kakamega County (NACADA, 2012). On the contrary NACADA (2017) reported that enforcement of the Alcohol Drinks Control Act 2010 and County Alcohol Drinks Control Act and other preventive measures by secondary schools is yet to be perfected.

Secondary schools are not drug-free zones, and therefore urgent actions are needed to mitigate against substance misuse related disorders MOH, (2019), in line with Vision 2030's goal of creating a globally competitive middle income economy. Substance abuse prevention education has been incorporated into the competency-based curriculum that aims to produce empowered and engaged learners given that they spend majority of their time in school (NACADA, 2020). Despite these efforts, a basic question remains: Why are substance abuse preventive measures not effective in Kenyan schools, especially those in Kakamega County? Similarly, Oteyo (2013) notes that no progress has been made over the past two decades

despite several efforts to reduce substance abuse and the researcher is unaware of any such studies documented in Kakamega County. Therefore, the current study was initiated to determine the influence of psychosocial predisposing issues on effectiveness of preventive measures in secondary schools in Kakamega County.

1.3 Statement of the Problem

The effectiveness of substance abuse prevention programs has been shown to correlate with psychosocial characteristics in affluent nations like the United States (ONDCP, 2012). Agenda 3 of Sustainable Development Goals (SDG) Target the aims to improve the prevention and treatment of substance abuse, particularly the harmful use of narcotic drugs and alcohol (NACADA, 2021). It is therefore crucial to understand why it matters to assess the influence of psycho-social predisposing issues in substance abuse prevention programs. This, in essence, provides a means of filling in the gaps in our understanding of whether they promote or hinder the effectiveness of preventive measures there are in secondary schools across Kakamega County. The Office of National Drug Control Policy (ONDCP, 2012) promotes a view emphasizing that preventive measures targeting the root of the problem are essential to reducing substance abuse and assist individuals in leading healthier lives.

NACADA, (2010) indicates that the most widely abused substance by secondary students in Kakamega County includes alcohol: spirit 36%, chang'aa 30%, busaa15%, beer 6% and others 13%. This is as a result of the psychosocial predisposing issues that put young people at risk of developing behaviour problems including substance abuse (Oshikoya & Alli, 2006; Sue, 2014). Kakamega County is generally composed of a young population: 58% of the population is aged less than 20 years, a category that is easily influenced to abuse substances. In the recent past there has been an upsurge in the abuse of busaa and changaa in Western

region of Kenya inclusive of Kakamega County (NACADA, 2021). Current statistics indicate that more than half of substance abusers are aged 10-19 years, (NACADA, 2017). In another survey, NACADA (2019) established that alcohol abuse prevalence among secondary school students in Kakamega has reached 23.4%, which is far above the national average of 12.2%.

In the perspective of prevention, Mattias Gunnarsson, (2012) observes that enhanced knowledge about predisposing factors of substance abuse is necessary for the development of effective preventive intervention concerning substance abuse. That is why the MOE, (2013) emphasize that schools must endeavor to create safe and caring environment where learners are aware of factors behind substance abuse and strive to embrace remedial measures as a way to make the school a substance free environment. Despite extensive efforts in mitigating against substance abuse not much has been realized in secondary schools of Kakamega County (NACADA, 2017). The study therefore sought to determine the extent of influence of psychosocial predisposing issues on effectiveness of substance abuse preventive measures among secondary school students in Kakamega County.

1.4 Purpose of Study

This study investigated influence of psycho-social predisposing issues on effectiveness of preventive measures among secondary school students in Kakamega County.

1.5 Specific Objectives of Study

This study was guided by the following specific objectives:

1. Establish influence of co-curricular predisposing issues on effectiveness of substance abuse preventive measures among students in Kakamega County.

2. Establish influence of peer predisposing issues on effectiveness of substance abuse preventive measures among students in Kakamega County.
3. Determine influence of family predisposing issues on effectiveness of substance abuse preventive measures among students in Kakamega County
4. Examine influence of personality predisposing issues on effectiveness of substance abuse preventive measures among students in Kakamega County.

1.6 Research Hypothesis

On the basis of the specific objectives of the study, this study was further guided by the following research hypotheses:

Ho₁ Co-curricular issues have no statistically significant influence on effectiveness of substance abuse preventive measures among students.

Ho₂ Peer issues have no statistically significant influence on effectiveness of substance abuse preventive measures among students.

Ho₃ Family issues have no statistically significant influence on effectiveness of substance abuse preventive measures among students.

Ho₄ Personality issues have no statistically significant influence on effectiveness of substance abuse preventive measures among students.

1.7 Basic Assumptions of the Study

Although several assumptions were necessary for effective and scientifically correct accomplishment of this study, the following assumptions were considered as critical for study;

- i) Apart from psycho-social predisposing issues, all other factors that could influence substance abuse and effectiveness of preventive measures were held constant during the study.
- ii) There is influence of psycho-social predisposing issues on effectiveness of substance abuse preventive measures.
- iii) Schools in the study area engage in the implementation of substance abuse preventive measures and the only issue is that the influence of psychosocial predisposing issues on the effectiveness of substance abuse preventive measures is not known.

1.8 Scope of the Study

The study was carried out in public secondary schools in Kakamega County and focused on the extent of effectiveness of substance abuse preventive measures in relation to co-curricular, peer, family, and personality issues among secondary students in Kakamega County, Kenya. The selection of the issues was based on the fact that they are considered significant in behaviour problems such as substance abuse, (Nicole, Pillai, Flora, Stevens, Stevens, Cohen, Greenberg, Garfield, 2016). Furthermore, they have been alluded to literature review and witnessed in the teaching field. The target population comprised of 1,080 class teachers, 12 sub county directors of education and 59,675 form three students in school settings inclusive of Mixed Day and boarding, Girls' Day and Boarding, Boys Day and Boarding schools.

1.9 Limitations of the Study

Despite the fact that deliberate efforts were made to ensure that the study is scientifically sound, some foreseeable limitations were noted in both field work and methodology. The critical ones were;

Adolescents may underreport due to fear of repercussions (Norman & Ford, 2015) and that explains why substance abuse activities are secretive; this was mitigated by disclosing the intention of the research to the respondents and observation of ethical standards. Furthermore reliability and validity of the instruments were ensured during pilot study in order to guarantee reliability and validity of the data collected.

Kakamega County is vast. This was mitigated through sampling techniques such as, cluster, purposive and simple random sampling to ensure fair coverage.

Likert scale was used. Although this is widely used in social studies it is not the best yardstick when dealing with data that is continuous in nature. This was mitigated through use of large samples and random sampling.

1.10 Justification of the Study

Substance abuse is an international and national challenge that requires urgent attention due to the increasing rate of involvement of youth, (World Health Organization WHO, 2014). Abuse of substances among the youth not only drains the economy but also is a blow to the Country as her youth become less productive. The rationale of effectiveness of substance abuse preventive measures is to reduce or delay the likelihood of experimentation with substances and by extension provide information on the extent of influence of psychosocial predisposing issues, as well as encourage those who are predisposed to the substances to get the help they need.

In school, teachers determine programs that are appropriate to their students staying informed about preventive practices, implement the programmes, engage the students, monitor and evaluate the effectiveness of programs. Therefore response of students and teachers on the

extent of influence of psychosocial predisposing issues on effectiveness of these PM is quite important. However, Munro (1997) suggests that substance education has been critiqued as being not adequate enough and suggests that schools should seek to expose students to interactive and integrative approaches, to prepare students for living effectively where they can adopt and maintain life skills and behavior that will protect them from substance abuse. Hence this study might reveal the level of influence of substance abuse psychosocial predisposing issues in the study area of Kakamega County.

1.11 Significance of Study

The study generated knowledge that is critical in improvement and sustainability of effectiveness of substance abuse preventive measures and therefore provide a baseline for improvement of students' behaviour as regards substances. To the teachers, sub-county directors of education and researchers, the findings generated additional knowledge, reduced the existing knowledge gap and form a sound platform for further research.

It is hoped that the findings of this study might enrich the country's national education goals with effective substance abuse preventive measures that would by extension lead to the achievement of academic excellence.

In order to help students comprehend the causes of substance abuse and the methods they can adopt to mitigate against substance abuse, it is important to establish the level of influence of psychosocial predisposing issues on the effectiveness of substance abuse preventative measures. Students, educators, and educational leaders have all benefited from the study's findings on what they can do to curb youth substance abuse.

Furthermore, the study has validated and deepened our understanding of the social cognitive theory, which proposes that an individual's behavior is influenced by the interplay of their environment, personality, and behavior, and that an individual's context influences their behavior. Thus, modifying the secondary school setting would significantly reduce pupils' substance abuse.

Counselors in schools can benefit from the study findings by being more knowledgeable about the influence of psychosocial issues on the effective substance abuse preventive measures.

The study might help the Ministry of Education (MOE) to understand better the level of influence of psychosocial predisposing issues on substance abuse according to different school types in the study area. This informs the planning of preventive interventions to mitigate the problem. The study findings might help policy makers in the ministry, administrators and teachers aware of the specific predisposing psycho-social issues hindering or promoting the effectiveness of the preventive measures in curbing substance abuse.

The study findings might also be a source of knowledge to scholars in related areas and may form a basis on which other researchers can make reference to.

1.12 Theoretical Foundation of the Study

The current study focused on a theory from a developmental perspective because it explores social, biological, emotional and cognitive domains. To better comprehend the relationship between psychosocial predisposing issues and the underlying substance abuse preventive measures, this study draws on Social Cognitive Theory (Albert Bandura, 1977). Based on

this theory, responses of school actors were used to assess the extent to which psychosocial issues influence the efficacy of preventive measures.

1.12.1 Social cognitive theory developed by Bandura in and modified in 2000

Bandura (2001) asserts that any factor that influences behavior can have a significant impact on the course of personal development. (Bandura, 2009). Social cognitive theory provides a triangular relationship between an individual (their accumulated knowledge), their surroundings, and their actions. Second, people pick up knowledge from their own experiences and through seeing those of others. Third, human beings have the potential to act in certain ways. Knowing what and the how of an activity is essential to its proper execution. However, knowledge is often not put into practice. Consequences, both actual and imagined, play a role in shaping people's decisions. Consideration of the expected outcome prior to the performance of the behavior is the fifth factor. Finally, self-efficacy, which is the level of confidence a person has in their ability to do a behavior is more focused on the value placed on the outcome and is more subjective to an individual.

Bandura (1977) contends that humans are both consumers and contributors to their surroundings. The environment has a significant impact on an individual's behavior. This perspective provides support to the study's hypotheses regarding the role of family, peers and co-curricular issues on the effectiveness of substance abuse preventive measures. In the context of a family, for instance, parents might have an impact on their children's drinking habits through indirect modeling (Bandura, 1977) and their own attitudes on alcohol consumption. Bandura argues that personal, behavioral, and environmental variables interact dynamically and reciprocally to shape psychological functioning. Furthermore, the social and psychological effects in the environment shape the development and modification of

students' perceptions, beliefs, and cognitive skills. This perspective lends credence to the study's hypothesis, that personality is an issue in the success of efforts to reduce substance abuse. The social context implies that students are more likely to take risks when they make decisions based on information from their surroundings. Additionally, Social Cognitive Theory explains how the conduct is influenced by the external factors (environment) through cognitive processes.

The sixth tenet in the theory is self-efficacy. Self-efficacy was defined by Bandura as the confidence in one's ability to plan and carry out the actions necessary to handle future events (Bandura, 1995, 2004). This provides sufficient backing for the preventative measures in the study. The purpose of this study was to evaluate the influence of psychosocial predisposing issues on effectiveness of substance abuse preventive measures among secondary students in Kakamega County. According to Alia et al., (2018) self-efficacy is defined as the degree to which an individual believes he or she is confident and capable of performing a certain behavior in a specific situational context, a concept that is relevant to this study. Bandura understood that individuals have power to guide and alter their actions. According to the theory, those who have a healthy dose of self-efficacy are more resilient to setbacks, disappointments, take on more responsibility, and develop a keener interest in the activities in which they partake. However, people who lack a strong sense of self-efficacy, shy away from challenges and quickly lose confidence. Therefore, substance abuse occurs when a person lacks the ability to manage both himself and their environment.

Bandura's theory indicates a potentially crucial circumstance that may arise in secondary schools, when psychosocial predisposing issues may hinder or promote preventive measures.

Zimmermann (2008), who sees the environment as a good or negative contributor to self-regulation, agrees with this point of view.

1.13 Conceptual Framework

A conceptual framework outlines possible courses of action or a preferred approach to an idea or thought, (Shields & Ragarja, 2013). The theory selected for a study provides the conceptual basis for designing the study (Grant & Osanhoo, 2014). It is important to connect the setting of an ongoing study to previous theories because they form a foundation for the analysis, interpretation, inference and conclusion (Arkey and O'Malley, 2005).

Designing of a study entails integration of different aspects of a study and the theoretical framework through the process of concept mapping (Novak and Canas, 2006). Concept mapping involves organizing the study in terms of variables and then construction of concept maps to provide a visual representation of relationships between the variables in the study as perceived through the lens and vision of the theoretical framework (Mennecke and Townsend 2012). During concept mapping one should consider the study variables and basic assumptions. Eventually concept mapping leads to creation of a conceptual framework for the study which provides a logical structure or visually displays research expectations with regard to perceived directions and relationship between the variables in the study (Grant & Osanhoo, 2014, Munhall & Chenail, 2008). According to Farnworth *et al* (2013) the concept of relations is the baseline of all research activities. The conceptual framework as in Figure 1.1 guided this study.

Wesley and Smith (2010) argue that avoiding severe substance abuse problems requires measures that takes into account several levels of influence, including those of the person, the

peer group, the family, and the community. The model here under Fig. 1.1, illustrates the perceived inter-relationship between the independent and dependent variables in the study, in order to determine influence of psychosocial predisposing issues. The independent variable includes peer, family, co-curricular and personality issues which when they interact with dependent variable either promotes or hinder effectiveness of substance abuse preventive measures

The dependent variable for this study is effectiveness of preventive measures. It is premised that the level of effectiveness of preventive measures would provide direction in terms of preventive programmes for the County as a whole. However with the many intervening variables (Fig. 1.1), these affect the inter-relationship between the psycho-social predisposing issues and effectiveness of substance abuse preventive measures. Some of the indicators of preventive measures are particularly; increased abstinence, truancy reduced or stopped, reduced absenteeism, increased self-esteem, high level of retention in school, strong attachment to school and reduced school dropout. However if the preventive measures (PM) are not effective then the psycho-social issues are not strong predictors of substance abuse (SA) preventive measures.

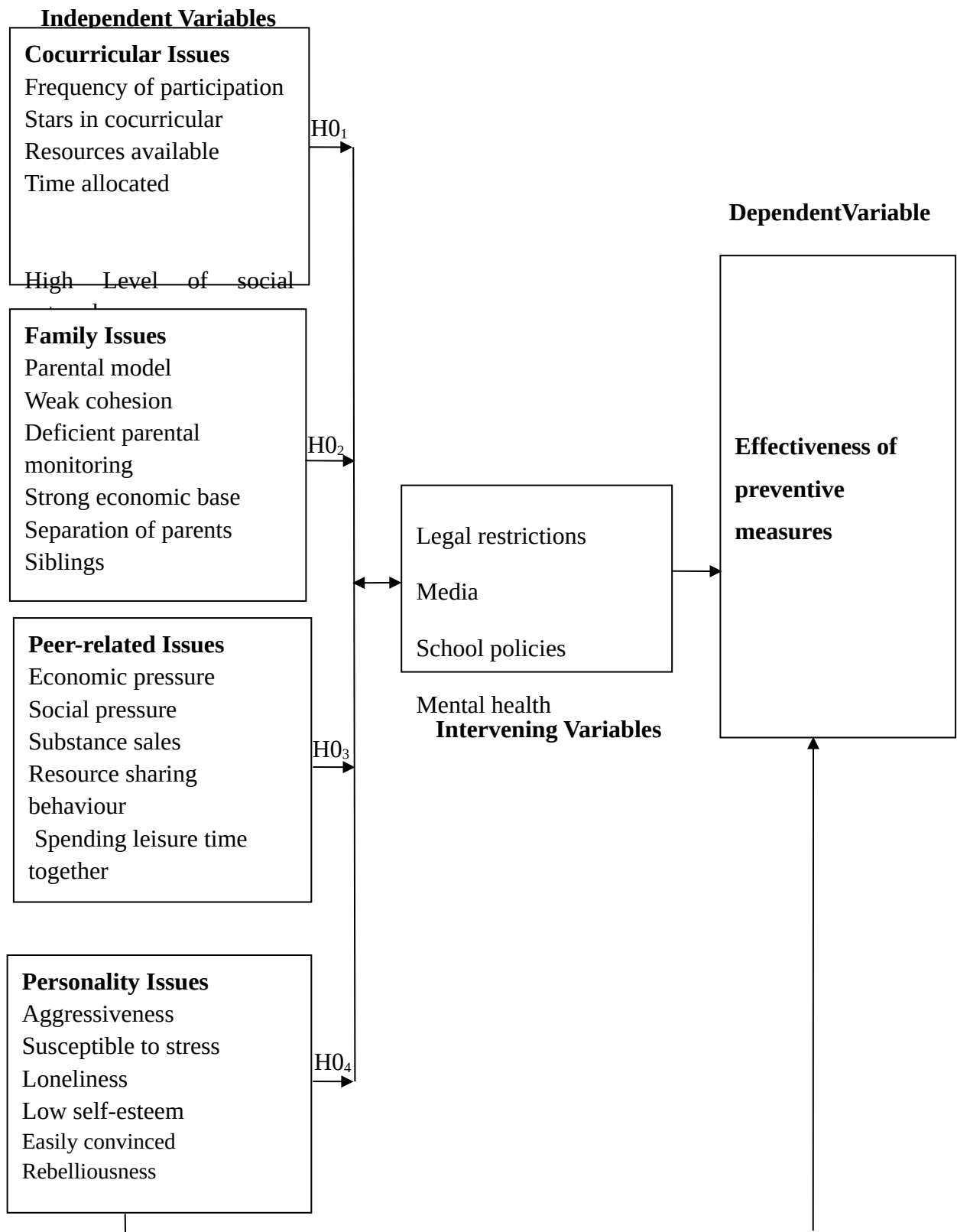


Figure 1.1: Conceptual Model

Source: Researcher (2022)

1.14 Operational Definition of Key Terms

In this study each of the following terms might carry the meaning indicated against;

Abuse: Refers to using a substance continuously even with or without the knowledge that it causes serious problems

Co-curricular issues: Refers to non-academic activities which predispose students to substance abuse in a school environment. They also directly or indirectly enhance or hinder the effectiveness of preventive intervention against substance abuse. For instance, nature of co-curricular, random checks, school administration (protective factors) and competitive games, clubs and music (risk factors).

Effectiveness: Refers to the extent to which the presence, usefulness and capacity of preventive activities encourage students to promote constructive lifestyles.

Family issues; Refers to factors related to family unit that provides a powerful influence on enhancing or hindering the effectiveness of preventive intervention against substance abuse.

Issues: Refers to anything whose influence is not clear such as family, personality, co-curricular and peers.

Predisposing Issues: Refers to anything or situation(s) or condition(s) that initiate or enhance substance abuse by students in a learning environment.

Peer Issues: Refers to peer to peer activities that that provides a powerful influence on either enhancing or hindering the effectiveness of preventive intervention against substance abuse.

Personality Issues: Refers to individual or internal factors that exist or occur at individual level that predispose students to substance abuse. The same can enhance or hinder the effectiveness of preventive measures against substance abuse such as guidance.

Psycho-Social Issues: Refers to psychological factors; personal or individual factors and social factors that emanates from social environment such as parental style, family, peers, social class, education, religion, culture among others that increase vulnerability to substance abuse and also enhance prevention.

Public Secondary Schools: Refers to secondary schools that have been established or are inherited and maintained by the government of Kenya.

Preventive Measures: Refers to ways through which the school acts to reduce risky or avoid or delay substance abuse and in the process motivate individuals to change their behaviour

Student: Refers to any secondary school going individual.

Substance: Refers to products that have an effect on people's emotions, thoughts, perceptions, and actions. Neither food nor water fall under this category. It can be ingested orally, inhaled, smoked, imbibed, rubbed into the skin, or injected.

Substance Abuse: Refers to misuse and or overuse of any psychoactive substance such as alcohol, cannabis, cigarettes, miraa among others, resulting in changes in bodily functions, thus affecting the individual in a negative way socially, physically or cognitively.

School Type: Refers to school settings found in the study area such as girls'boys' schools, mixed day and boarding.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview of the global and Kenyan context of substance abuse. Section one provides a general international perspective on substance abuse, that is, concept of substance abuse, rationale of substance abuse predisposing factors, rationale of substance abuse preventive intervention, cocurricular issues and substance abuse, peer issues and substance abuse, family issues and substance abuse, personality issue and substance abuse, preventive interventions such as, school based programmes, life skill training, school leadership and peer counselling preventive interventions of substance abuse in the study area. This is the basis upon which suitable conceptual frame work for the current study is identified.

2.2 Status of Substance Abuse.

According to the World Health Organization's Global Youth Tobacco Survey (2014), cannabis seizures accounted for more than half of all drug seizures in 95 countries in 2008. The research also highlighted the fact that heroin and cocaine continue to be the most prevalent substances across Europe and Asia, while other studies have shown that people between the ages of 12 and 17 are most vulnerable to developing addiction to drugs, and that this trend may reach its peak between the ages of 18 and 25 (World Drug Report, 2018).

Juveniles in four Caribbean and five Latin American nations were surveyed about the perceived risks and advantages of marijuana usage (Joesph, 2014). Most of the countries participated in this multi-national effort used data from the World Health Organization's Global School-Based Student Health Survey, which focused on substance abuse among

adolescents. Students between the ages of 13 and 15 in Jamaica were polled in 2010, and the results showed that 79.9% of them had tried drugs before turning 14 (National Council and Drug Abuse, 2014). Seven percent of Trinidad and Tobago's 13- to 15-year-olds had tried marijuana at least once, with seventy-seven percent of those people having their first experience with the drug before the age of 14 (Ministry of Health, 2011). Eleven percent of Belize's 13- to 15-year-olds had tried marijuana at least once, with seventy-eight percent of those people having their first experience with the drug before the age of 14 (Ministry of Health, 2011). Statistics from a 2013 survey performed in Chile showed that 24.7% of 13- to 17-year-olds had tried marijuana at least once, with 60.9% of those people having their first experience with it before the age of 14 (Ministerio de Salud de Chile, 2013).

Despite its wealth of information, this empirical review revealed a gap in our understanding of influence of psychosocial predisposing issues on effectiveness of substance abuse preventive measures on a global scale, suggesting that, as of yet, the extent to which this is the case is either unknown or has not been established.

Young people under the age of eight are more likely to experiment with drugs like "kuberi" and cigarettes due to social pressure from friends, easy access to these substances, and a lack of law enforcement (Mwananchi 1/4/2013:21). Among university students in North West Ethiopia, 26.7% were found to be regular users of Khat (Wazema & Madhavi, 2015). The purpose of this research was to examine Khat abuse at Jimma University in Ethiopia and to identify characteristics that may contribute to its prevalence among the student body. It was discovered that the prevalence of Khat use was rising rapidly among Ethiopia's youth, particularly in the

country's affluent urban academies. Of the 620 students surveyed, 24.2% of males and 2.4% of girls reported ever chewing khat.

Similarly, a research conducted in a South African formal settlement revealed that official policies regarding alcohol consumption were lacking according to a recent study. The South African government's efforts to curb excessive drinking have had little effect so far. Both men and women in their twenties and thirties reported drinking excessively. There is no maximum amount they must consume legally. Per capita alcohol consumption (in terms of pure liters of alcohol) by people aged 15 years and above was highest in South Africa (SA) in the year 2010 among the 48 countries in the WHO African region. Nine countries, including South Africa, were given a score of 5 for their prevalence of alcohol use. This ranking suggests that alcohol is widely used and abused in this country (Vellios & Van Walbeek, 2018).

Medina-Mora (2005) observes that in order to find effective remedies against substance misuse, it is important to understand the underlying psychological variables. Substance abuse prevention methods have come a long way, but the social influence model has shown the most promise. The main idea is that young people who experiment with drugs do so due to social pressures from their classmates, families, communities, and even from within themselves. However, Kemoi, (2014) research concluded that planning preventative strategies without taking into account the social settings in which certain pupils live and learn is unlikely to be successful. Further still, no one preventative strategy is likely to be successful if developed or implemented in a vacuum. UNODC, (2017) reported that local or national prevention efforts work best when they are part of a larger, health-centered, and

well-balanced system that addresses all aspects of substance abuse—from law enforcement and supply reduction to treatment for substance use disorders and risk mitigation..

Substance misuse among Kenyan youth at universities is a major public health and social concern. Campuses were identified as a hotspot for drug sales and usage by the National Agency for the Campaign against Drug Abuse (NACADA) in 2010. Juice and other sweets were being tainted with the chemicals and then smuggled into classrooms to avoid detection. According to surveys performed by the National Association of College and Academic Deans of Africa (NACADA), substance misuse is on the rise in Kenyan schools, with children as young as eight indulging in the vice. According to data collected by the Kenya Tobacco Control Alliance (KETAC), shisha use is rapidly expanding among Kenya's youth. It's a common misconception that this harmful behavior is also currently in schools. Unlike cigarettes, it doesn't have a smoky aftertaste and comes in a range of tastes (Mwaniki, 2017).The World Health Organization (2017) warns that the amount of smoke absorbed from one puff of shisha is equivalent to that from 100 to 200 cigarettes. It is the root cause of many of the issues plaguing Kenyan schools right now (Maithya, 2013; Muchemi, 2013).

The tenth biennial report on the state of alcohol and drug abuse control in Kenya shows a worrying increase in the problem over the previous two years (NACADA, 2019).Schools are not drug-free zones anymore, as evidenced by the NACADA, (2016) assessment on the state of SA in Kenya's secondary school students. There has been a horrifying boom in the abuse of soft substances in Kenya, and many of vulnerable school children have fallen prey to it. According to Nation Newspaper (2019), kuber, has emerged as a new entry point for drug use and criminal activity. It is difficult for teachers and parents to discover the indiscretion

when students eat it by putting a pinch of it between their bottom lip and gum. Ingenious methods of packaging kuber and bang in 'mandasi', as well as little, unlabeled tea bags, have also been developed by students. The paste is then placed to the palm of the hand, where it is absorbed slowly into the body. For many students, it is more readily available in the form of a breath-freshener than in the form of cigarettes or similar stimulants

The empirical review investigated the prevalence of substance abuse at global, regional and local levels. This empirical analysis has underscored the prevalence of substance abuse and efforts made in mitigating the problem. Despite its depth, this empirical analysis fails to specify the extent to which psycho-social predisposing issues influence effectiveness of preventive measures for substance abuse substance abuse preventative measures among adolescents in school settings in Kenya, more specifically, Kakamega County

2.3 Rationale of Effectiveness of Preventive Measures of Substance abuse

According to Forthun (2008), those at risk of developing a substance use disorder can benefit from a complementary strategy in which services are provided to them in the hopes that the risk of developing an addiction can be reduced. This study adopts Medina-Mora's (2005) definition of prevention as any strategy for limiting substance usage and lessening its negative effects on health and society. He maintains that interventions must be taken both before and after the onset of symptoms to be beneficial. Instead of trying to compensate for a pervasive bad social climate, preventative efforts should aim to build and maintain a positive social climate that supports socialization. Moreover, in earlier study, NCPC, (2008) clarifies that preventive measures ought to become a natural and significant part of the academic programme. Interventions should be made especially during the formative years between infancy and maturity. Content aimed towards middle schoolers should be general, useful for

early teens as well, and should emphasize the teaching of social skills, self-control, problem-solving abilities, decision-making skills, and healthy behavior. Furthermore, UNODC, (2017) reported that early adolescent programs should be participatory, focusing on coping skills, resistance and resilience abilities. Involving parents during this time is important for several reasons, including strengthening family bonds and guaranteeing parental support. Goal-setting, health education on the detrimental effects of substance misuse, and further development of life skills should all be part of programs designed for young people in their late teens and early twenty-something. Programs that encourage healthy identity development in this age group have been shown to have a favorable impact on student engagement (Onrust et al., 2016).

According to (Kemoi, 2014), "interventions" describe the actions taken to reach community, system, or individual. Universal programs, selective preventative techniques, and individualized prevention are the three types of intervention levels distinguished by the Institute of Medicine (Mrazek & Haggerty, 1994; Ayah, 2011; Kloos, et.al., 2012). Regarding the current research, specified prevention measures are explored beside universal and selected preventive treatments. According to Kemoi (2014), students need interventions that teach young people how to resist drug use. They learn to respect and prioritize their own growth as well. Substance addiction prevention efforts should begin immediately and involve as many people as possible who may be at risk. The interventions ought to take preventative action rather than corrective action. These initiatives must be exciting, geared toward young people, and participatory. Research shows that youth respond positively to substance abuse prevention messages that are credible, open, and come from reliable sources and schools are the best setting in which to implement such programs (Botvin, et al., 2003).

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The aforementioned justification for preventative intervention is consistent with the opinion of McKiernan & Fleming (2017) that when considering school-based measures, it becomes vital to account for the varying ages, grades, and skills of kids. It is recommended that efforts be made to equip children with the information they need (Newton et al., 2013). School is increasingly becoming a playground for tragic exposure and fatal experimentation with substances that leads to chronic addiction, as evidenced by the findings of a report by a public policy agency, KIPRA, (2018). Although rationalization of preventive measures is rich in content, this literature fails to identify psychosocial predisposing issues and their influence on effectiveness of different substance abuse preventive measures in the context of Kakamega and as such this study intended to fill the gap.

2.4 Psychosocial Predisposing Issues

Substance misuse is a worldwide problem that is getting worse (Kemoi, 2014; Magu, Mutugi, Ndahi, & Wanzala, 2013). As will become clear in the next paragraphs, this behaviour has been linked to psychological, social, and environmental aspects. Adolescents may be especially susceptible to substance misuse because of the complex interplay between individual, micro (home, school, and friends), and macro (social, economic, and physical) aspects. Momtazi, Saeed, et al. (2009) observe that schools offer a unique opportunity for prevention and that many adolescents in need of treatment would choose to receive it if it were conveniently located at school and administered by their school counselor, with whom they may already have a rapport.

2.5 Co-curricular Issues and Substance Abuse

According to Andrade (2014), schools actively encourage pupils to participate in extracurricular activities. However, schools also introduce young people to potential harmful activities, like substance abuse. Activities that enhance a student's education but are not required by the school are called co-curricular (Kiran, 2006). Co-curricular activities are defined by the Great Schools Partnership (2013) as "programs and learning experiences inside or outside the school that complement the academic curriculum in some way but do not earn a student academic credit " a definition that has been adopted in this study. Youth can find an ideal setting for a wide range of dangerous behavior in the context of sports and other social activities.

Moore, & Werch, 2005; Taliaferro et al., (2010) conducted a cross-sectional analysis of data from a nationally representative sample of high school students in Florida, USA. School-sponsored sports and extracurricular sports/physical activities were used as independent variables in logistic regressions to examine relationships with the four measures of substance misuse that served as dependent variables. This study found that male students were more likely to engage in school-sponsored, male-dominated sports, whereas female students were more likely to engage in extracurricular, mixed-gender sports. Women who participated in dancing, cheerleading, or gymnastics while in school had a lower risk of alcohol abuse than those who did so outside school. School-sponsored football, swimming, wrestling, and out-of-school tennis were all associated with an increased risk for using at least one substance among males, but males who participated in extracurricular swimming were less likely to abuse alcohol.

Gee and Sam (2014) looked into the culture of alcohol advertising at four major sporting events for a report commissioned by the Health advertising Agency in New Zealand. While the details of alcohol advertising varied by occasion, they consistently observed heavy pushing of alcoholic beverages and their usage. The study sampled people with intellectual disabilities in New Zealand sports, particularly rugby Pageantry and excessive alcohol consumption were shown to be normative in the international rugby sevens event, according to this research. Moreover, Gee (2013) noted that during the 2011 Rugby World Cup, symbols were produced linking alcohol to sports. Findings revealed that, popularity of sports and other forms of popular culture played a large role in this.

Nicole, Takalani, and Odimegwu (2018) concluded in a study conducted in South Africa that participation in sports is advantageous. However, young people can find welcoming settings within athletics for engaging in dangerous behaviors like substance misuse. In this study, researchers in South Africa looked at how young people's participation in extracurricular activities correlated with sexually risky and drug-using behaviors. The South African Young People's Lifestyle Survey (SAYLS) from 2009 was used. The cross-sectional survey method was used for this study. Participants range in age from 12 to 22, all of whom have engaged in at least one risky sexual behavior. Descriptive statistics were used to characterize the people in the sample. Multivariate logistic regression analyses examined whether or not respondents' involvement in extracurricular activities was related to their risky sexual and illicit drug use behaviors. The results show that youth participation in extracurricular activities does not prevent them from engaging in dangerous behaviors. This is why the current research looked into extracurricular factors that influence students' substance use and the efficacy of preventative measures.

Contrary to the aforementioned empirical studies Lynnette (2014) conducted a study on adolescent substance misuse and participation in extracurricular activities in Central Florida, USA. This study found that adolescents who participated in academic and fine clubs were less likely to engage in substance addiction. This lends credence to the findings of studies (Andrade, 2014; Bachman et al., 2008) that indicate participation in extracurricular activities can mitigate the risk of substance dependence. This research was done in a developed nation with a distinct economic and social structure. Substance abuse (SA) prevention efforts and contributing variables may therefore vary across developed countries like the United States from underdeveloped countries like Kenya.

Co-curricular activity participation is promoted by schools, educators, community leaders, and parents not only to increase students' physical activity and general health (Kwan et al., 2014), but also to reduce students' risk of substance abuse and prevent adolescents from engaging in deviant behaviors. A study that was conducted in China among high school students who participated in extracurricular activities were found to have a more positive self-image, better psychological health, more emotional stability, and enhanced social adaptation compared to their non-participating peers (Shiah et al., 2013).

Participation in after-school sports has been shown to reduce the prevalence of alcohol and drug abuse among high school students (Jernigan et al., 2014). Activities outside school (such as athletics, youth clubs, choir, and theater) were found to reduce the likelihood that young people in South Africa (aged 12 to 22) would engage in risky conduct or use illegal drugs. There was no clear pattern of results, suggesting that extracurricular activities could either increase or decrease risk. Mckieruan (2016), who agrees with this point of view, pointed out that while some researchers promote the use of sport as a treatment of substance

abuse, in some circumstances participation in sport increase use of substance. Some researchers warn against using sports as a strategy of decreasing SA in young people since the highs that young people experience when playing sports may be similar to the highs that are created by heavier alcohol usage (Diehl et al., 2012; Kwan et al., 2014). In addition, theatrical festivals and athletics are being used as treatments to reduce drug and alcohol use in Kenyan schools, particularly at the elementary and secondary levels. Most of the studies included in this review were conducted in countries other than Kenya, in particular Kakamega County. Some studies promote the use of sport as a treatment of substance abuse, and in some circumstances participation in sport increase use of substance due to difference in socio-cultural setting. The results of the studies do not show how much extracurricular activities like field trips, sports, and clubs have influenced the effectiveness of substance abuse preventive measures. The purpose of the current study is to fill that void.

2.6 Peer Issues versus Substance Abuse

Everyone is susceptible to some degree of persuasion by the words and deeds of others, or by the perceived attitude of others. This is especially true for teenagers in general, as the central purpose of adolescence is the creation of an individual sense of self (Ting et al., 2015). Adolescents, as they go through this stage of life, become increasingly self-reliant. Many teens who had never used substances before do so because they are predisposed to them as a result of their increased independence and their increased sensitivity to the messages they perceive around them (Alan, 2011). Numerous studies have shown that adolescents' drug use is affected by their social circles (Kristjansson, Sigfusdottir, & Allegrante 2013; Jackson et al., 2014; Lee et al., 2015; Ting et al., 2015). Peer influence play a significant role in the initiation and maintenance of alcohol and tobacco use among teenagers (Chassin et al., 2002;

Teunissen et al., 2012; Liu et al., 2014). In earlier studies Trucco, et al., (2011) perceived peer popularity is linked to higher rates of substance abuse among adolescents, as noted by. The researchers hypothesized that adolescents who were more popular would be more likely to experiment with drugs.

Foo, Tam, and Lee (2012) conducted a qualitative multiple case study in Malaysia in which they interviewed seven participants. Seven female drug addicts and ex-convicts from a Christian recovery center in Malaysia took part in the study. Substance misuse was the dependent variable, and family and peer influence were the independent ones. The results indicated that one's peers had a greater impact on their substance use than their parents. It's consistent with the theory that children are safer when they're close to their parents and more risky when they hang out with their friends. In earlier studies Kim, et al., (2002) asserted that when a child's relationship with his or her family, especially his or her parents, is strained or nonexistent, the youngster will look to other children for support and solace. Without the leadership of a trustworthy adult, a young person is more likely to engage in risky behaviors, such as substance misuse, as recommended by his or her peers. Female drug users and ex-convicts were studied, and only family and peer difficulties were considered as potential influences on substance misuse. It ignored extracurricular and personality factors as well as the success rate of SA preventative measures. This void was the motivation for this investigation.

A study was done on fifteen year males in 30 countries by Ter., et al (2013), as cited by Lily van Rhyn (2015). The results state that the adolescent males reported to have had an increased usage of cannabis, when they had increased peer interaction. They subsequently had more evenings out with friends, they used electronic media communication more often,

and their families had less effect on them. Mathys., Burk & Cillessen (2013) states that peer socialization is more important in cannabis use, than it is for tobacco use. Similarly, in a study by Gervilla., Cajal and Palmer (2011), on the influence of specific substances in several countries, results indicated that the influence of cannabis usage in the group of adolescents increases, as the number of peers who take cannabis rises. The adolescent males reported that for every night they went out with their friends during the week, there was more smoking per week. It was also easier for them and their friends to easily get cannabis. The study was limited to male adolescent respondents on specific substances, whereas the current study used a sample comprising teachers, students and education officers in the County of Kakamega.

Maithya (2009) conducted a study in Kenya's Machakos region and it turned out that curiosity was among the highly ranked factor. A study with similar results was also found in Vihiga County. According to the results of this research, peer pressure is a major contributor to adolescent substance abuse. Peer pressure was cited by 87% of respondents (Chebukaka, 2014) and included factors including having friends who took drugs, wanting to fit in with friends, emulating peers, and being welcomed into a group. This research is consistent with the beliefs of Gorsuch and Butler (1976), as mentioned by Mukhandia (2016), which hold that, in today's society, the influence of one's peers is crucial in the initiation of drug use among young people who have not yet developed strong social networks. A study by Dishion, et al., (2002), cited by Mukhandia (2016), revealed that putting children at risk in a peer group intervention had unfavourable results. Although the studies were conducted in diverse settings, the respondents still cited peer pressure as the leading cause of drug use. The

evaluated empirical literature primarily consists of studies conducted in settings other than secondary schools.

2.7 Family Issues versus Substance Abuse

Young people's substance usage is commonly blamed on their parents. During the socialization process, adults guide children's actions and encourage them to adhere to societal standards. A child who has been properly socialized knows his or her own value and has a strong sense of belonging to a family in which he or she is desired, loved, and relied upon (Lee et al., 2015). The social cognitive theory proposed by Bandura corroborates this. According to this hypothesis, humans pick up information about their surroundings through observing their immediate surroundings. This suggests that children of drug abusers are more likely to become drug addicts themselves. Further still, substance abuse risk appears to be affected by the adolescent's family dynamics, especially in cases of single-parent households (Moor et al., 2013; Tomcikova et al., 2015). Substance misuse has also been linked to parental divorce (Hemovich and Crano, 2009; Barrett and Turner, 2005) and some research suggests that adolescents are more likely to partake in dangerous behavior like drug usage if they believe their parents approve of such behavior (Wallis, 2013).

A longitudinal study conducted in Hong Kong, Daniel Shek, et al., (2020) looked at the effects of parental factors on their children's substance use and how those effects changed over time. Researchers in Hong Kong found that parental behavioral control and the quality of the parent-adolescent connection were inverse predictors of early substance use based on a sample of 2,668 Chinese middle school pupils. Adolescent substance use was projected to increase at a slower rate in households where mothers exercised greater behavioral control and when mother-teenager relationships were of higher quality. Adolescent substance use

rates were not significantly affected by parents' level of psychological control. The mother-adolescent connection was a strong longitudinal predictor of teenage substance use, while fathers' behavioral control was a stable contemporaneous predictor. However, Otieno and Ofulla's (2009) conducted a research on 458 Kisumu town students and found that those from lower socioeconomic backgrounds were more likely to engage in substance misuse (28.0%) than those from higher backgrounds (21.5%). Students that abuse substances tend to come from homes where there is a history of substance abuse. Hung et al. (2015) found that parents have an effect on their children's drinking habits, especially if the parents themselves struggled with alcohol use or abuse (see also: Benjet et al., 2014; Chassin, 2002).

Several studies Buehler and Gerard, 2013; Adeoti and Edward, 2010; Anderson, (2009) as cited in Joyce Pere (2016) study found a favorable association between student substance misuse and family factors. Having a parent with a drug problem increases the risks of developing the same problem in the children, and studies show that students from families whose parents or guardians consume substances prefer to imitate the behavior of their parents by taking illegal drugs. It was also found that children's drug use was significantly influenced by their parents' views about using tobacco, alcohol, and other substances. Further still, most parents are either constantly on the go in search of money or, when they are at home, too preoccupied with entertainment to pay much attention to their children. According to Bowen (2012), many children feel neglected since their parents work long hours and are rarely around. Due to their absence, parents are unable to guide their offspring in matters of the heart. The literature review on family matters mentioned above is quite comprehensive. However, it is unclear whether family issues address prevention of substance abuse. The impact of risk factors can be mitigated by protective factors present in the family unit.

Therefore the current study aimed at determining the influence of family issues on preventive measures of substance abuse among students in Kakamega County.

2.8 Personality Issues versus Substance Abuse

A proper foundation for emotional growth, which greatly influences behaviour, should be provided for by the family and the environment in which the young people grow up. Schools have an obligation to ensure that such an environment prevails. Failure to which students will not manage their emotions successfully and the seeds for emotional dysfunction are therefore sown. Such a situation is a recipe for behavioural problems, substance abuse inclusive (Wanjama, et al., 2013). Hokm Abadi, (2018) notes that high-risk individuals can be identified by looking at their family history and character qualities. Some people feel that drug abusers are predisposed to addiction because of flaws in their character. To alleviate pain or discomfort, to achieve euphoria or fantasy, or to escape unpleasant reality are all possible psychological motivations for substance abuse, according to a study on effects of substance abuse on secondary school students in Nigeria (Alan and Bryman, 2012). This corroborates with another study findings, Zucker and Harford (1983) that found stress is brought by anger, irritation, and boredom, among college students who are more likely to drink in an effort to blend in with their peers. Similarly, Freeman & Parry, (2006) study concluded that alcoholism is linked to a wide range of personality traits, including extroversion, defiance, impulsivity, and a need for novel experiences. A study by Reddy, et al., (2014) study revealed that students' mental health and wellbeing were negatively impacted by academic stress; some students who experienced academic stress turned to substance misuse.

In addition, the extent to which one has positive or negative evaluations of oneself is a common definition of self-esteem. Bukunmi (2017), supports this view; drinking increases positive feelings of self-esteem and Parish and Parish (1991) hypothesized that individuals with low self-esteem are substantially more likely to consume alcohol as a means of attempting to increase companionship, support, and recognition. People's view that alcohol may alleviate stress has been taken into account, and research has shown that those with low self-esteem are more likely to share this belief (Pullen, 1994, as referenced by Bukunmi, 2017).

Moreover, psychological variables including attachment style, attachment trauma (Padykula and Conklin, 2010), and self-regulation (Percy, 2008) are believed to be associated with substance abuse. Controlling one's own emotions, impulses, needs, and actions is a key part of a well-developed personality (Baumeister, *et al.*, 2007). Students who lack confidence in themselves in the classroom, those who are more reserved in social situations (introverts), and those who come from unstable home are all more likely to experiment with substance abuse (Giant, 1997). The theory of "Self-Efficacy" supports this view Bandura (1986, 2004). Further, it is the responsibility of educational institutions to foster such an atmosphere of adequacy and that is why if pupils don't learn to control their feelings, they'll have a hard time overcoming emotional difficulties later in life. Wanjama, *et al.*, (2013) confirms that substance misuse is just one of the many behavioral issues that can arise in such a setting Karki (2017) found that students' drug usage was significantly influenced by mental aspects such as their thought patterns, behavior, personality traits, self-esteem, and coping abilities.

Similar research was conducted by Hokm, *et al.*, (2018), that looked into the connection between the Big Five personality traits (extraversion, agreeableness, openness to experience, conscientiousness, and neuroticism) and the Big 5 drug classes (sedatives, opiates, stimulants, hallucinogens, and marijuana) among self-reported addicts. Based on their study of 1,102 drug abusers, Terracciano *et al.*, (2013) concluded that people who regularly use cocaine and opiates tend to be highly neurotic and have low levels of conscientiousness, while people who regularly use marijuana tend to be highly open to new experiences but have low levels of agreeableness and conscientiousness. Gullo and Dawe (2008) and Volkow (2009) found that impulsivity is a risk factor for the emergence of substance misuse in young adults. While the aforementioned research shows psychological variables that influence substance abuse, the following research focuses more generally on the efficacy of SA preventive approaches in the light of personality issues. The gap which motivated the present investigation.

2.9 Preventive Measures in the Perspective of Psychosocial Issues

According to Fareo, (2012), a school principal is the single most influential factor in raising student achievement and enhancing the school's overall performance. Thus students who have strong ties to the school community are less likely to participate in risky behaviors including substance misuse. Botvin (2000) argues that teachers and principals should implement programs that warn students about the risks of drug usage in order to discourage experimentation and help them stay away from potentially dangerous environments. Wangai's (2001) research recommended that principals educate parents about the risks of DSA and gain their help in reducing the problem on special occasions like Parents' Day, AGMs, and award ceremonies. During these events, they should invite community leaders

and other influential members to speak about DSA. Odejide (2006) argued for a concerted effort on the side of civic society to combat drug abuse. Stress caused by the school administration's authoritarianism, lack of independence, and refusal to address students' complaints can lead to substance usage, particularly of depressants Kingala, (2000) also cited by Mukhandia (2014).

Kombo (2005) conducted a research in a subset of Kenyan schools and found that pupils' rates of substance misuse was varied by school type. He claims that among young Kenyans students in day schools are more likely to be exposed to substance addiction due to their daily commute to and from school, whereas those in boarding schools are more tightly monitored. Johnstone (2000) found, however, that boarding school pupils drink at the same rates as their day school counterparts. But he confirms what Kombo (2005) found: that day school students drink at a higher rate than boarding school students. Administrators in educational institutions are tasked with managing students' affairs and should have the knowledge, skills, and resources to effectively strategize, mobilize, distribute, and enforce discipline among their staff in order to achieve the institution's stated mission. Despite this common belief, Stella, Maris, Kanini, Muoti (2014) noted that drug use is associated with how the school administration handles student affairs, citing King'ala (2000) on the effects of drug and substance abuse on academic performance among secondary school students in Makueni County, Etsula (2017) found in Eldoret that students in stressful situations, such as those caused by the heavy-handedness of school administration, harsh treatment, lack of freedom, and failure of students to get their grievances handled, were more likely to turn to substance misuse. Sniffer dogs and breathalyzers would be employed alongside other methods to detect the presence of alcohol among pupils as part of an initiative to reduce drug and alcohol usage on school grounds. In

addition, many drug dealers were found in Gelina's (2006) survey on adolescent drug usage. Findings revealed that pupils were being targeted for the sale of narcotics by having them inserted into school-issued geometric sets. While this review contains sufficient material on preventative interventions from a school perspective, it lacks data on the extent to which co-curricular issues influence or are associated with the effectiveness of substance abuse preventive measures in the study area. The results of the studies varied on extracurricular issues and did not show the extent of influence co-curricular issues like field trips, sports, stars in co-curricular and clubs have affected or can affect the success of substance abuse preventive measures in the study area, suggesting that more research is needed.

Schools serve as hubs for many youth-focused interventions and educational initiatives. Students must have meaningful interactions with one another to share their perspectives and experiences with substances, as well as to choose reasonable and effective alternatives in high-risk settings (Jackson et al., 2014). Furthermore, peer assistance programs are more effective than didactic presentations (Porath-Waller et al., 2010) since they are extremely engaging. To help students make better decisions, the information presented should improve their cognitive, social, and emotional skills and be relevant by discussing substances to which they are currently exposed (Ministry of Education, 2013).

Tsvetkova., et al., (2013) investigated the relationship between drug abuse awareness training and drug abuse prevalence rates among students in Sweden. The study revealed a strong association between drug prevention education and students' drug habits. In addition, the study showed that there is a positive long term correlation between drug abuse education and the proportion of students who have tried to abuse drugs. According to this study the larger

the number of students who attended drug abuse education programmes, the larger the number of drug abusers. This study was done in Sweden but the current study was carried out in Kenya and sought to establish the influence of peer issues on effectiveness of substance abuse preventive measures.

The first time most students experiment with drugs is in a social setting, and they recognize that there is no single criterion that determines whether or not they use. Because of this, the American Academy of Paediatrics (2007) suggests that effective drug programs should center on skills instruction that combines demonstration, practice, feedback, and praise. Life skills training, which aims to equip people with the tools they need to tackle real-world challenges, is another tried-and-true method. By teaching kids problem-solving and other life skills, teachers can help students avoid or recognize the risks of substance usage. Substance addiction prevention in Cape Town's high-risk neighborhoods was the focus of a study by (Puljevic and Learmonth, 2014). Findings indicated that parental and community involvement, as well as peer education, were useful in reducing substance misuse. This corroborates with United Nations (2009) report that the most effective way to teach life skills is through group activities such as brainstorming, demonstration and guided practice, role play, small group discussions, educational games, case studies, storytelling, debates, and practicing life skills in a specific context with others, as well as through audio and visual activities such as arts, music, theater, dance, decision-mapping, or problem tree analysis.

Further still, ongoing initiatives in Kenya are empowering young people to say "NO" to substance misuse as a means of preventing and reducing substance abuse. The field of education has been identified as a key player in the war on drugs. As a result, they have access to counselling and guidance (Hagembe and Simiyu, 2010). Nyachwaya, et al., (2016)

evaluated the efficacy of drug rehabilitation programs in Kisii County. The goal of the rehabilitation program was to encourage the rehabilitatees to alter their behavior. The researchers used a cross-sectional approach to gather their information. Ten rehabilitation clinics in Kisii County and the surrounding areas were randomly selected as the study population. It was unclear if the drug addicts' current rehabilitation programs were effective. For this reason, research on the efficacy of drug addiction treatment programs in Kisii County and the surrounding area was necessary. All these studies focused on preventive strategies of substance abuse in developing and undeveloped countries; however, none of the studies addressed the influence of peer issues on effectiveness of preventative measures among secondary school students. Nyachwaya, Sereta., et al (2016) used cross-sectional methodology while Ellickson, McCaffrey, Longshore(2003) did a longitudinal study. The current study used a type of triangulation mixed methods so as to address all quantitative and qualitative variables related to the influence of substance abuse preventive measures among secondary students

Multiple preventative strategies have been shown to reduce substance abuse among young people in Africa (Allen et al., 2016). More specifically, the most successful programs are those that focus on both improving parenting and strengthening family relationships (Griffin & Bovine, 2010). According to Lynn H., Ana M. R., and Anthony S. (2015), research has repeatedly demonstrated that a dearth of parental involvement in their children's activities is predictive of substance use initiation and progression. Parental supervision, open communication between parents and children, constructive parenting, and family management techniques all help reduce substance misuse. Puljevic and Learmonth (2014) investigated substance addiction prevention in high-risk neighborhoods of Cape Town, South

Africa. The results showed that having parents involved helped reduce alcohol consumption. Bowen (2012) revealed that protective family variables like parent conventionality, maternal adjustment, and strong parent-child bonding mitigated the likelihood of interacting with peers who use drugs. Their findings highlight the continued importance of the family in the socialization of children long into adolescence. As a result, improving protective parenting behaviors can have a beneficial effect on the child (Hawkins, 1992).

Similarly, Allen *et al.* (2016) found that family-based interventions were beneficial in reducing adolescent substance abuse. Jackson (2015); Catalano and Miller (2002) suggest that parents' active participation in their children's education is a crucial component in reducing substance misuse in them. The UNODC created a training package called Treat net Family (TF) in vietnam that incorporates the fundamentals of both evidence-based family therapy and family-based interventions. Adolescents and their families participated in all five stages of therapy, which included: "engagement," "family assessment," "creating a motivational context for change," "primary intervention," and "termination." Family members and adolescents alike reported enjoying the therapy's positive effects on their mental health and parent-child communication (Hogue *et al.*, (2017); Busse, *et al.*, (2021). Most research on the efficacy of drug misuse prevention programs have been conducted in countries other than Kenya. The fact that the results of these studies might not be directly related to the situation in Kakamega County is all the more reason to do the research. Although these literature review is comprehensive, the evaluation of the literature on the topic of substance abuse prevention in Kenya and, more particularly, Kakamega County, does not give sufficient evidence to determine the extent of influence the family issues have on effectiveness of substance abuse preventive measures. The current study is therefore to

evaluate the effectiveness of substance abuse preventive measures in the light of influence of family issues

Personal, social and emotional challenges contribute a great deal to students' substance abuse (Leong, Kim, & Gupta, 2011). Researchers have found that such challenges require counselling and therapeutic attention mainly offered through guidance and counselling services in institutions of learning. Nabunya (2012) conducted a study on the role of guidance and counselling in management of student discipline in learning institutions in Kenya. The study found out that optimum development of individuals comes through providing an emotional climate and environment that assists in mental health development. This confirms the argument brought out by Bandura (1986) that the environment in which an individual lives in, gradually shapes his or her behaviour. The study found out that people with healthy attitudes and feelings were not likely to involve themselves in socially unacceptable behaviour. However, a person who suffers emotional frustrations will find life generally miserable and unable to adjust. Guidance and counselling therefore is crucial in achieving a healthy emotional climate. However, the study did not address the extent to which personality issues can influence preventive measures of substance abuse which the current study went further to investigate.

Prevention programs addressing individual psychological vulnerabilities help adolescents that are particularly at-risk to deal constructively with emotions arising from their personalities instead of using negative coping strategies such as hazardous and harmful alcohol and drug use. In South Africa, Twala (2010) carried out an evaluation on primary reduction of drug abuse education amongst young people at Tembisa. A sample of thirty eight college learners was systematically selected. The data was collected by means of a

questionnaire based on background information of respondents' attitude, knowledge and behaviour of drug abuse. The findings of the study indicated that drug abuse education had an effect on knowledge but there was no statistical significance effect on attitude and behaviour towards drug abuse. The study concluded that information given to young people could not determine change in behaviour and attitude.

According to Lanier, Graham, and Farley (2010) the initiation to drug abuse typically starts during adolescence and appears to be the result of the complex interplay of social, personality, cognitive, attitudinal, behavioural and developmental factors. Personal and social Development of students has been enriched through affective education. A review of literature by Otingi (2012) on the effectiveness of drug abuse prevention methods and strategies in Finland and Kenya revealed that Kenya needs to adopt self-esteem enhancement programmes in alcohol and drug abuse prevention. The implication of the study was that self-esteem acts as a social vaccine that empowers individuals and inoculates them against socially undesirable behaviours. However, according to some researchers (Larimer *et al.*, 2010; Dun *et al.*, 2010) affective model of drug abuse prevention seems not to be very effective. Dun *et al.* (2010) stated that there was danger in relying on developing resistance skills as the only part of preventive measures against drug abuse among the students

What an individual holds will influence a person to abuse substances, stop abusing or continue abusing substances. Agrawal *et al.*, (2010) asserted that beliefs are based on the information that a person has about an object or action; but information alone is not adequate for behaviour change. The study found out that majority of university students linked drinking alcohol with having fun, which was a major incentive to abusing alcohol. Self-esteem is a personality factor that may influence reduction in substance abuse among

university students. It has to do with an individual's sense of value or worth. On the contrary, Kumwenda, et al (2011) examined how low self-esteem influenced students in drug abuse. The study results indicated that students with low self-esteem reported to have abused drugs more than those with high self-esteem. This suggest that self-esteem enhancement programmes are a priority in addressing substance abuse.

According to a study done in Machakos by Maithya (2009) on the methods used by schools to deal with substance abuse and their perceived effectiveness in secondary schools in Kenya, the most frequently used ones are counseling, inviting parents or guardians to school, suspension, severe punishment, and expulsion, talks by teachers during assembly, use of guest speakers, strict school rules signed on admission by all students and impromptu inspections especially in students' boxes. Half of the teachers thought these approaches were somewhat effective. A favorable emotional climate and environment aid in the formation of healthy attitudes and sentiments, which are crucial to a person's optimal growth. This suggests that those with positive mental health are less prone to get involved with negative actions. Dunne, Bishop, Darcy (2017) argue that teaching on mental health helps students grow as individuals and contributes to their social and academic success. Further still, student body should be involved in developing and implementing any preventive measure to the pupils so that they may take pride in it. This is done in light of the fact that lasting transformation originates inward (Otingi, 2012; Donaldson *et al.*, 1994).

Further, a longitudinal study conducted by Lee (2014) on the factors that lead Swedish adolescents to start smoking found that low self-evaluations of health and negative views of one's own role in life were two of the most significant predictors of teen smoking. Despite its wealth of material, the scope of this empirical research does not answer the research question at

hand, which is whether or not personality issues have influence on effectiveness of substance abuse preventive measures among students in the study area. Further still the study adopted the longitudinal approach whereas the current study adopted the mixed method design suggesting that more research is needed.

2.10 Summary of the Knowledge of Gaps

The literature analysis indicated four areas of research that needed to be addressed, and that is exactly what this study set out to do. The effects of many psychosocial issues on substance abuse have received considerable attention in the empirical literature, though preventive measures have received insufficient attention. Furthermore, continued research is required because of contradictory and varied findings on extracurricular, peer, family, and personality issues and the effectiveness of preventative measures of substance abuse. In addition, most of the in-depth studies have been conducted in economically developed nations, therefore this area also needs research that provides a viewpoint from emerging nations. Most research has focused on the causes and consequences of substance abuse, whereas only a minority of studies have examined the effectiveness of substance abuse preventive measures of substance abuse. This study was conducted to address this knowledge gap. Some studies focused on high school students of both sexes, while others focused on college students only. Substance abuse (SA) prevention efforts and contributing variables may vary across developed countries like the United States and underdeveloped countries like Kenya as reflected in the current study.

The following were gaps that were aimed to be filled by this study. First, from the reviewed studies, it is clear that much has been done adequately across developed countries. The results of the studies on extracurricular issues were varied and did not show the influence of

cocurricular issues like field trips, sports and clubs have affected or can affect the success of substance abuse preventive measures, suggesting that more research is needed. Second, while this literature analysis is extensive and adopted a wide range of research designs the current study used a type of triangulation mixed methods so as to address all quantitative and qualitative variables related to the influence of peer issues on substance abuse preventive measures among secondary school students in the County of Kakamega. Besides, the studies also did not investigate the extent of peer issues influencing the effectiveness of substance abuse preventative measures in the Kenyan setting as it has not been documented, more particularly, in Kakamega County. Thirdly, literature review on family matters aforementioned is quite comprehensive. However, it is unclear from this analysis the influence of family issues on the effectiveness of substance abuse preventive measures in the Kenyan environment, and in particular Kakamega County. Finally, the literature review that is rich in terms of methodologies and settings this overview of empirical research does not answer the research question at hand, which is whether or not personality issues have influence on effectiveness of substance abuse preventive measures among students in the study area.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the methodology and procedures that were followed when carrying out the study. It presents research Paradim, Research Design, Study Area, Study Population, Sample Size and Sampling Techniques. The chapter further presents Data collection Instruments, Pilot Study, Validity and Reliability of research instruments, Data Collection Procedures and Analysis.

3.1 Research Paradigm

Research paradigm refers to the philosophical approach adopted by the researcher. The philosophical approach basically directs the what, how and why the research has to be undertaken. Interpretivism and positivism are two broad philosophical paradigms employed in

research. Positivism as an ontology focuses on observable social reality and entails formulating hypotheses based on existing theories giving rise to law like generalization. It is more concerned with facts and figures that can be statistically represented. In essence positivism regards human related phenomenon as stable and constant and can be objectively reported. In this study, generation of figures based on scores on psychosocial predisposing issues and substance abuse preventive measures facilitated objective interpretation of the relationship between phenomena. Interpretivism or phenomenological approach on the other hand focuses more on the humane aspect. Key to the Interpretivism epistemology is empathy. The researcher is part of the world of the research subjects and strives to understand the world from the subjects' perspective (Finlay, 2009; Mkansi & Acheampong, 2012). Interpretivism is guided by the premise that human behavior is complex and unique. In essence feelings and attitudes change and may not be accurately predictable. In this study, focus group discussions and interviews facilitated a personal interaction with the slow learners and other respondents. The facial expressions, body language and tonal variations provided insight into the actual attitudinal and emotional state of the individual. The interaction gave a humane perspective of the respondents in contrast to the impersonal questionnaires. Social science research is rooted in positivism and Interpretivism philosophical approach which the researcher adopted because the study used a mixed approach which entailed collecting qualitative and quantitative data. The argument is that there are aspects of human being that are predictable and stable but some are unpredictable and can only be described as per the specific time and moment. Moreover, even though facts and figures are important they may not accurately represent the human aspects in totality.

3.2 Research Design

The study used Convergent parallel mixed methodology because the method provide method flexibility, enabling the researcher to collect both types of data while avoiding the limitations of either approach alone. The fundamental idea behind mixed methods research is that combining quantitative and qualitative methods yields more insightful results than using either method alone (Creswell, 2014). This necessitates gathering both quantitative and qualitative information concurrently. After that, the findings from each study are compared and/or combined (Bryman, 2014). According to Creswell (2015), the method allows collection of qualitative and quantitative data using mixed techniques such as questionnaire, interview guide, and focus groups. Triangulating data sources is a key part of the mixed-method research strategy of converging qualitative and quantitative findings which the study adopted (Clough & Nutbrown, 2012). This agrees with the findings of (Bazeley, 2018). It was thought to be helpful for collecting open-ended qualitative data to supplement existing quantitative data. The researcher does not alter the variables being studied but instead looks at them as they already are, as described by Cohen, Manion, and Morrison (2018). Accordingly, the study was conducted within the context of the existing psychosocial predisposing issues and the effectiveness of substance abuse preventive measures in the study area.

Further to this, these objectives were also subjected to correlational design. This was necessary because the objectives sought to determine any relations between psychosocial predisposing issues and substance abuse preventive measures and why. Correlation design is effective in investigating degree of association between variables because it enables establishment, confirmation or dismissal of causal relationships (Kothari, 2010, Bell, 2007). Therefore, this design was used to investigate the influence of psychosocial predisposing issues and effectiveness of substance abuse preventive measures relationships.

3.3 Study Area

Kakamega County is located on the western part of Kenya. The County is made up of twelve Sub-Counties namely; Lurambi, Ikolomani, Mumias East, Matungu, Shinyalu, Khwisero, Butere, Lugari, Malava, Likuyani, Matete and Navakholo (ROK, 2010). It has a total of 491 secondary schools. The study was carried out in secondary schools of which 95 are girls' schools, 32 are boys' schools, 251 are mixed day and 113 are mixed day and boarding (County Education Office, 2017) (See appendix X1).

The County has 4 Counties bordering it; Busia and Bungoma County to the north, Vihiga County to the East, Uasingishu County to the west and Siaya County to the south (County Survey Office, 2016). In particular, Kakamega County is strategically positioned in the sense that it is in the neighbourhood of Busia County which experiences an upsurge of international narcotic drug trafficking. The County is generally composed of a young population: 58% of the population is aged less than 20 years, a category that is easily influenced to abuse substances. Age distribution is 0-14 years 46.6%, 15-64 years 49.7% and over 65 years 3.6% (ROK, 2018). In the recent past there has been an upsurge in the abuse of busaa and changaa in Western region of Kenya inclusive of Kakamega County (NACADA, 2021). In another survey, NACADA (2019) established that alcohol abuse prevalence among secondary school students in Kakamega has reached 23.4%, which is far above the national average of 12.2%.

According to a report based on the 2009 Kenya Population and Housing Census data shows that, of the 47 counties in Kenya, Kakamega contributes the highest proportion (4.8%) to the national poverty, and has a poverty index of 49.2% and 57% of the population live below poverty line (GoK, 2018). The policy of drinking dens being away 300 metres from institutions of learning has not been generally adhered to in the County thus, students access

substances easily. Schools have adopted various preventive measures, but there are no concerted efforts from the school environs in fighting the menace.

3.4 Study Population

A study population is a subset of a larger population that has similar demographic and/or behavioral traits. All the objects of study are part of the target population (Kothari & Garg, 2014). All possible individuals, situations, or things to whom the researcher is extrapolating their findings are included (Bruce, 2018). The study population comprised of 12 education officers, 530 G/C HoDs, 1,080 class teachers and 59,675 form three students drawn from 491 secondary schools (Appendix X1) out of which 465 are public and 26 are private (GoK, 2018). The form three class was considered for study because they have stayed relatively longer in school and are therefore likely to be more familiar with the psychosocial predisposing issues and capable of evaluating their influence on effectiveness of preventive measures in schools. Participants in the study ranged in age from 16 to 21. This demographic overlaps with the adolescent phase, a time when young people are naturally inquisitive and eager to try new things, including drugs.

3.5 Sampling Procedure

According to Kothari and Garg, (2014) when the accessible population is non-uniform in character multi-stage sampling was adopted. On the basis of the broad spectrum of the sample frame in this study, multi-stage sampling was employed beginning with cluster sampling. First, schools were proportionally clustered to facilitate representation of Girls' schools, Boys' schools and mixed schools in the study. Within each of these clusters, further cluster sampling was undertaken to generate smaller clusters of boys boarding only, girls boarding only, girls day only, Boys day only, mixed day only, mixed day and boarding and

mixed boarding schools only). This is mainly because different school types are likely to have different experience (Ronald, Ron, Robert & Nancy 2013) as regards psychosocial predisposing issues and substance abuse preventive measures. Cluster sampling enabled identification of each group as a cluster and then within each group to cater for the subgroups therein. This is because according to Mertler Craig, (2019) cluster sampling is focused on intact groups. Further to this, it ensured inclusion of all subsets of interest through division of the study population into mutually exclusive and yet exhaustive subject categories. There were 18(3.66%) boys' boarding schools, 14(2.85%) boys' day and boarding schools, 24(4.88%) girls' boarding schools, 44(8.96%) girls' day schools, 27(5.49%) girls' day and boarding, 251(51.12%) mixed day schools and 113(23.01%) mixed day and boarding schools in the County (CEO, 2021).

Specific schools were randomly selected within each sub cluster to participate in the study. The goal of simple random sampling is to give each individual or component of a sample frame an equal probability of being chosen for the study (Coolican, 2014). According to Gay and colleagues (2009), qualitative research can adopt samples as small as 10% of big populations and 30% of small communities. The researcher therefore considered 10% of each school type (cluster) through simple random sampling to ensure every school in each cluster has an equal chance of inclusion in the sample.

Kakamega County is divided into 12 sub-counties, and it is expected that its population of 59,675 form three students would attend one of the county's 491 secondary schools. The sample size for students was determined by using the table developed by Krejcie and Morgan (1970) as cited in (Kothari and Garg, 2014). The table indicates that for a population of 59,675, the corresponding sample size is 381 respondents, a sample sufficient enough to

generate a 99% confidence interval with a margin error of 1% (Appendix IX). Probability proportion to size (PPS) sampling technique was used to determine sample size per cluster. This is a sampling procedure under which the probability of a unit that is selected is proportional to the size of the ultimate unit (Kothari & Garg, 2014). Each school type formed a cluster of its own which was then treated individually to obtain a sample for the study. The overall sample size of the students was the summation of the specific sample size from the different clusters. A formula developed by Kathuri and Pals (1993) as recommended by Kothari & Garg, (2014) was used to obtain the number of members from each school type. The following formula yielded sample size from each cluster to be engaged in the study:

$$S = n_i/N$$

Where by

S = specific sample size per cluster

n_i = number of members in cluster 1

N= Number of members in the entire population

i = 1, 2,3,4,5 for school types

In qualitative research, purposive sampling technique is used to find people who are both familiar with the topic at hand and open to taking part in the study (Palinkas et al., 2015). In pursuant to this, purposive sampling was adopted in selecting Sub-County directors of education while purposive and simple random sampling techniques were used to select individual respondents (class teachers and HoD'S guidance and counseling) using the random number technique as recommended by Aryl *et al* (2019). Participants for focus group

were purposively selected. One (1) Focus Group Discussion per school type was sampled through purposive sampling technique.

3.6 Sample Size

Table 3.1: Sampling Matrix for Respondents and Sample Size

Sample unit	Target Population	Sample size	Sampling Technique
Students	59675	381	Simple random sampling
Class Teachers	1080	108	Purposive and Simple Random Sampling
HOD Guidance and Counseling	530 12	53 12	Purposive and Simple Random Sampling
Education officers			Purposive sampling

Source: Researcher (2022).

3.7 Research Instruments

Primary data was obtained from students, teachers and Sub-County education officers through questionnaires, oral interviews and focus group discussions. There were 2 sets of self-administered survey questionnaires (one for class teacher, and another for student). These questionnaires relied on closed and open -ended questions in which the respondent ticked a box or circles a response from a set of options (Ronald, et al, 2013).The study adopted this method for it enabled the researcher collect information on a large number of items and self-administered surveys allow the respondents more time for thought (Ronald, et al, 2013). Further still, open ended questions were designed in such a way that they allowed the

respondents to give their own views other than adaption of the pre-conceived responses. This enabled the respondents to express their views and options freely. The Questionnaires were used because they can ensure and assure the confidentiality of the respondents. The questionnaires were administered by trained research assistants.

Further to this, interview guides were used to compliment the questionnaires in getting first-hand information, both structured and semi structured interview guides were used. There was one interview guide for Sub-County education officer and another for G/C HoDs. According to Cooper and Schindler (2006), Focus Group Discussions are advantageous in generating quality data because of the associated group dynamics and elements of quality control since during the discussions the respondents hear, listen, stimulate and correct one another and occasionally add more information and emphasis where and when necessary. Seven Focus Group Discussion Guide (FGD) for students. Interview guide as well as focus group discussion provides room to probe for fuller understanding of responses from respondents (Coolican, 2014).

3.7.1 Class Teachers' Questionnaire

The questionnaire consisted of five sections. The first section solicited personal data from respondents. Section two sought information on commonly abused substances, co-curricular as a psychosocial predisposing issues and effectiveness of substance abuse preventive measures. Section three sought information on peer as a psychosocial predisposing issues and effectiveness of substance abuse preventive measures. Section 4 sought information on family as a psycho-social predisposing issues and effectiveness of substance abuse preventive measures while, section 5 sought information on personality as a psycho-social predisposing issues and effectiveness of substance abuse preventive measures. The

questionnaire had 20 open and closed –ended questions on a 5-Point-Likert scale as follows; Very High=5. Moderately High=4; Neutral =3; moderately low=2 and Very low=1.

3.7.2 Students' Questionnaire

The questionnaire consisted of five sections. The first section solicited personal data from respondents. Section two sought information on commonly abused substances, co-curricular as a psychosocial predisposing issues and effectiveness of substance abuse preventive measures. Section 3 sought information on peer predisposing issues and effectiveness of substance abuse preventive measures. Section 4 sought information on family as a psychosocial predisposing issues and effectiveness of substance abuse preventive measures. Section 5 sought information on personality as a psychosocial predisposing issues and effectiveness of substance abuse preventive measures. The questionnaire had 20 open and closed-ended questions on a 5-Point-Likert scale as follows; Very High=5. Moderately High=4; neutral =3; moderately low=2 and Very low=1.

3.8 Interview Guides

The interview guide (IG) presents oral verbal stimuli and asks for an oral-verbal answer (Mertens, 2010). According to Hernandez et al. (2014) and Araiza et al. (2014), interviews provide a "subjective narrative of the professional's perceptions and beliefs about adolescent behavior." Additionally, the researcher is able to direct the questions asked, and the data collected is more trustworthy, methodical, efficient, and complete (Coolican, 2014). They made sure to get input from all of the HoD's directors of guidance and counseling and Sub-County schools. Those Heads of Department and Sub-County Directors of Education who were difficult to get in touch with had their interview times scheduled over the phone.

3.8.1 Interview Guide for HoD Guidance and Counseling

For HoDs' guidance and counseling, the guide was aimed at gathering demographic information, status of substance abuse in schools, causes of substance abuse, influence of co-curricular, peer, family and personality issues on effectiveness of substance abuse preventive measures'heir recommendation (Appendix V).Interview was conducted by the researcher in person upon agreed time.

3.8.2 Interview Guide for Sub County Director of Education

For Sub-County directors of education, the guide was aimed at gathering information on respondents demographics, information on commonly abused substances, causes of substance abuse, comment on effectiveness of substance abuse preventive measures, how the office has helped in addressing preventive measures effectively and their recommendation (Appendix VI).Interview was conducted by the researcher in person upon agreed time.

3.9 Focus Group Discussion Guide for Students

According to Cooper and Schindler (2006) Focus Group Discussion is advantageous in generating data in a group of people and should typically be made up of 8 to 10 participants. In this study, FGD were used to collect data from students and the process was led by trained research assistants in an organized meeting for thirty to forty minutes. Focus group discussion was appropriate as the subjects of the study were homogenous. Each group discussion was guided by a checklist structured according to themes and in a manner that allowed flexibility in raising questions (Appendix V11). This allowed group dynamics and quality control since the respondents had an opportunity to hear each other's responses and stimulated one another. Seven focus group discussions were held per school types.

3.10 Pilot Study

Instruments were tested in pilot study to find and fix ambiguities in the instruments, ensuring their validity and reliability. According to Kothari and Gara (2014), a pilot survey is a miniature version of the full-scale study. This allowed the researcher check the instruments' suitability and get a feel for how long it would take to administer the questionnaire. The questionnaire's content, wording, sequence, form and layout, question difficulty, and instructions were all subjected to extensive pre-testing. The pilot study served to inform changes, additions, and deletions to the questionnaires. In order to prevent survey fatigue, the schools and sample were left out of the final study.

The researcher utilized a simple random sampling strategy to select the participants in the pilot study. The pilot project involved only 10% of the expected participants from across four schools. The researcher employed a random selection method to choose participants for pilot studies. It was based on 38 students representing 10% of the sample size, 10 class teachers, 5 HoD's of guidance and counseling and 1 sub county director. The consistency of the questionnaire responses was examined using a split-half reliability technique. Cronbach's alpha(a), also known as the CCA (α) correlation coefficient, was used to calculate the significance level of the test since doing so guarantees minimal individual variation and a high degree of correlation (Ary, Cheser and Sorensen, 2019).

This was useful for assessing the instruments' suitability and providing the researcher with a rough estimate of the time required to administer the questionnaire. In this study, pilot testing was undertaken in Bungoma County as a rehearsal of the main study. It was designed to facilitate identification of ambiguous and vague question items, exposure of deficiencies in

the question items and to enable use of respondents' comments and suggestions for improvement. Additionally, all aspects of the instruments were assessed and where necessary modifications, additions, deletions and review on the basis of question content, wording, sequence and layout, question difficulty of instructions for each instrument were considered. This is in line with Penny and Deborah (2018) according to whom piloting should facilitate identification of weaknesses for mitigation prior to the main study.

3.11 Validity of the Research Instruments

Experts in the field were consulted to determine the face, content, and construct validity of the instruments. Objectives-based theoretical assumptions were used to determine if the questions in the questionnaire, interview guide, and focus group discussion adequately sampled the topic domain. The University supervisors from the Department of Educational Psychology at MMUST reviewed the questionnaires, focus group discussion guide, and interview guide.

3.11.1 Content Validity

Expert or researcher opinion is typically used to determine content validity (Penny Mukherji and Deborah Albon, (2018)). The content validity of the instruments used to collect data in this study was evaluated with the help of fellow researchers, two university supervisors (academic members of the Department of Educational Psychology at MMUST), and research specialists. According to Creswell (2013), experts in the field should be consulted when determining the reliability of research tools. To ensure validity, in this study the instruments were developed in accordance with the specific objectives of the study. The instruments were then subjected to expert judgment content –validation by the academic supervisors in terms of relevancy, framing, sequencing or flow of the question items and content validity index using the

content validity formula by Amin (2005). According to this formula Content Validity Index is the ratio or fraction of the number of judges in this case university supervisors declaring a specific item as valid against the total number of items in the instrument and only instruments scoring at least 80% are treated as fit enough for use in the study (Amin (2005). Alternatively, suggestions from the supervisors and other experts at MMUST were used to improve the instruments through modifications, additions, deletions and review of question content until they attain this score prior to engagement.

3.11.2 Construct Validity

The number of items used to measure a specific construct (variable) was confirmed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, and factor analysis was performed to check for construct validity. Extraction of maximum common variables from all variables and placing them into a common score is a method used in factor analysis to reduce a large number of variables into fewer factors (Hakanen, Schaufeli, and Ahola, 2008). Only those factors were kept in the analysis that could shed light on the question of whether or not there is a connection between psychosocial characteristics and the success of substance addiction preventative interventions. In summary, the pilot study involved the testing of a number of potential indicators, and only those with a loading of 0.40 or above were used in the final analysis. It is sufficient to use any indicator or factor with a factor loading of 0.40 or above (Hakanen, Schaufeli, & Ahola, 2008). Bartlett's Test of Sphericity was performed to determine if the items were from a normally distributed population (Creswell, 2014).

3.11.3 Reliability of Research Instruments

The quality of any research is reflected in the reliability and strength of the conclusions drawn from its findings while the quality of findings depends on the reliability of the data collection instruments (Orodho, 2009). According to Wakhungu (2008) prior to dissemination a researcher should measure and ascertain the reliability of his conclusions which are normally a reflection of the data collection instruments. According to Saleemi (2014) a reliable instrument is one that has the capacity to generate or produce the same outcome or responses when applied repeatedly under uniform circumstances or time after time. Similarly, according to Kothari (2010) reliability is consistency of measurement. Therefore to secure quality findings a researcher needs to ensure that the instruments are reliable enough.

In this study, Split-half reliability test method which makes use of Split-half technique of reliability testing was used to ensure reliability. This choice is due to the fact that this method has the capacity to enable elimination of chance or random error and to ensure internal consistency (Saleemi, 2014). The scores for the items in each instrument were split into two halves based on odd numbers and even numbers before being subjected to Cronbach's alpha Coefficient testing in accordance with the recommendations of Mugenda and Mugenda (2003).

To warrant engagement in the study each instrument was reviewed until it exhibited a Cronbach's alpha Coefficient score of at least 0.70 and above. This is in accordance with Cohen, Manion and Morrison (2018) Saleemi (2014), According to Wakhungu (2008) any instrument with Cronbach's alpha Coefficient scores of 0.7 and above is effective enough and therefore acceptable. Table 3.3 displays the results of a Cronbach's alpha reliability test, where a coefficient was calculated for each item.

Table 3.2: Summary of Reliability Analysis

Item	Cronbach's alpha	Cronbach's Alpha Based on Standardized Items	No. of Items	Remarks
Co-curricular Issues	.867	.867	23	Reliable
Peer Issues	.893	.893	8	Reliable
Family Issues	.894	.894	5	Reliable
Personality Issues	.890	.890	7	Reliable
Effectiveness of preventive measures	.893	.893	8	Reliable

Source: Researcher (2022).

From Table 3.3, items within the study were deemed reliable due to their coefficient alphas that include; co-curricular Issues which had 23 items having a coefficient of .867, peer Issues that had 8 items tested presented a Cronbach alpha coefficient of .893; family Issues with 5 items presented a Cronbach alpha of .894; personality Issues with 7 items produced a reliability Cronbach alpha of .890 and lastly effectiveness of preventive measures that had 8 items being tested and produced a reliability Cronbach alpha of .893 coefficient. Reliability coefficients for all the study variables derived above 0.7 that was termed acceptable according to (Cygler& Deboska, 2015). The coefficient range was excellent and signified a high level of internal consistency of the data collection instrument.

Discussion of the emergent themes with MMUST's expert supervisors in an open process where assumptions were challenged and consensus was gained regarding the themes confirmed the reliability of the qualitative data collected. Using many tools resulted in a more complete set of results, guaranteeing the data's accuracy.

3.11.3.1 Normality Test

Some assumptions regarding the data are necessary for statistical analysis. In most cases, they presume that the data follow a normal distribution and that the variances of the comparison groups are similar. In order to derive valid findings from the research, these assumptions must be taken into account at all times. Parametric tests include the t-test, one-way analysis of variance (ANOVA), and the correlation between two sets of data. The test assumptions for a parametric analysis should be verified with some preliminary tests before proceeding. Non-parametric tests should be used when the assumptions cannot be met.

In this analysis, we used normality tests to determine if our sample data followed a normal distribution. Since the Shapiro-Wilk test is the most robust test across distributions and sample sizes, it was employed to check whether or not the data obtained followed a normal distribution. P-Values less than or equal to 0.05 in Table 3.3 indicate that the Shapiro-Wilk test contradicts the normality hypothesis.

Table 3.3: Tests of Normality

Effectiveness Issues	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Co-curricular Issues	.305	6	.086	.905	6	.405
Peer Issues	.266	5	.200*	.917	5	.510
Personality Issues	.314	5	.119	.887	5	.341
Family Issues	.229	9	.189	.926	9	.448

The Shapiro-Wilk significant values were greater than 0.05 showing that the data was a normal distribution. To test for homogeneity of the variance, Levene`s test was conducted.

3.11.3.2 Multi-collinearity Tests

Multi-collinearity is detected through the help of tolerance and its reciprocal-the Variance Inflation Factor. For multi-collinearity to exist, two conditions have to be met; i) tolerance values must be greater than 0.2 and ii) VIF values must be less than 5.0 for multi-collinearity to exist.

Table 3.4: Multi-collinearity Tests

Model	Coefficients ^a				Collinearity Statistics		
	Unstandardized Coefficients		Standardized Coefficients		T	Sig.	Tolerance
	B	Std. Error	Beta				
(Constant)	.422	.359			1.176	.245	
Co-curricular Issues	.006	.071	.008	.081	.936	.767	1.304
Peer Issues	.166	.086	.219	1.929	.059	.513	1.949
Personality Issues	.506	.091	.585	5.554	.000	.596	1.677
Family Issues	.143	.065	.184	2.204	.032	.949	1.054

a Dependent Variable: Effectiveness

b Independent variable: constant

Findings revealed tolerance values that are greater than 0.2 and VIF values that are less than 5.0 thus the two conditions were met hence the statistical inferences made from the data findings could be deemed as highly reliable and there is no multicollinearity problem.

Sampling adequacy test

Sampling adequacy was tested using the KMO and Bartlett's test

Table 3.5: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	21719.460
	Df	1138
	Sig.	.000

The Kaiser-Meyer-Olkin (KMO) Test is a measure of how suited data is for Factor Analysis. The test measures sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited your data is to Factor Analysis. KMO values between 0.8 and 1 indicate the sampling is adequate. KMO values less than 0.6 indicate the sampling is not adequate and that remedial action should be taken. The KMO values in this study was 0.948 indicating that the sampling was adequate then we should proceed with Exploratory Factor Analysis. If Bartlett's test of sphericity is significant ($p < 0.05$), we should proceed with the Exploratory Factor Analysis.

Factor Analysis

Factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables (manifest variables). In multivariate statistics, a scree plot is a line plot of the eigenvalues of factors or principal components in an analysis. The scree plot is used to determine the number of factors to retain in an exploratory factor analysis (FA) or principal components to keep in a principal component analysis (PCA). A scree plot always displays the eigenvalues in a downward curve, ordering the eigenvalues from largest to smallest.

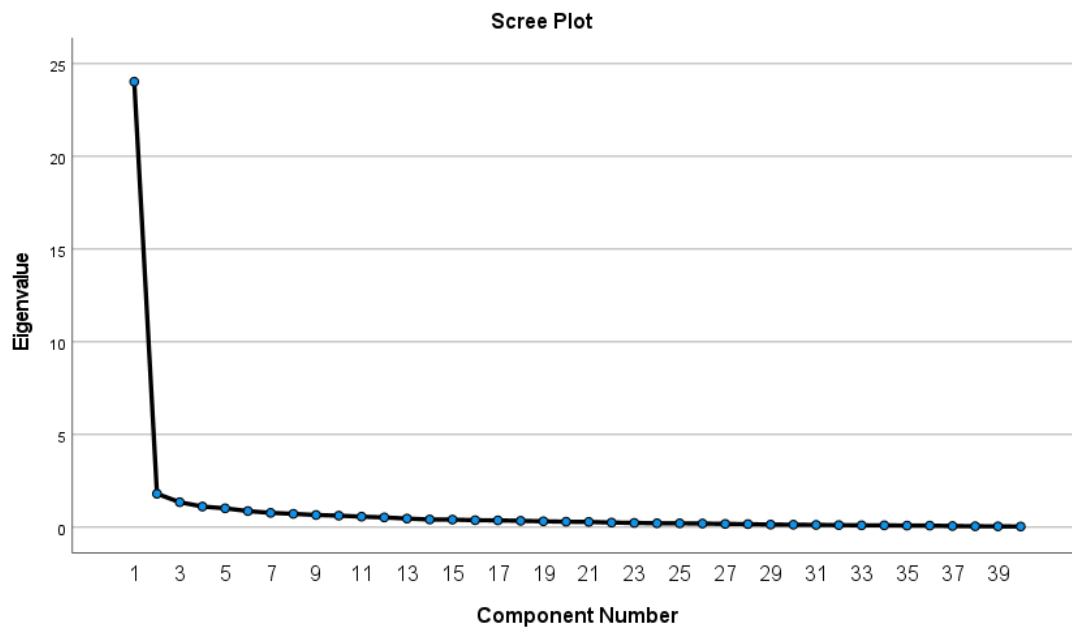


Figure 3.1: Scree Plot graph

The scree plot graphs the eigenvalue against the factor number. It can be seen that from the third factor on, the line is almost flat, meaning each successive factor is accounting for smaller and smaller amounts of the total variance.

Linearity Test

Linearity test aims to determine whether the relationship between independent variables and the dependent variable is linear or not. The linearity test is a requirement in the correlation and linear regression analysis. Good research in the regression model there should be a linear relationship between the independent variable and dependent variable. If the value $\text{sig. Deviation from Linearity} > 0.05$, then the relationship between the independent variables is linearly dependent. If the value $\text{sig. Deviation from Linearity} < 0.05$, then the relationship between independent variables with the dependent is not linear. The assumption of linearity posits a direct, straight-line relationship between predictor and outcome variables. If the residuals are normally distributed and exhibit homoscedasticity, linearity typically holds, simplifying the analysis process.

3.12 Data Collection Procedure

The National Commission for Science, Technology, and Innovation (NACOSTI) approved this study after being recommended by the MMUST Directorate of Postgraduate Studies, and the County Director of Education in Kakamega County and the Sub-County Directors of Education Officer were informed before any fieldwork could begin. The schools were called ahead of time to get acquainted with the setting and schedule visits. There were well-timed briefings and debriefings set up. Two research assistants were responsible for the distribution and collection of questionnaires. Face-to-face methods were used for both the interview guide and the focus group talks. The researcher gathered both quantitative and qualitative data from each institution on the same day.

3.13 Data Analysis

Data was managed, analyzed, and interpreted using both quantitative and qualitative methods in this study. The researcher started with the numbers in their analysis. During data analysis, the researcher combined quantitative and qualitative findings. This helps to provide an in-depth rationale for any discrepancies or ambiguities in the results (Creswell, 2014). On-site data analysis began with a thorough check for completeness, followed by the addition of missing information and confirmation of anything that was unclear. Before leaving the field each day, the analysis also required serializing the instruments from each participant. This was accomplished before starting the data entering and analysis processes.

Coding of responses and categorization of data from interviews and focus groups was performed, as well as data preparation and cleaning using Statistical Package for the Social

Sciences (SPSS version 27), including the identification and management of impossible values, handling of missing data, identification and management of outliers.

Statistical analysis of the quantitative data was performed using SPSS version 27. Measures of central tendency and inferential statistics were used to numerically and graphically represent the samples; correlation, simple linear regression, model summary, and analysis of variance were calculated to test the influence of the independent variables (psychosocial issues) on the dependent variable (effectiveness of substance abuse preventive measures); and tallied frequencies provided a clear picture of which frequencies were most prevalent. In descriptive studies, a frequency table is the most typical form of data presentation (Kothari, 2014). This helped the study's author gauge influence of psychosocial issues on effectiveness of preventive measures. Graphical representations, tabular data, and statistical discussion (results) were then used to present the data.

Focus group discussions and interview guidelines were utilized to collect qualitative data, and an audio recording of the initial interview was listened to ensure that no information was missed. The next stage was to transcribe the audio recordings of the focus groups and the interviews. After that, the researcher synthesized the information in light of the study questions and any recurring themes. The topics were analyzed by first coding and then categorizing the data. According to Miles and Huberman (2014), the stages were followed with the thematic data analysis. The detailed instructions were quite helpful in setting up practical routines. First, the researcher became acquainted with the data, and then, in the second stage, relevant information was uncovered. After that, the researcher looked for commonalities that reflected the study topic. Students, heads of guidance and counseling, and

the sub county director of education all filled out focus group and in-depth interview guides respectively, which the researcher read through in the fourth phase. Step six required the researcher putting up the findings in narrative and interpretive form, which included transcribed participant responses and a narrative summary of the study findings. Qualitative research methods are advised for examining sensitive subjects like alcohol consumption (Taggart et al., 2007; Truesdale-Kennedy, Taggart, & McIlfatrick, 2011).

3.14 Ethical Considerations

Ethical guidelines were followed throughout the research. The researcher secured approval to conduct the study from NACOSTI, the National Commission on Science and Technology Innovation. The study's author then formally requested written approval from the county education director, the sub county education director, and the school's administration.

The researcher guaranteed respondents the anonymity of their responses. The researcher made sure the participants understood the purpose of the study and the procedures that would be used (Appendix 1). Participants' anonymity and confidentiality were guaranteed in the informed consent form. Participants' names and other personal information were kept private because the poll didn't ask for any sensitive information that may be used to identify them. Moreover, no one was compelled to take part in the research. Information was gathered from volunteers (Appendix11).

All the respondents were given the utmost consideration. The volunteers were also assured that their participation in the study would not have any negative effects on them. The participants were subsequently informed that the study's findings will be made public and were allowed to ask questions related to the task ahead (Appendix 11). At long last, they

agreed to sign the informed consent form. The researcher additionally confirmed in writing that no previously published material was used and that all references to previously published material were properly cited.

CHAPTER FOUR

PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter consists of presentation, interpretation and discussion of the findings of the data collected in the study in respect to objectives in terms of response rate, demographic characteristics, descriptive analysis based on statistics like percentages, means, standard deviations, aggregate mean and inferential statistics for hypothesis tests.

4.2. Response Rate

A total of five hundred and fifty four (554) copies of questionnaires were administered to teachers and students in schools that were sampled in Kakamega County; three hundred and eight one (381) copies of questionnaires were distributed to students, a hundred and eight (108) copies to class teachers. Fifty three (53) copies of interview guide to HODs of guidance and counseling and twelve (12) to Sub-County Directors of Education. Of these, two hundred and seventy (270) copies of questionnaires from students, twenty seven (85) copies of questionnaires from class teachers, thirty two (32) copies of interview guide from HODs of guidance and counseling and twelve (12) copies of interview guide from Education officers were returned. This represented a questionnaire response rate of 70.9% for students, 60.4% for HODs Guidance and counseling, and 79% for class teachers in interview guide and 100% for Education officers. The results on response rate are as shown in table 4.1.

For FGD, 6 groups of students out of 7 participated in the study translating to 85.7% response rate. Mugenda and Mugenda (2008) asserts that a response rate of 60% and above is recommended. This therefore means response rate for this study was adequate.

Table 4.1: Response Rate per cluster of Respondents

Respondents	Sample size	Participants	Return rate (%)
Students	381	270	70.9
HOD Guidance and Counseling	53	32	60.4
Class Teachers	108	85	79
Director of Education	12	12	100
Total	554	341	64%

Source: Field Data (2022)

The findings yielded an overall response rate of 64% which according to Mugenda and Mugenda (2008) was sufficient and representative enough for generation of outcome of findings. Therefore the data was adopted for analysis. This was achieved because the researcher together with the assistants issued the questionnaire and interview guide in person to each respondent to ensure that each and every respondent took part in the study.

4.3. Demographic characteristics of Respondents

The respondents were asked to indicate their demographic information. These characteristics influenced the behaviour of respondents and their response to questions on engagement of students in substance abuse and subsequently their response to effective preventive measures.

4.3.1. Students and Teachers by Gender

The respondents were asked to indicate their gender. The results on gender are shown in Table 4.2.

Table 4.2: Students, Teachers and Sub county directors by gender

Respondent Category	Teachers		Students		Sub county directors	
	Frequency	%	Frequency	%	Frequency	%
Male	26	44.1	159	48.9	8	66.7
Female	33	55.9	111	41.1	4	33.3
Total	59	100	270	100	100	100

Source: Field Data (2022)

Table 4.2 shows that 33 (55.9%) of the teachers were female while 26 (44.1%) were male and 66.7% of education officers were male while 33.3% were female. On the other hand, 159 (48.9%) of the students were male while 111 (41.1%) were female. This findings reveal that majority of the teacher respondents were female whereas student respondents were male as well as the education officers. Therefore there is no equal gender representation. This is attributed to the fact that substance abuse is a social activity that engage more of male than female respondents. In a school situation teachers take the lead role in managing substance abuse problem and as indicated there are more female than male teachers that are willing to engage in substance abuse preventive activities. On the other hand more of male students engage in the social activity than girls. Therefore this implies that, gender in this study partly plays a role in determining the level of influence of social interaction on substance abuse preventive measures.

4.3.2 Distribution of Students by Age

The respondents were asked to indicate their age bracket, the results are as shown in Fig. 4.1 below;

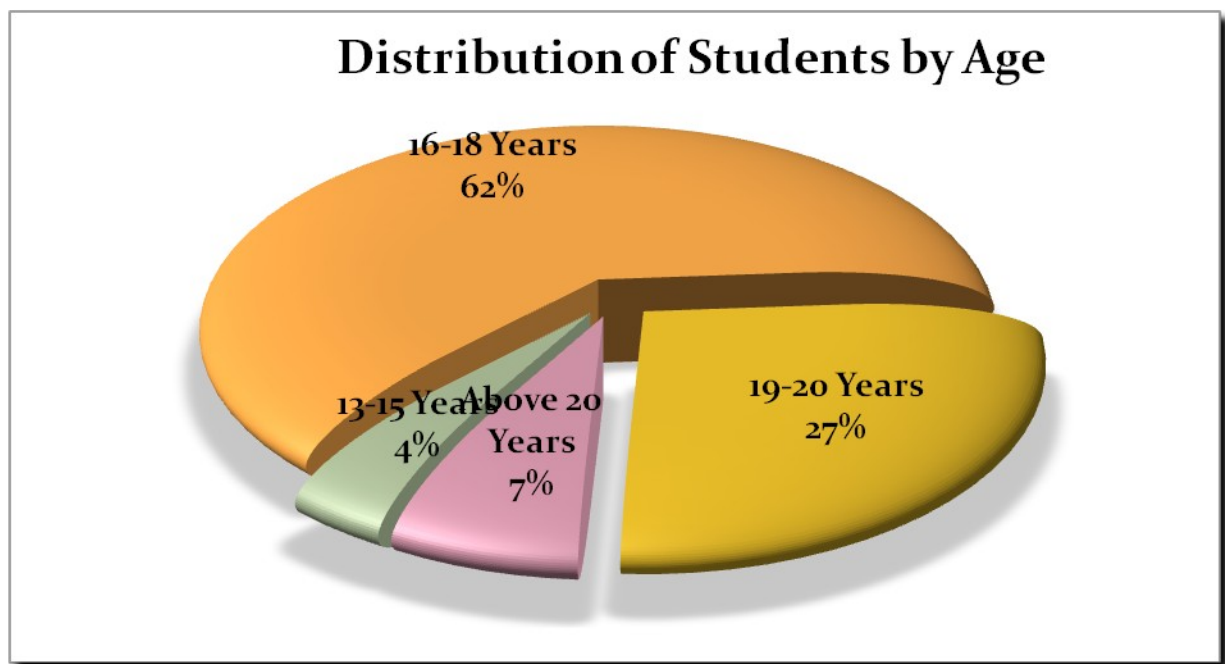


Figure. 4.1: Distribution of Students by Age

Source: Field data (2022)

From Figure 4.1 across the study area, 11 (4.1) of the students were reported to be between 13-15 years, 166 (61.5%) were of the age between 16-18 years followed by 73(27.1%) aged between 19-20 years and 20 (7.4) were over 20 years respectively. Therefore, majority of the form three students who took part in the research are between ages 16-18 years. These results are attributed to the age bracket that is a critical period for students to experiment with substances. This is close to The World Drug Report, (2018) which observed that most research suggests that early (12–14 years old) to late (15–17 years old) adolescence is a critical risk period for the initiation of substance abuse. This further corroborates with Onyiye et al, (2016) in his study in a secondary school in eastern part of the country, that noted most of the students within 15 -19 years abuse one or more substances.

4.3.3. Teachers' Experience

The respondents were asked to indicate their years of service in teaching as shown in Fig. 4.2.

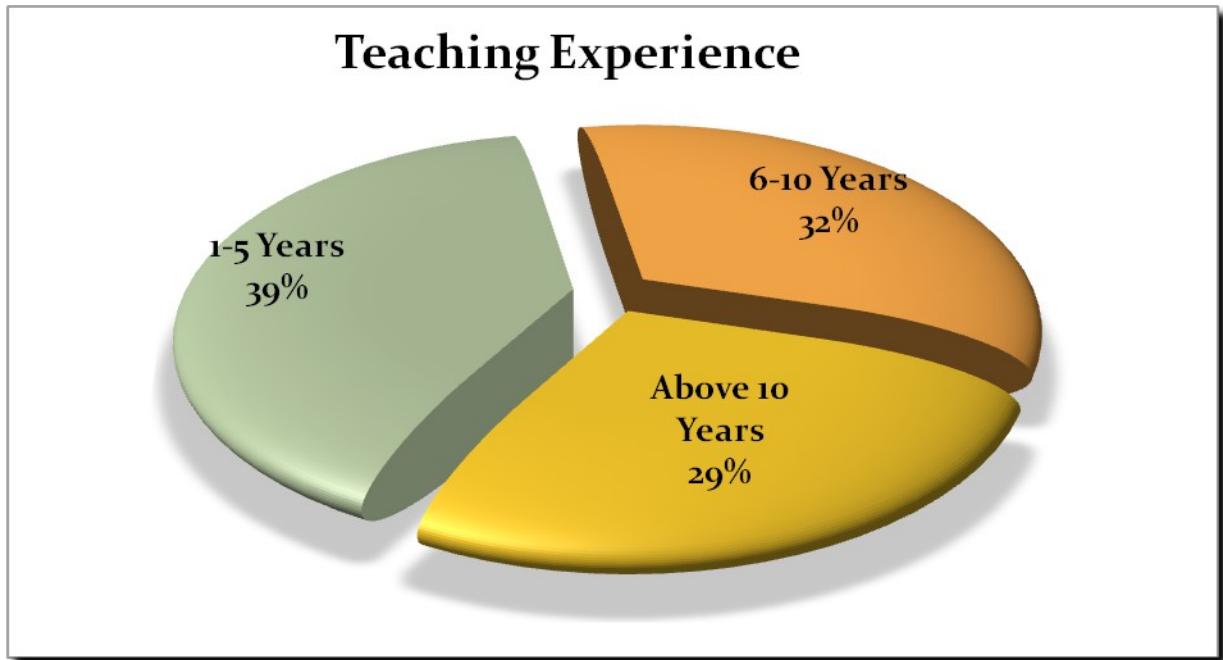


Figure. 4.2: Teachers' Experience

Source: Field data (2022)

Findings from figure.4.2 shows HoDS' Guidance and Counseling and class teachers' experience was 1-5 years, followed by 6-10 years and finally above 10 years. Therefore the majority of the teachers' experience is between 1-5 years, which is a pointer to the fact that the views presented in the study were majorly from teachers with minimal teaching experience. An indication that teachers of this category were more willing to participate in this research.

4.3.4 School Category

The respondents were asked to state the category of school in which they are and the results were presented as shown in Table 4.3

Table 4.3: School Category

Category of School	Teachers' Response		Students' Response	
	Frequency	Percent	Frequency	Percent
Public	55	93.2	226	83.70
Private	4	6.8	54	20
Total	59	100.0	280	100.0

Source: Field data (2022)

From Table 4.3, majority 93.2% of the teachers were from public schools while 6.8% of the teachers were from private schools. This is attributed to the many public secondary schools there are than private in Kakamega County. Majority 83.70% of the students were from public schools while 20% of students were from private schools a fact that is also attributed to the more number of students from public than private secondary schools in Kakamega County.

4.3.5 Distribution of Schools by School-Type

The respondents were asked to state their school type in the study area and the results were presented as shown in Figure 4.3

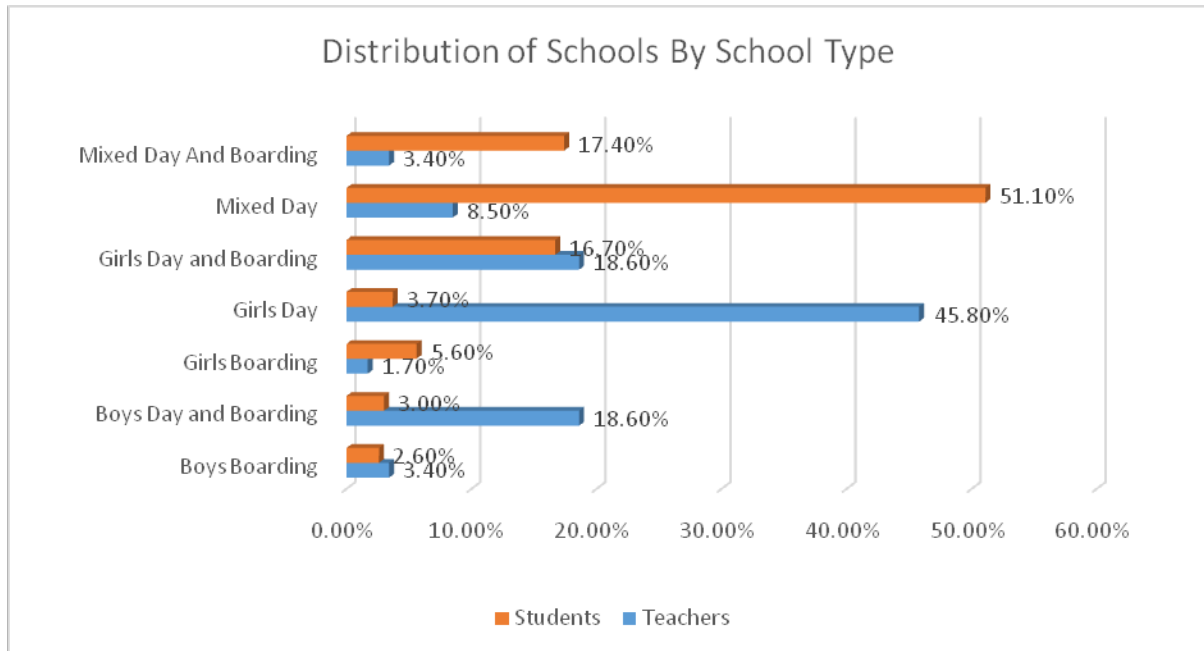


Fig.4.3: Distribution of Schools by School-type

Source: Field data (2022)

From Figure 4.3, majority 45.8% of the teachers were in girls day schools compared to 18.6% who were in boys day and boarding schools and 18.6% girls day and boarding schools respectively. Whereas 1.7% of the respondent were in a girls boarding school. This finding indicate that majority of the teachers were from girls day schools followed by boys day and boarding schools as well as girls day and boarding. School type as a characteristic directly determine the response of teachers to the issues that influence of substance abuse as well as the effectiveness of SA preventive measures. Majority 51.1% of the students indicated that they were from mixed day schools followed by 17.4% who indicated that they were in mixed day and boarding schools. Further still, 16.7% of the students indicated that they were in girls' day and boarding schools while 2.6% of the students were from boys boarding schools.

These findings reveal that majority of the student respondents were from mixed day schools, followed by mixed day and boarding as well as girls boarding. This findings implies that the respondents were picked across schools of varied characteristics and this is a true reflection of the fact that varied characteristics of school types give rise to varied influence on substances being abused and consequently their responses to the effectiveness of preventive measures.

4.3.6. Distribution of Students by Religion

Respondents were asked to indicate their religion. Response to these question was summarized and presented as shown in Figure 4.4.

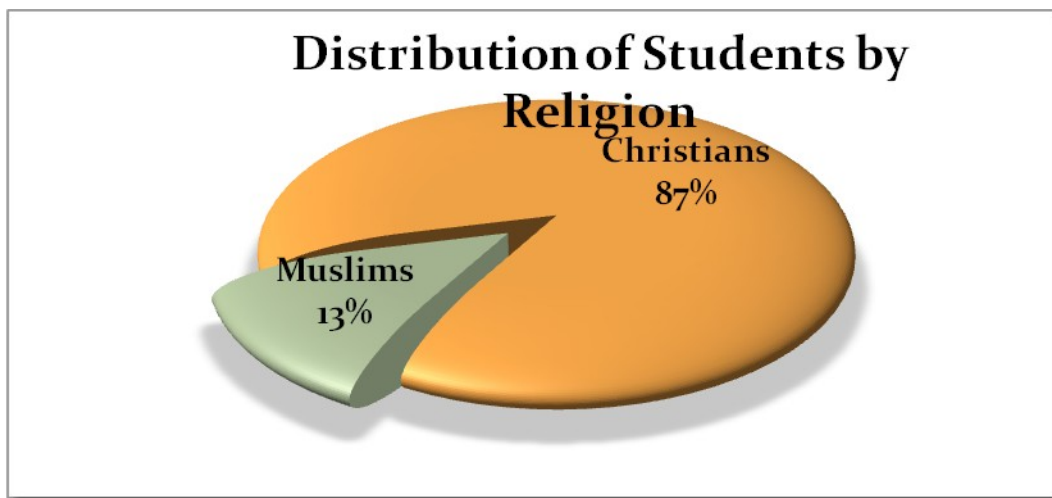


Figure.4.4:Distribution of Students by Religion

Source: Field data (2022)

From Figure. 4.4 findings from distribution of students by religion reveal that, 87.0% of the students were Christians while 13.0% of them were Muslims. This implies that the views presented in the study were majorly from Christian students. This is attributed to the fact that Christianity as a religion has a large following in the County. Religion has a role to play in influencing effectiveness of substance abuse preventive measures.

4.3.7. Knowledge in the Area of Substance Abuse

The study sought to establish whether the students and teachers had some knowledge in the area of substance abuse in schools. Their responses were summarized and presented as shown in Figure. 4.5 below:

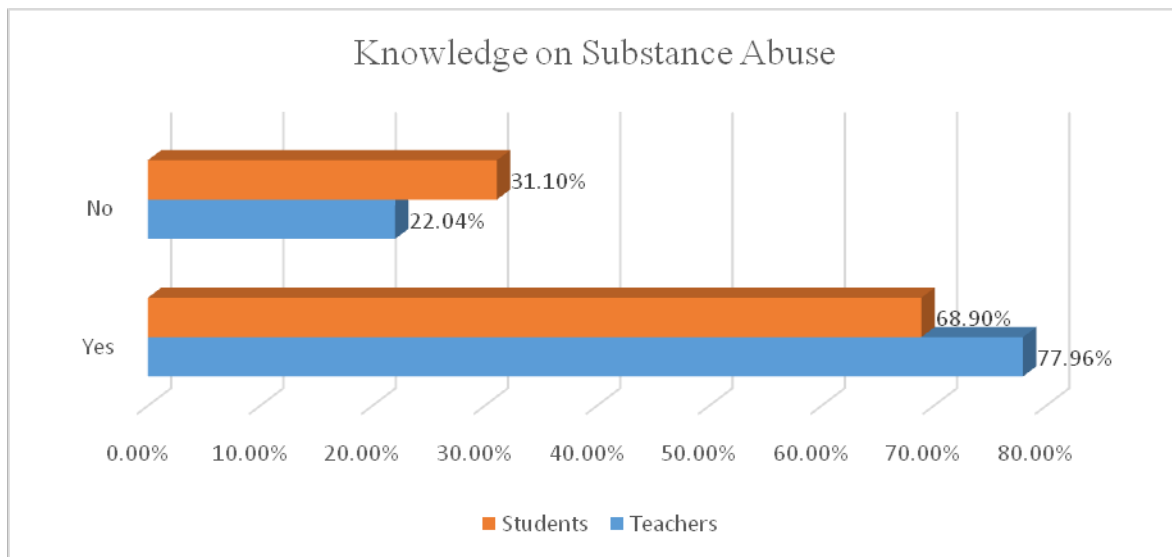


Figure 4.5: Knowledge in the area of Substance Abuse

Source: Field data (2022)

An assessment of students and teachers with respect to whether they have knowledge of students who abuse substances (Figure.4.5) revealed that, 68.9% of the students were of the view that they have knowledge of students who abuse substances while only 31.1% did not. On the other hand, 77.96% of the teachers observed they had knowledge of students who abuse substances and 22.04% did not. This therefore means that majority of the students and teachers in the county of Kakamega are aware that substances are abused. During FGD interview with students, it was revealed that alcohol and bhang were the most abused

substances by students according to records. One of them went on to elaborate and stated that:

‘Abuse of substances take place early in the morning before teachers arrive in school. We find the notorious ones a source of entertainment and they like making fun of themselves in the absence of teachers’ (FGD 1 Feb 19, 2022).

Similarly, the Education officers agreed that the prevalence of substance abuse was high. Explaining the situation one said:

‘The abuse of substances by students has been rampant in this County. They know more than we do. This is a very big challenge to us’ (EO 2 April 1, 2022).

This therefore means that substance abuse is not a secret. It is a common behaviour problem in the study area.

4.4 Descriptive Analysis

In the study, descriptive statistics were used to summarize primary and secondary data in a manner to enable meaningful description and interpretation. This is in line with Kothari (2014) according to whom descriptive statistics enable researchers to summarize the data and further to describe meaningfully the distribution of measurements. The descriptive statistics applied in the study were frequency, percentages, means, aggregate means and standard deviation. The mean (μ) was extensively used because according to Mugenda and Mugenda (2003) it takes into account each score in the distribution.

Standard deviations were used to measure the extent to which psychosocial issues influence the effectiveness of substance abuse preventive measures. This is in line with Kothari and Gang (2014) according to whom standard deviation (δ) is the most widely used and stable measure of dispersion that takes into account each score in the distribution. Standard

deviation (δ) score of more than one was interpreted as high variation in effectiveness of substance abuse preventive measures, a score of less than one indicated low variation while, a score of 1.0 meant that the respondents were equally spread to the positive and to the negative. When the standard deviations (δ) are low it implies that the respondents generally agreed in their views and further that there were no cases of extremes or outliers in scoring during data collection. Additionally, a high score standard (δ) deviation indicates a lower level of agreement or congruence among respondents in the scoring and vice versa (Kothari, 2019). Aggregate mean was also extensively used in the analysis. The findings of each variable were then presented using tables, pie chart or bar graphs according to specific objectives and thematic areas and interpretation made.

The items in the questionnaire were framed on a five point Likert scale where 5=very high, 4 = moderately high, 3 = Neutral, 2= moderately low and 1 = very low, thus 5 represented a high level of influence of psychosocial issues on substance abuse preventive measures, while 1 indicated a low level of influence. On the basis of mean score (μ) 3.00 was adopted as the baseline for data analysis and interpretation. Therefore a variable with a mean score of at least (μ) 3.00 was interpreted as having high influence, while those scoring below (μ) 3.00 were interpreted as non-issues in the study area.

4.4.1 Objective One: Influence of Co-curricular predisposing Issues on Effectiveness of Substance Abuse Preventive Measures

The first objective of the study sought to *establish influence of co-curricular issues on effectiveness of substance abuse preventive measures among students*. The objective was founded on the premise that co-curricular activities are a critical component of school activities and that the issues are likely to expose students to substances. Co-curricular in

secondary school education is mandatory. The activities form a platform for students meeting, engagement, as well as socialization and at the same time can also be a potential base for abuse of substances. More important, schools provide a base for stakeholders such as teachers and students to implement substance abuse preventive measures, thus, knowledge on how co-curricular activities predispose learners to substance abuse is critical for effectiveness in preventive measures.

4.4.2 Commonly Abused Substances in the study area

This specific objective was assessed in two sub-themes. The first sub-theme sought to establish and rank the substances that are abused by students in Kakamega County. The findings are in Table 4.4.

Table 4.4: Ranking of substances abused by students

		5 VH	4 MH	3 N	2 ML	1 VL	Mean (μ)	Sdev (σ)	Ag.M
Traditional brew	Students	59.25 160	33.96% 89	16.66% 45	13.00% 35	(15.18) 41	3.73	1.355	4.00
	Teachers	35.59 21	27.11% 26	13.55% 8	15.25% 9	8.47% 5	4.27	1.257	
Spirits	Students	25.92% 70	24.07% 65	14.44% 39	17.65% 48	17.65% 48	3.32	1.326	3.61
	Teachers	18.64% 11	27.11% 16	27.11% 16	15.25% 9	8.47% 5	3.90	1.161	
Bang	Students	23.70% 64	22.59% 61	19.35% 52	11.85% 32	22.59% 61	3.47	1.479	3.63
	Teachers	22.03% 13	32.20% 19	16.94% 10	13.55% 8	15.25% 9	3.80	1.383	
Miraa	Students	20.37% 55	28.14% 76	20.37% 55	14.44% 39	16.67% 45	3.56	1.367	3.54
	Teachers	22.03% 13	28.81% 17	16.94% 10	16.94% 10	15.25% 9	3.52	1.343	
Kuber	Students	21.85% 59	28.51% 77	21.48% 58	8.88% 24	19.25% 52	3.33	1.514	3.29
	Teachers	22.03% 13	20.33% 12	16.94% 10	18.64% 11	22.03% 13	3.26	1.412	

N=270, N=59

Key: 5 = Very High 4 = Moderately High 3 = Neutral 2 = Moderately low 1 =

Very low, STD = Standard Deviation, M=Mean, Agg. M=Aggregate

MeanN=329

Source: Field data (2022)

On a scale of 1-5, the study identified and ranked five substances that are largely abused by students in Kakamega county. According to the findings, the most abused substances is traditional brew. The findings manifested an aggregated mean of 4.00 which is several degrees above the baseline mean score (p) of 3.00. Further to this, the study established that a higher proportion of students compared to teachers hold the view that traditional brew is the most substance that is abused as reflected in the mean ($4.27 > 3.73$). This gap in the findings could be attributed secretly among students whereby a fraction of the students who do not disclose the fact that either they abuse the traditional brew or their colleagues abuse the specific substances. The finding that traditional brew is the most abused substances according to teachers is attributed to the fact that it is highly available and hence highly accessible to the students. The findings could also be attributed to the fact that some students are induced into abusing traditional brew during ceremonies. This corroborates with Rehm, Taylor & Room, and (2006) who observed that adolescents who initiate smoking are much more likely to begin abusing alcohol at a younger age than those who do not and vice versa.

On the contrary a higher proportion of students ($16.66\% > 13.55\%$) than teachers are neutral of the fact that traditional brew is abused by secondary school students in the study area or not. For both students and teachers the findings could be attributed to secrecy associated with substance abuse. Whereby some students and teachers are avoiding to reveal knowledge of abuse of the traditional brew.

Further assessment reveals that 13% of the students and 15.25% of the teachers hold the view that traditional brew is lowly abused by secondary school students in Kakamega County. At

the same time above 15.18% of the students and 8.47% of the teachers hold the view that students are very lowly involved in the abuse of traditional brew. The findings for these two levels of abuse of traditional brew are attributed to the students and teachers from schools that are highly disciplined. This is because students in the highly disciplined schools are not exposed to the traditional brew. The findings are attributed to students in boarding schools where the traditional brew is limited by lifestyles. According to the findings of the study, as manifested in the standard deviation, teachers are more congruent to the extent to which traditional brew is abused than the students (STD dv $1.257 < 1.355$).

According to the findings the second most abused substance is bang as reflected in an aggregate mean score of 3.61, which is above the baseline value of 3.00 mean score. The high level of abuse is attributed to the fact that bang is moderately available in both rural and urban schools' environments in Kakamega County. This finding is close to Kaburu, (2006) who observes that secondary schools have become hubs for illicit substances instead of being the avenue of the country's future human resource capital. Further assessment of the findings reveals that a higher proportion of students than teachers hold the view that bang is very highly abused by secondary school students ($23.7\% > 22.03\%$). The gap is attributed to the idea that students have higher chances of knowing the abusive behaviors of their fellow students than teachers. This is because the students are socially closer to one another than to teachers. Further assessment of the findings reveals that about 32.20% of teachers and 22.50% of the students hold the view that bang is moderately abused by students in Kakamega County. The higher proportion of teachers is attributed to schools and teachers that are highly knowledgeable and focused on the matters of students' discipline.

On the contrary a higher proportion of students compared to teachers are not sure if secondary schools' students in Kakamega county abuse bang or not (19.35%>16.94%). The gap between the two is attributed to severely whereby some students evaded disclosing knowledge of bang abuse by their colleagues. In the alternative, the findings could be attributed to students who are exercising self-control against the fact that they are active participants in the vice. Additionally for both teachers and students the findings are attributed to those whose lifestyles is dominated by religious believers on inclination.

On the contrary about 13.55% of the teachers and 11.85% of the students hold a view that student's involvement in the abuse of bang is moderately low. The findings are attributed to students and teachers in boarding secondary schools where issues of students' enhancement in the abuse of bang are not publicized. This is close to Mornitoring the Future, (2015) report which noted that bang is easily accessed by students through underground networking in some areas. Responses from focus group discussions validated the findings that some substances had high influence as depicted from the questionnaires. One respondent observed,

'We carry drinking water to school. So some students blend alcohol with water, which escapes the authority's eye.'(FGD 2 Feb 18, 2022)

In the alternative, the findings are attributed to students and teachers who have not witnessed the vice but have occasionally received response about students' involvement in the vice. According to the findings of the study as reflected in the level of standard deviation, respondents are not highly congruent in their views concerning abuse of bang. However, the teachers are more congruent than the students (Std dev. 1.383>1.479). During an interview guide with the education officers, it was revealed that alcohol and bhang were the most

abused substances by students according to records. One of the Education officer went on to elaborate and stated that:

‘Alcohol is the commonly abused substance in high schools though, the abuse of bang has been on the rise of late as many students consider it as cool not as a substance. Many cases the Ministry of Education is dealing with are alcohol-related.’ (HoD Feb. 22, 2022).

The study further established that the next highly abused substances is spirit. This view is reflected in an aggregate mean score of 3.61. The high involvement of students in the abuse of spirits is attributed to high availability and wide range of spirits. Further assessment of the findings revealed that a higher proportion of students than teachers hold the view that student’s involvement in the abuse of spirits is very high when compared to teachers (25.92%>18.64%). The gap reflected in these findings is attributed to the fact that the process of abusing spirits is undertaken at night when most teachers have returned to their homes. In the alternative, the findings are attributed to the fact that spirits are mostly abused by day scholars who have opportunity to engage in the vice away from their teachers

Further assessment of the findings reveal that a high proportion of teachers compared to students hold the view that secondary schools’ students’ involvement in the abuse of the spirits is moderately high (27.11%>24.07%). The gap in the findings is attributed to teachers serving in day schools where abuse of spirits is prevalent and students in boarding schools where exposure to spirits is limited by the terms and conditions of being a boarding student. In the alternative, the gap in the findings could be attributed to teachers serving in urban day

secondary schools where abuse of spirits is highly prevalent due to high exposure of students to the spirits and students in rural boarding schools where exposure to spirits is limited.

On the contrary, a higher proportion of students than teachers hold the view that student's involvement in the abuse of spirits is moderately low (17.65% > 15.25%). Similarly, about 17.65% of the students and 8.47% of teachers hold the view that students' involvement in the abuse of spirits is very low. These findings are attributed to denial of students to expose their views about involvement of their colleague in the abuse of spirits.

According to the study, the next most abused substance is Miraa. This is reflected in a mean score of 3.54 which is less than 3.61. The study further established that about 22.03% of the teachers and 20.37% of the students hold the view that secondary school students in the county are very highly involved in abuse of Miraa. The issues of higher proportions of teachers compared to students is due to secrecy amongst students in particular those who are active in the abuse of miraa. Further to this, about 28.81% of the teachers and 28.14% of the students hold the view that secondary school student's involvement in the abuse of miraa is moderately high. These findings are attributed to students and teachers of the schools in the urban regions of the county. This is because students in such schools are moderately exposed to miraa that is sourced from the big towns in the county. This corroborates with (World Drug Report, 2014) that substance abuse has been a concern for many years, and up to today there is an alarming rate of increasing adolescent miraa, tobacco, alcohol use worldwide. This is also supported by the findings in a survey carried out in 25 counties in Kenya on the prevalence of substance abuse which revealed that drugs that were perceived to be relatively

more accessible were tobacco, miraa and alcohol with a respective 8 per cent and 6 per cent of pupils implying they were easy to access (NACADA, 2019)

Contrary to this the above the findings, about 20.77% of the students and 16.94% of teachers are not sure if the secondary school students in the Kakamega County are involved in the abuse of miraa. For the students, the findings are attributed to day scholars in the rural based secondary schools. This is because this category of students are not so much exposed to miraa whose accessibility is majorly an urban affair. For the teachers, the findings are attributed to new recruits and further to those who are not involved in administration where matters of abuse of miraa are handled. The study also established that 14.47% of the students and 16.94% of the teachers are of the opinion that the involvement of secondary school students in the abuse of miraa is moderately low. The gap in the findings is attributed to the fact that teachers are more open in revealing the state of abuse than students. This is because of what the profession require of them.

The study established that next to miraa. Kuber is the next most abused substances. This finding is manifested in a mean score of 3.29 ($3.29 < 3.54$). The finding is attributed to students of urban secondary schools. This is because in Kakamega county. Kuber is mainly available in urban communities because it is an imported substance. The study further established that while 22.03% of the teachers hold the view that secondary schools' students' involvement in substance is very high, a close proportion of students (21.85%) hold the same view. These findings are attributed to day schools in urban centers where students exposed to kuber is high due to linkage of neighboring schools.

The participants were asked to indicate the co-curricular issues that predispose students to substance abuse. The results are as shown in Table 4.5

Table 4.5: Co-curricular issues predisposing students to substance abuse

Cocurricular issues Respondents			Level of predisposing influence							
			VH 5	MH 4	NS 3	ML 2	VL 1	Mean (μ)	Std dev (δ)	Ag.M
Competitive games and sports	Soccer	Students	16.29% 44	30.00% 81	22.59% 61	22.59% 61	17.7 48	3.17	1.356	3.54
		Teachers	18.64% 11	49.15% 29	14.0% 8	10.53% 6	5.26 3	3.89	1.068	
	Rugby	Students	30.37% 82	30.74% 83	16.29% 44	11.48% 31	10.3 28	3.62	1.334	3.76
		Teachers	38.98% 23	20.33% 12	18.64 11	10.16% 6	8.47% 5	3.91	1.311	
	Sports	Students	2.96% 8	10.74% 29	32.59% 88	25.18% 68	27.7% 75	3.09	1.311	3.09
		Teachers	20.33% 12	27.41% 16	25.72% 15	15.75% 9	14.8% 7	3.09	1.121	
Clubs – Drama Festival	Students	8.88% 24	11.85% 12	18.14% 49	20.74% 6	39.2 106	2.78	1.411	3.33	
	Teachers	20.33% 12	38.98% 23	18.64% 11	8.47% 5	13.5% 8	3.89	1.068		
Volleyball	Students	26.66% 72	30.00% 81	15.55% 42	13.33% 36	13.3 36	3.37	1.259	3.37	
	Teachers	15.25% 9	30.50% 18	22.03% 13	16.67% 9	11.5 7	3.38	1.247		

Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = Moderately low

**1= Very low, STD= Standard Deviation, M = Mean, A. M =Aggregate Mean
N=329**

Source: Field data (2022)

An assessment of the co-curricular activities that have, psychosocial predisposing influence on students' involvement in the abuse of substances the study identifies five activities that are predisposing. The activities ranged from rugby, soccer, drama, volleyball down to sports.

According to the study, rugby has the highest predisposing influence. This finding is reflected in the aggregate mean score of 3.76. This score is several degrees (0.76) above the baseline mean score of 3.00 indicating a high level of predisposing influence, as reflected in the mean scores of 3.91 and 3.62 for teachers and students respectively. The high

predisposing influence of rugby is recognized by both teachers and students. This finding is attributed to energy demands for playing rugby. This is because some students are easily provoked by demand for energy to abuse substances that are believed to have an energy-inducing influence on humanity. Further, the study established that a higher percentage of teachers than students (38.98% > 30.3%) hold the view that rugby has a very high predisposing influence on secondary students' involvement in abuse of substance. The gap is attributed to difference in the experience of teachers and students in the matters of student's involvement in substance abuse whereby the teachers are more experienced and knowledgeable than students. This is close to Gee, Jackson, and Sam (2014) who explored the role that alcohol played in the international rugby sevens tournament and found that pageantry and excessive alcohol consumption were normative.

On the contrary a higher proportion of students compared to teachers hold the view that rugby has a moderately high predisposing influence on involvement of secondary schools in substances (30.74% > 20.33%). The gap is attributed to difference in the capacity of the students and teachers to rank the predisposing influence of rugby. In this case, several teachers feel that rugby has a very high influence while students feel rugby has moderately high influence. The gap in the finding is further attributed to the fact that only a few schools and by extension a few students in the county are involved in playing rugby. The study also established that about 16.29% of the students and 18.64% of the teachers are not sure if rugby has any predisposing influence on students' involvement in substances abuse or not. These findings are attributed to teachers and students in secondary schools that do not participate in rugby as a co-curricular activity. Further to this, the study established that about 11.48% of the students and 10.16% hold the view that rugby has a moderately low

predisposing influence on the students' involvement in the abuse of substances. These findings are attributed to secondary schools in rural areas where rugby is a rare activity. Further to this, about 10.3% of the students and 8.47% of the teachers hold the view that rugby has a very small predisposing influence on students' involvement in abuse of substance. These findings are attributed to teachers and students from highly disciplined schools where students' involvement in abuse of substances is very limited.

The responses from interview guide validated the findings from questionnaire that participation in competitive games influenced students to abuse substances. One of the respondents during the interview asserted,

Substance abuse is evident and cases have risen in the recent years of many students involved in the vice. It is something very normal during school competitions in games and sports' (HoD, Feb. 19, 2022).

In view of the researcher these students come from an environment where use of substances is part of their cultural practices. According to the study of all the co-curricular predisposing issues, rugby is the most influential game that predispose students to substance abuse as reflected in the aggregate mean score of (μ) 3.765 which is above the baseline score. This is attributed to the fact that students have developed a liking toward rugby in the recent past. The sport requires a lot of energy and students are tempted to eat a lot or abuse substances. This is close to (KIPPRA) and NACADA (2019) survey conducted across 25 counties including Kakamega which revealed that standard five and eight pupils (respondents) take alcohol, 'chang'aa' and 'busaa' from homes, since a majority of their parents brew in homes.

Further assessment reveals that a bigger proportion of teachers compared to students (18.84% > 16.29%) 18.64%) hold the view that soccer has a very high predisposing influence on students' involvement in substances abuse. The gap between the two is attributed to difference in love for soccer. The study further established that a bigger proportion of teachers hold the view that soccer has a moderately high predisposing influence on students' involvement in substance abuse. The gap could also be attributed to limitations in the experiences of teachers and students in the matters of soccer and students' involvement in substances abuse. For both findings they could imply that soccer highly provides social network in substance abuse since it is a household game in the study area. This is contrary to (Larson, 2000) that observed, incorporation of games and sporting activities in prevention programs may augment effectiveness of preventive measures. Further still, the assessment reveals that a greater percentage of students 22.59% > 14.00%) than teachers are not sure if soccer has any predisposing influence on students' involvement in substance abuse or not. The gap could be attributed to students and teachers from schools where soccer not an active cocurricular activity.

The study also reveals that about 22.59% of the students and 10.53% of the teachers hold the view that soccer has a moderately low predisposing influence on students' involvement in substance abuse. At the same time, about 17.7% of the students and 5.26% of the teachers hold the view that soccer has a very low predisposing influence on students' involvement in substance abuse. These findings are attributed to the fact that soccer is a popular co-curricular activity amongst secondary school students in Kakamega County while teachers suspect that it only predisposes the students to substance abuse. In the alternative the gap in the findings could be due to the fact that while students are basing their view on the short-term experiences. The teachers' views are based on the long-term experiences. The results

showed that the environment is a critical source of substance. Soccer is an activity prone to social networks and therefore have influence on students' abuse of substances. This is in agreement with Ondieki and Mokua (2012) who asserted that peers or friends in a school were the major source of information about the availability of drugs of abuse. However, according to findings as reflected in the standard deviation for soccer, teachers are more congruent in their views concerning soccer as a predisposer to substances abuse (STD deviation: $1.068 < 1.356$). However, this is contrary to (Kwan et al., 2014; Barnes et al., 2006) study findings that it is also a way to prevent adolescents from engaging in deviant behaviors. This is also contrary to findings from the interview guide with Education Officers who hold the view that soccer exposed students to substance abuse. Commenting on the association between co-curricular issues and substance abuse, one of the Education officers stated:

'Co-curricular activities exposed students to social networks which is a breeding ground for substance abuse. Students in the process of socialization in the course of playing they are directly or indirectly influenced by their fellow peers to abuse substances (Edu. officer, Feb. 19, 2022).

The study further established that in terms of predisposing secondary schools' students to abuse of substances, soccer is followed by drama ($\mu: 3.54 > 3.33$). The finding is attributed to the fact that just like soccer, drama attracts crowds of students thus providing a predisposing environment. This is in line with NACADA, (2021) guideline for alcohol and substance use that points out clubs and in particular drama festivals which some students misuse to abuse substances. According to the findings higher percentages of teachers hold the view that drama has a very high predisposing influence on students' involvement in substance ($\mu: 20.33\% > 8.88\%$). This finding is attributed to the fact that unlike most students, teachers

have a responsibility and therefore engage in monitoring students' behaviors and the associated causal factors. Due to the same reasons, the study also established that a significantly larger proportions of teachers compared to students hold the view that drama has a moderately high predisposing influence on secondary school students' engagement in the substance (μ : 38.98% > 11.85%).

On the contrary about 18.64% of the teachers and a close proportion of the students (18.14%) are not sure if drama has predisposing influence on students' involvement in substance abuse or not. These findings are attributed to schools that do not participate in drama. Further to this, the study established that about 20.74% of the students and 8.47% of the teachers hold the view that drama has a moderately low predisposing influence on students' involvement in substances abuse. At the same time, it was established that a much higher percentage of students than teachers hold the view that drama has a very low predisposing influence on students' involvement in substance abuse (39.2% > 13.5%). The gap is attributed to students and teachers that are in schools where there is no drama activity.

According to teachers findings, drama has very strong predisposing influence (u : 3.89) on students involvement in substances abuse but to the students, drama has a non-significant predisposing influence on secondary students involvement in substance abuse (n ; 2.78 < 3.00). The study established that teachers are more congruent in the view over the predisposing influence of drama than the students (STD deviation 1.068 < 1.411). On the contrary, Dunne, et al., (2017) noted that establishing school connectedness by increasing student participation in co- curricular improves relationships and also help cut down on substance abuse.

Further assessment revealed that 2.96% of students and 20.33% of teachers hold the view that sports has a very high influence, while 10.74% of students and 27.41% of teachers noted that it has a moderately high influence on student's involvement of abuse of substances. This means a bigger proportion of teachers than students in both findings feel that sports contributed to substance abuse greatly. An indication that teachers are of the opinion that sports activities create a competitive spirit which enhances networking in the abuse of substances. This corroborates with Sztainert, T. (2015) suggestion in a study on sports participation and substance abuse that the type of sports, the environment in which the sport is conducted, as well as competition level is paramount.

However, a higher proportion of students than teachers (32.59%>25.72%) are neutral, implying that some students are not sure whether sports activities exposed them to substance abuse due. This could be schools that do not provide sports engagement. In the same vein, 25.18% of students and 15.75% of teachers feel that sports activities have a very low influence on students' involvement in abuse of substances, whereas 27.77% of students and 14.86% of teachers feel it has a moderately low influence. This is reflected in a high score of STD deviation (μ 1.311) for students and (μ 1.121) for teachers, which means that on the average, the respondents opinion differ from the mean by only (μ 1.311 and (μ 1.121) units with regard to the Likert scale items. An indication that a higher proportion of students felt that sports activities did not expose students to substance abuse. This is contrary to the views of Jernigan, et al., (2017) whose study findings revealed that sports and other social activities provided an enabling environment for risky behaviour such as substance abuse.

Findings from further assessment revealed that while, (26.66%; N=72) of students and (15.25%; N=9) of teachers felt that length of time the activities are allocated had a very strong influence, on students' abuse of substance, (30.00%; N=81) of students and (30.50%; N=18) of teachers were of the view that it had a moderately strong influence over the same. This therefore implied that a majority of teachers and students felt that the length of time scheduled for activities provide room to networking of substance abuse among students. This view is further supported by a moderately high mean (μ) 3.37 for students and (μ) 3.38 for teachers from the study. This is close to NACADA, (2019) report that many also believe that extra-curricular activities may actually affect student performance in a negative manner due to conflicting time requirements and competing schedules. However, (13.33%; N=36) of students and (16.67%; N=9) of teachers felt it had a moderately low influence, while (13.33%; N=36) of students and (11.56%; N=7) felt it had a very low influence on students' abuse of substances. The findings imply that the time scheduled for these activities does not contribute to social networking for students' abuse of substances. This view is contrary to Carson-Chahhoud, et al., (2017) who asserted that longer and more intensive interventions are more successful.

This study further sought to examine the effectiveness of substance abuse preventive measures in the light of cocurricular predisposing issues among secondary school students in Kakamega County as summarized in Table 4.6

Table 4.6: Cocurricular issues vs limiting influence on Effectiveness of substance abuse preventive measures

			Limiting influence					Mean (μ)	Std dev	AG. M
			5	4	3	2	1			
Selection of curriculum activities	Students		29.62% 80	30.74% 83	10.74% 29	15.93% 43	12.96% 35	3.87	1.377	3.60
	Teachers		20.33% 12	42.37% 25	20.33% 12	3.51% 2	10.53% 6	4.33	1.173	
Adherence to drug related policies	Students		19.25% 52	38.17% 103	21.84% 59	11.15% 30	9.29% 25	4.14	1.191	4.34
	Teachers		22.03% 13	49.15% 29	13.55% 8	7.02% 4	5.26% 3	4.54	1.076	
School admin. interventions	Students		18.88% 51	32.22% 87	31.1% 84	11.72% 34	11.72% 34	4.55	1.269	4.355
	Teachers		23.72% 14	25.42% 15	23.72% 14	16.075 9	7.14% 4	4.16	1.223	
Random checks	Students		29.62% 80	30.00% 81	15.55% 42	12.59% 34	12.22% 33	3.97	1.352	4.35
	Teachers		23.72% 4	42.37% 25	15.25% 9	12.28 7	3.51% 4	4.73	1.050	
Open communication channels	Students		15.93% 43	12.96% 35	29.62% 80	30.00% 81	11.11% 30	3.83	1.349	4.36
	Teachers		42.37% 25	25.42% 15	3.51% 2	3.55% 9	15.25% 9	4.89	1.125	

Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = Moderately low 1 = Very low, STD dev=Standard Deviation, M=Mean, A. M=Aggregate Mean N=329

Source: Field data (2022)

An assessment of the co-curricular activities that have, psychosocial predisposing influence on effectiveness of preventive measures identifies five preventive measures that experience limiting influence from cocurricular activities. The activities range from open communication channels, school administration interventions, random checks among the students, measure of enforcement of public laws and policies, down to measure of selecting what cocurricular practices to engage into.

The participants were asked to indicate whether open communication channel is an effective preventive measure in addressing substance abuse in the light of cocurricular predisposing practices in schools. According to the study, open communication is the most limited. This finding is reflected in the aggregate mean score of 4.36. This score is several degrees (1.36) above the baseline mean score of 3.00 indicating a high level of limitation as reflected in the mean scores of 3.83 and 4.89 for students and teachers respectively. The negative predisposing influence of cocurricular is recognized by both teachers and students. This finding is attributed to the fact that teachers often engage students in open communication forums and in issues to do with substances most do not open up thus this measure suffers most is frequently energy demands for playing rugby. The study revealed that a higher percentage of teachers compared to students 42.37%>15.93% hold the view that open communication channels has a very high influence, while, 25.42% of teachers and (12.96% of students felt that it has a moderately high influence. This view is further supported by a moderately high mean (μ) =3.83) for students and (μ) =4.89) for teachers from the study an indication that cocurricular impacts negatively on effectiveness of open communication. However, 30. % of students and 13.55% of teachers feel it has a moderately low influence, while 11.11% of students and 15.25% of teachers feel that it has a very low limiting influence. From the findings, a bigger percentage of students hold the view that cocurricular has a low influence on open communication. This gap is due to the fact that these are students in boarding schools where exposure to open communication is a culture. This study therefore established that teachers hold the view that open communication had a positive impact on preventive measures, students disagreed over the same. An indication that in an open forum most students are not able to express openly for fear of being labeled as wrong elements, while teachers consider open discussions of issues raised by students as an

effective method. This is close to the ministerial guidelines on managing discipline in Kenyan learning institutions. Schools have suggestion box where issues raised by students are addressed at the earliest opportunity in an open forum (MOE, 2022). On the contrary, commenting on co-curricular related-determinants one of the Education officers stated:

‘Co-curricular activities such like soccer is a breeding ground for substance abuse. Students in the process of learning and perfecting the art in their respective activities they meet new acquaintances who sometimes abuse substances and influence their fellow players.’ (EO 2 March 6, 2022)

According to the study, school administration is the second most limited measure in addressing substance abuse. Further assessment reveals that 18.9% of students and 25.72% of teachers are of the view that interventions from school administration had a very high limited influence on the effectiveness of preventive measures. For teachers the gap is due to schools whose discipline is a tall order and there administrative intervention suffers. At the same time, findings reveal that a much higher percentage of students than teachers (32.2% > 25.42%) hold the view that it has a moderately high limiting influence. This finding could be from students that do not embrace administrative interventions. On the other hand 11.72% of students and 16.07% of teachers hold the view that it has a moderately low influence. Therefore it was established that a majority of teachers and students were in agreement that school administration to an extent limit the success of effectiveness of preventive measures. This view is further confirmed by a very high mean (μ) 4.55 for students and (μ) 4.16 for teachers from the study. The implication is that where the administration embraces open forum and listens to students’ grievances in the light of co-curricular predisposing issues the measure suffers in unconducive environment for management of substance abuse. This is contrary to Dunne, et al., (2017) who noted that

establishing school connectedness by increasing student participation and in co- curricular, does improve relationships and help in cutting down on substance use.

According to the study, random checks among students is the third most limited measure in addressing substance abuse. Findings reveal that 29.62% of students and 23.72% of teachers feel random checks strategy has a very high limiting influence on the effectiveness of substance abuse preventive measures. The gap for students suggest that they have a negative attitude towards random checks and the bigger percentage of teachers indicate the level of interference this measure subject to the effectiveness of prevention, 30.74% of students and 42.37% of teachers feel it has a moderately high limiting influence over the same. In essence, the bigger proportion of teachers and students indicate that random checks a risk effectiveness of preventive measures, indicating that the predisposing effect of sports such as competitive sports and gender based sports that calls for a high level of discipline where random checks is included may risk effectiveness of prevention of substance abuse. This is supported by a high mean score of (μ) 3.97 for students and (μ) 4.73 for teachers in the study. This is close to Mckieruan, (2016), who noted that in some cases participation in sport is linked to increased use of substance. In addition, (Kwan et al. 2014; Diehl et al., 2012) caution against the use of sports as a means to reducing youth substance abuse for the feelings that youth get from participating in sport might actually mirror the same feelings produced from higher alcohol use.

According to the study, adherence to drug related policies among students is equally highly ranked as the fourth most limited measure in addressing substance abuse. Findings reveal that, 19.25% of students and 22.03% of teachers are of the opinion that adherence to drug related policies has a very high limiting influence on the effectiveness of preventive

measures on substance abuse. Similarly, 38.14% of the students and 49.15% of teachers feel it has a moderately high limiting influence over the same. However the proportion of teachers is higher than students. An indication that for teachers, limited drug related policies has a negative bearing on the effective management of substance abuse which is supported by a strong mean of (μ) 4.14 for students and (μ)4.54 for teachers. The finding is attributed to competitive or open games taking place in a school less than 300 metres from drinking dens, which further hinder in the effective preventive measures and vice versa. This is close to Oriato, et al (2009) study findings which noted that students in towns are more likely to abuse drugs and other substances as compared to those in the rural areas.

4.4.3 Hypothesis Testing

This study modeled the effectiveness of preventive measures for substance abuse among secondary school students in Kakamega County using linear regression modelling. To effectively do so, the study first ran Pearson product moment correlation coefficient between the outcome variable (Preventive measures) and its correlates to establish plausible variables to pursue in the regression model at $p=0.05$. The results are presented in Table 4.7.

Table 4.7: Correlation Matrix between the Outcome Variable and its Correlates

		Preventive Measures	Co-curricular Issues	Peer Issues	Personality Issues	Family Issues
Teachers	Preventive Measures	1.0000				
	Co-curricular Issues	0.3110	1.0000			
	Peer Issues	0.5652	0.4729	1.0000		
	Personality Issues	0.7680	0.3080	0.6292	1.0000	
	Family Issues	0.7681	-0.0136	0.1665	0.1893	1.0000
Students	Preventive Measures	1.0000				
	Co-curricular Issues	0.2340	1.0000			
	Peer Issues	0.2401	0.2291	1.0000		
	Personality Issues	0.6310	0.1293	0.2502	1.0000	
	Family Issues	0.7300	0.2952	0.2064	0.1633	1.0000

Pearson correlation: ≤ 0.35 = Weak correlation; 0.36-0.67 = Moderate correlation; 0.68-0.89=Strong

Correlation; ≥ 0.90 = Very strong correlation

From Table 4.7 all the independent variables correlated positively with the dependent variable and therefore were used in the regression model.

4.4.4. Regression Analysis for Co-curricular Issues

To establish the level of influence of co-curricular issues and examining whether this issue was a significant predictor of preventive strategies of substance abuse, the study used a coefficient of determination (R^2) using regression analysis as shown in Table 4.8 for students and teachers.

Table 4.8: Model summary

	Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
Students	1	.234 ^a	.055	.051	.63961
Teachers	1	.311 ^a	.097	.081	.60655

a. Predictors: (Constant), Co-curricular Issue

From Table 4.8 the R value for students and teachers is at .234^a and .311^a respectively which shows that there exists an influence of co-curricular issues on effectiveness of substance abuse preventive measures. R² shows .055 and .097 on variation of effectiveness of preventive measures of substance abuse caused by co-curricular issues.

An analysis of variance (ANOVA) was also done to ascertain whether co-curricular issues was a significant predictor of effectiveness of preventive measures of substance abuse. The results were summarized as shown in Table 4.9 for students and teachers.

Table 4.9: ANOVA of Co-Curricular predisposing issues and Preventive Measures

		Model	Sum of Squares	Df	Mean Square	F	Sig.
Students	1	Regression	6.285	1	6.285	15.363	.000 ^b
		Residual	108.412	269	.409		
		Total	114.697	270			
Teachers	1	Regression	2.243	1	2.243	6.098	.017 ^b
		Residual	20.970	58	.368		
		Total	23.214	59			

a. Dependent Variable: Preventive measures

b. Predictors: (Constant), Co-curricular Issues

From Table 4.9 where [F (1, 269) = 15.363, P<.05] for students and where [F (1, 58) = 6.098, P<.05] it is evident that co-curricular issues influence effectiveness of preventive measures of substance abuse and thus a significant predictor.

Simple linear regression was carried out to test if co-curricular significantly influenced substance abuse preventive measures among secondary school students. The results of the regression indicated that the model accounted for 9.7% from teachers and 5.5% from students of the variation in the dependant variable as indicated in Table 4.8 and that it is

evident that co-curricular issues influence effectiveness of substance abuse preventive measures and thus a significant predictor, where $[F(1, 269) = 15.363, P < .05]$ and $[F(1, 58) = 6.098, P < .05]$ in Tab. 4.9. From this regression model, it is evident that co-curricular issues was statistically significant hence can be used for model fitting. We therefore reject the null hypothesis and accept the alternative hypothesis. This implies that effectiveness of substance abuse preventive measures in secondary schools in Kakamega County is dependent on the co-curricular issues among secondary school students in Kakamega County. This is close to Nicole, Takalani and Clifford (2018) study on extracurricular activities and risky sexual and illicit drug abuse behaviour among youth (12–22 years old) in South Africa. Descriptive statistics and logistic regression models were used which similarly were applied in the current study. Further, results show that sports (about 60%) and youth groups (about 15%) are the most popular forms of extra-curricular activities and that youth who engage in other, undefined extra-curricular activities ($OR = 2.11, p\text{-value} < .05$) and sports ($OR = 1.03, p\text{-value} < .05$) have higher odds of illicit drug abuse, indicating that extra-curricular activities and sports predispose youths to substance abuse just as in the current study where secondary school students in Kakamega County are exposed to co-curricular issues for substance abuse.

Further, previous research suggests extra-curricular activities can reduce the likelihood of substance abuse (Andrade, 2014). Lynnette (2014) examined a correlation of adolescent substance abuse and extra-curricular activities. The baseline model showed a negative relationship between involvement in academic clubs and marijuana use, suggesting that adolescents who participated in academic clubs were less likely to use marijuana. This means that when participation in extra-curricular activities increases, the use of marijuana reduces. For academic extra-curricular activities there was a statistically significant relationship,

($P=0.77$) at $p<0.05$). In Arts there was a relationship that was not statistically significant, ($P=0.98$) and in sports there was also a relationship that was not statistically significant, ($P=0.97$). On the contrary, Somayeh Ahmadabadi (2018) investigated the relationship between sports activity and experience of smoking, alcohol and drug abuse among a sample of male and female students in Tehran. Comparison of male and female students showed that smoking, alcohol and drug abuse in males were significantly higher than females ($p<0.0001$).

4.5. Peer Issues Vs Effectiveness of Substance Abuse Preventive Measures

The second objective of the study sought to *evaluate influence of peer issues on effectiveness of substance abuse preventive measures among students*. It originates from the fact that, peer issues have a role to play in a secondary school student behaviour. As young people enter adolescent years and move through those years, they become more independent from their parents. As a result of their independence and increased attention to messages they perceive around them, many of them that hadn't used substances previously are exposed to them, and choose to take a drink or a smoke to see what it feels like or to fulfill role expectations that they perceive, either accurately or not from their peers (Alan, 2011). On the other hand, prevention programmes should be a natural and important part of the school curriculum. Important points for interventions are during this critical stages of transition from childhood to adolescence and then to adulthood (National Institute on Drug Abuse, 2016). Preventive strategy in a school is a yardstick to assess the change process in behaviour as students interact with their fellow peers. As it has been observed some of these strategies are effective whereas others are not. The primary objective of psychoactive substances abuse prevention is to help, particularly younger age, to avoid or delay the initiation of the use of psychoactive

substances, or, if they have started already, to avert the development of substance abuse disorder.

Pursuant to this, the objective was founded on the premise that in spite of the concerted efforts towards prevention the vice is still rampant. This is contrary to the beliefs Mukhandia (2016), which hold that, in today's society, the influence of one's peers is crucial in the initiation of drug use among young people who have not yet developed strong social networks. A study by Dishion, et al., (2002), cited by Mukhandia (2016), revealed that putting children at risk in a peer group intervention had unfavourable results. So the question is, to what extent does peer predisposing issues influence the effectiveness of preventive measures? It is against this critical concern that this objective was designed to investigate the views of students and teachers. The change process can be reflected in the views of students, which will further distinguish the level of effectiveness of substance abuse preventive measures.

4.5.1 Peer Issues on Effectiveness of Substance Abuse Preventive Measures

A five-point rating scale was used to collect views from the students and teachers. Seven constructs were presented to the students as indicators of peer issues. They responded to the statements from the Likert scale from strongly high (5) to strongly low (1) and thus 5 represented a high level of influence, while 1 indicated a low level of influence of peer issues of substance abuse preventive measures. This data was further analyzed on the basis of descriptive statistics and summarized as shown in Table 4.10.

Table 4.10: Ranking of Peer issues Predisposing Students to Substance Abuse

Peer issues	Respondent category	Level of predisposing influence					Mean (μ)	Std dev. (δ)	Ag. M
		VH 5	MH 4	NS 3	ML 2	VL 1			
Peer Grouping	Students	42.22% 114	30.00% 81	12.96% 35	6.69% 8	7.81% 21	3.94	1.249	3.81
	Teachers	33.89% 20	40.67% 24	11.86% 7	10.17% 6	3.39% 2	3.68	1.370	
Social Pressure	Students	25.92% 70	37.40% 101	20.00% 54	10.37% 28	6.30% 7	3.91	1.245	3.915
	Teachers	35.59% 21	27.11% 16	23.72% 14	5.08% 3	8.47% 5	3.92	1.087	
Financial capacity of peers	Students	7.77% 21	11.11% 30	23.70% 64	22.68% 61	34.57% 93	3.66	1.154	3.21
	Teachers	22.22% 12	22.22% 12	30.50% 18	6.77% 4	13.55% 8	3.76	1.236	
Religious pressure	Students	34.07% 92	31.48% 85	8.51% 23	8.50% 21	10.53% 26	2.36	1.279	2.47
	Teachers	5.08% 3	11.86% 7	13.55% 8	44.06% 26	25.42% 15	2.58	1.163	
Involvement of some students in sales	Students	20.74% 56	34.07% 92	7.03% 19	15.61% 37	23.67% 66	3.74	1.240	1.127
	Teachers	25.42% 15	35.59% 21	23.72% 14	13.56% 8	1.69% 1	3.73		
Resource sharing behaviour	Students	27.77% 75	25.18% 68	22.96% 62	15.56% 42	8.52% 23	3.37	1.289	3.53
	Teachers	37.28% 22	28.81% 17	6.77% 4	18.64% 11	8.47% 5	3.69	1.055	
Freedom to socialize with peers	Students	22.22% 60	39.25% 106	20.74% 56	9.29% 25	8.18% 22	3.48	1.278	3.58
	Teachers	22.03% 13	38.98% 23	20.33% 12	10.17% 6	8.47% 5	3.68	1.370	

**Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = Moderately low
1 = Very low, STD=Standard Deviation, M=Mean, A. M=Aggregate Mean**

Source: Field data (2022)

Findings from Table 4.10, reveal the presence of substance abuse psychosocial predisposing issues related to peers that limit the effectiveness of substance abuse preventive measures in the County. Finding revealed that 25.92% of students and 35.59% of teachers hold the view that social pressure has a very high limiting influence on students' abuse of substances,

whereas 37.40% of students and 27.11% of teachers are of the view that it has a moderately high limiting influence. The findings reveal that the students and teachers are moderately congruent in their opinion over the limiting influence of social pressure. This is confirmed by the moderately high level of convergence in views as manifested in the mean(μ) 3.91 for students and (μ)3.92 for teachers which is above the baseline of 3.00. This implies that human beings more so peers are the product of socialization. Peers become what they want and determine the way they socialize because of the environment they are predisposed to. This is further reflected in the aggregate mean of 3.915 indicating that it ranks the highest in terms of limiting influence. This is close to Ting et al. 2015 who observed that teens generally, have the prime developmental task in their adolescence to recognize and shape one's own identity and identity of others through socialization. However, a higher proportion of teachers than students is neutral about this aspect of the study 23.72% >20.00%. This means that there are some emerging issues related to substance abuse that students are more knowledgeable about than teachers. This is close to Hamm & Zhang, 2010; Kindermann, (2015) that argue peers make children's time at school tolerable and fun providing companionship, help and emotional support that is only known to them.

From Table 4.10, a bigger proportion of the students compared to teachers (42.22%>33.89% are in agreement that peer grouping has a very high limiting influence on substance abuse. This gap is an indication that any peer can be influenced to some extent by the words and actions of others in groups or even the perceived attitude of others in a similar environment. Further still, 30.00% of students and 33.89% of teachers feel peer grouping has a moderately high influence. An indication that majority of the teachers and students are of the opinion that peer grouping has a moderate limiting influence students abuse of substance in the study

area. This is further supported by a strong mean of (μ) 3.94 for students and (μ) 3.68 for teachers from the study. This corroborates with Alan, (2011) who noted that as a result of teens' independence and increased attention to messages they perceive around them, many of them that hadn't used substances previously are predisposed to them, and choose to take a drink or a smoke to experience or to fulfill role expectations that they perceive, either accurately or not.

Further findings revealed that, 20.74% of students and 25.42% of teachers hold the view that sales of substances has a very high influence on abuse of substances, while, 34.07% of students and 35.59% of teachers feel that it has a moderately high influence. This is reflected in a high mean score (μ) 3.74 for students and (μ) 3.73 for teachers which is way above the baseline value of 3.00. An indication that a good proportion of the respondents are in agreement that sales of substances have a limiting influence thus risk the success of preventive measures. The implication is that those students that engage in substance activities in the home carry the same to school. This concurs with findings from a report in the Daily Nation (August 2, 2021) which revealed that in some Nairobi secondary schools, some students were working in cahoots with watchmen, cooks, and cleaners in peddling drugs into the institution.3.00.

Further findings revealed that 34.57% of students and 13.55% of teachers were of the opinion that financial capacity of peers had a very low influence on substance abuse. The higher proportion of students compared to teachers indicate that in the absence of money then students cannot afford to engage in substances. Implying that a strong capacity of finances is the source of substance abuse. Further still, 22.68% of students and 6.77% of teachers hold the view that it has a moderately low influence on substance abuse. The demographic

characteristics of the respondents (students) who formed the majority were from sub-county schools which accounts for this view. These are schools not well endowed, a fact that may not be of concern to the students, thus view it not a determinant that predisposes students to substance abuse. This is reflected in a means score of (μ) 3.66 for students and (μ) 3.76 for teachers which is above the baseline value of 3.00 and hence an indicator of limiting influence of financial capacity of peers. However, majority of teachers (30.5%; N=18) and a good proportion of students were neutral. This could imply either the respondents are not sure or there is lack of commitment on their part given that for teachers majority of had experience below 5 years and for students majority of the respondents come from mixed schools. This is contrary to Otieno and Ofulla (2009) in their study on substance abuse in Kisumu town which revealed that students from low social economic class were more involved in substance abuse (28.0%) compared to those from high socio-economic class areas of the town (21.5 %).

Finally, findings reveal that 22.22% of students and 22.03% of teachers feel that students having freedom to socialise has a very high influence on substance abuse This divergence in views indicate freedom to socialise is an aspect embraced more by students since peers prefer working free from supervision. Further still, 39.25% of students and 38.98% of teachers are of the view that the freedom to socialise among students has a moderately high influence on abuse of substances, an indication that majority of the respondents were in agreement that the aspect has limiting influence on effectiveness of substance abuse preventive measures in the study area as reflected in in an aggregate mean of 3.58 an indication that majority of the respondents hold the view peers embraces freedom to socialise. This is close to Bowen, et al., 2012; Hayashi, 2016; Kindermann, (2015)views that adolescent learners place a lot of value on peer support. Interview guide and focus group discussion validated the findings from

questionnaire on how respondents perceive the influence freedom to socialise has on substance abuse. During the interview, a participant observed that:

‘The influence of peer issues on substance abuse was as a result of; learners seeking independence; seeking identity to understand themselves; desire to increase their popularity; want to experiment and seek acceptance,’(HoD, Feb. 22, 2022).

In the researcher’s’ view this implies that peers easily influence one another as long as they have the freedom to socialize. Contrary to Gorsuch and Butler (1976) as cited by Mukhandia, (2016) indicated that peers play a major role in initial drug abuse in the non-socialized youth, in the contemporary culture. Therefore peers may either supply the drug directly or provide information on obtaining it as long as there is that freedom to socialise .

4.5.2 Influence of Peer Issues on Effectiveness of Substance Abuse Preventive Measures

To assess the effectiveness of substance abuse preventive measures, a six constructs opinion were included in the tool as shown in the Table 4.11 for students and teachers.

Table: 4.11: Peer Issues Vs Effectiveness of Substance Abuse Preventive Measures

Item	Response category	Limited preventive Measures							Ag.M
		VH 5	MH 4	NS 3	ML 2	VL 1	Mean	Std dev.	
Peer to peer talk	Students	21.48% 58	27.03% 73	18.51% 50	18.15% 49	14.81% 40	3.94	1.297	3.565
	Teachers	11.86% 7	30.50% 18	35.59% 21	8.47% 5	13.56% 8	3.19	1.181	
Inter-class Debate	Students	19.25% 52	38.51% 104	21.85% 59	11.11% 30	9.26% 25	3.26	1.172	3.31
	Teachers	23.72% 14	50.84% 30	13.55% 8	6.78% 4	5.08% 3	3.36	1.126	
Peer Guided Practice	Students	27.77% 75	30.37% 82	18.14% 49	14.07% 38	9.63% 26	3.09	1.305	3.215
	Teachers	13.55% 26	42.37% 25	20.33% 12	22.03% 13	1.69% 1	3.34	1.183	
Role playing games	Students	21.85% 59	31.48 85	20.74% 56	9.29% 25	16.36% 45	3.59	1.169	3.49
	Teachers	23.72% 14	40.67% 24	13.55% 8	8.47% 5	13.56% 8	3.39	1.232	
Invitation of Experts	Students	12.59% 34	18.15% 49	34.81% 94	12.96% 35	21.48% 58	3.04	1.297	3.385
	Teachers	20.33% 12	50.84% 30	11.86% 7	8.47% 5	8.47% 5	3.73	1.127	

Key: 5 = Very high 4 = Moderately high 3 = Not sure 2 = Moderately low 1 = Very low

STD=Standard Deviation, M=Mean, A. M=Aggregate Mean N=329

Source: Field data (2022)

An assessment of peer related substance abuse measures in the light of predisposing psychosocial issues ranged from peer to peer talk, role playing among peers, engaging guest speakers, debates and peer guided practices. The study identifies five preventive measures that experience limiting influence from peer issues. From Table 4.11, the study establishes that peer to peer talk is the most limited measure in addressing substance abuse and that peer issues limit the success of effectiveness of substance abuse preventive measures. For instance, 21.48% of students and 11.86% of teachers hold the view that peer- to -peer talk has a very high limiting influence on effectiveness of substances preventive measures, an

indication that it was not an effective measure of addressing substance abuse in the light of predisposing psychosocial issues. Similarly, 27.03% of students and 30.50% of teachers feel it has a moderately high limiting influence. From both findings the study therefore established that a majority of the students than teachers are of the opinion that peer to peer talk risk the success of effectively dealing with substance abuse. The implication is that most of these students first use substance in social situations and that their decisions are influenced by a variety of factors including peers. Students will not give the seriousness this measure requires. This is confirmed by the moderately high level of divergence in views as manifested in the standard deviation ($\sigma=1.297>1.181$). Contrary WHO (2014) asserted that this type of sharing leads to the formation of enduring relationships between peers as people develop a strong sense of connection with the other. Further findings reveal that a bigger percentage of teachers compared to students (35.59% >18.51%) are neutral. This implies that a good proportion of the students feel that this skill can easily provide an open channel for them to digress and focus on issues not relevant. Contrary NACADA, (2021) survey on alcohol and drug use prevention, suggested that prevention programs targeting learners should utilize interactive techniques.

According to the study, role play among students is the second most limited measure in addressing substance abuse with an aggregate mean of (μ) 3.49. Further findings reveal that 21.85 % of students and 23.72% felt that role-play has a very high limiting influence on substance abuse, whereas 31.48 % of students as well as 40.67% of teachers were of the view that it had a moderately high limiting influence. Therefore majority of the respondents viewed role-play as having a moderately high limiting influence indicating that role play among students risk the success of effectiveness of substance abuse preventive measures.

This is reflected in a moderate mean score of ($\mu = 3.34$) for students and ($\mu = 3.59$) of teachers which is way above the baseline mean score of $\mu = 3.00$. This is attributed to the fact that only specific messages on substance abuse can easily and conveniently be communicated through use of role play, which is contrary to Lena, et al., (2005) study whose findings revealed that there was a positive intervention for students who were at risk of developing alcohol problems later on through use of role-play.

‘School curriculum includes one lesson of life skill. It is therefore imperative that teachers expose students to a number of social skills so that students can easily handle challenges in life, such as substance abuse, on their own’ (EO 4, March 9, 2022).

According to the study, invitation of experts to school is the third most limited measure in addressing substance abuse with an aggregate mean of (μ) 3.385. Findings revealed that, 12.59% of students and 20.33% of teachers have the opinion that guest speakers as a strategy has a very high limiting influence on mitigating substance abuse. The gap for teachers is due to the fact that some students have a formed opinion of the visiting guests and for students it is a strategy that has never worked. In the same vein, 31.48% of students and 40.67% of teachers hold the opinion that this strategy has a moderately high limiting influence. The bigger proportion of teachers is attributed to schools that do not embrace the strategy. However, 20.74% of students and 13.55% of teachers feel they are not sure whether experts played a great role. The difference in findings is reflected in the mean ($\mu = 3.73 > 3.04$) an indication of no congruency in teachers’ and students’ views over the aspect of guest speakers. The divergence in views is justified by a high standard deviation ($\sigma = 1.297 > \sigma = 1.127$) from the mean. This implies that teachers are of the view that guest speakers as a strategy is a challenge in mitigating against substance abuse in schools, while majority of the students feel that experts do not have an impact on dealing with substance

abuse. The results reveal the negative attitude the students have towards the guest speakers invited.

Further still, findings revealed that 27.77% of students and 13.95% of teachers hold the view that guided practice has a very high limiting influence in the area of prevention. This gap is because while students are basing their view on the short-term experiences. The teachers' views are based on the long-term experiences. Further still, 30.37% of students and 42.4% of teachers have opinion that it has a moderately high limiting influence. The study established that majority of the teachers feel that guided practice was not an effective skill in mitigating against substance abuse due to predisposing factors related to peers. This is reflected in a mean score of ($\mu = 3.34 > 3.09$) which is above the baseline mean score of $\mu = 3.00$. This therefore implies that according to teachers students first use substances in social situations and that their decisions are influenced through learning by seeing and doing what their fellow peers do. This is close to the report of United Nations, (2009) that life skills are best taught in a participatory manner which include demonstration, role play and small group discussions. However, findings reveal that 18.14% of students and 24.48 of teachers felt they were not sure whether guided practice was an effective skill among the peers. The findings are attributed to schools and teachers that do not engage students in this strategy.

Hypothesis Testing

4.5.3. Regression Analysis for Peer Issues on Effectiveness of Substance Abuse Preventive Measures

To establish the level of influence of peer issues and examining whether peer issues was a significant predictor of preventive measures of substance abuse, the study used a coefficient of determination (R^2) using regression analysis as shown in Table 4.12 for students and teachers.

Table 4.12: Model Summary

	Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
Students	1	.240 ^a	.057	.054	.60636
Teachers	1	.565 ^a	.319	.307	.55679

a. Predictors: (Constant), Peer issues

From Table 4.12 the R value for students is at .240^a and for teachers is at .565^a respectively which shows that there exists an influence of peer issues on effectiveness of preventive measures of substance abuse. R² shows .057 for students and .319 teachers on variation of effectiveness of preventive measures of substance abuse caused by peer issues.

An analysis of variance (ANOVA) was also done to ascertain whether peer issues was a significant predictor of effectiveness of preventive measures of substance abuse. The results were summarized as shown in Table 4.13.

Table 4.13: ANOVA of Peer Issues and Effectiveness of Substance Abuse

	Model		Sum of Squares	Df	Mean Square	F	Sig.
Students	1	Regression	6.001	1	6.001	16.322	.000 ^b
		Residual	98.538	268	.368		
		Total	104.539	269			
Teachers	1	Regression	8.287	1	8.287	26.732	.000 ^b
		Residual	17.671	57	.310		
		Total	25.958	58			

a. Dependent Variable: Effectiveness of preventive measures

b. Predictors: (Constant), Peer issues

Simple linear regression was carried out to test if peer issues significantly influenced substance abuse preventive measures among secondary school students. The results of the regression indicated that the model accounted for 31.9% from teachers and 5.7% from students of the variation in the dependant variable as indicated in Table 4.13 and that it is

evident that peer issues influence effectiveness of substance abuse preventive measures and thus a significant predictor, where $[F(1, 269) = 16.322, P < .05]$ and $[F(1, 57) = 26.732, P < .05]$ in Table 4.13. From this regression model, it is evident that peer issues was statistically significant hence can be used for model fitting. We therefore reject the null hypothesis and accept the alternative hypothesis. This implies that effectiveness of substance abuse preventive measures in secondary schools in Kakamega County is dependent on peer issues among secondary school students and that preventive measures are effective. This is close to Muhia, D. (2021) study findings on the Impact of Peer Influence on Substance Abuse among students in Public Day Secondary Schools in Thika Sub-County, Kiambu County. The results further indicated that peer influence and substance abuse in secondary schools are positively and significantly related ($\beta = 0.518, p = 0.000$). Further, this findings corroborates with Anthonia (2022) study which was conducted in Nigeria to evaluate the association between school-based intervention programs and drug abuse among African American young people with the ages of 10 – 24 years. The Chi-square analysis revealed a significant association between participation in school - based intervention programs and drug abuse $[(\chi^2(1, N = 3533) = 8.567, p = .003)]$

4.6. Family Issues Vs Effectiveness of Substance Abuse Preventive Measures

The third objective of the study was to *determine influence of family issues on effectiveness of substance abuse preventive measures among students*. It originates from the concept of socialization among family members. During social interaction, family members more so parents and siblings direct young people's conduct along desired channels, and enforce conformity to family norms and skills to help the young ones fit in the society, school being one. A well-socialized child has a sense of self-worth, and feels strongly that he/she is part of

the family where one is needed, wanted and depended upon. Chassin *et al.*, 2000, Moor *et al.*, 2015, Dickson *et al.*, 2015, Lee *et al.*, (2015) pointed out that family has often been seen as a risk factor for adolescent smoking and substance abuse habits. The objective was founded on the premise that family is a remedy for dealing with substance abuse problems can be identified. Dunne *et al.*, (2017) report indicated that other successful programs that have found family measures that work alongside school programs are beneficial because active parental involvement in children's education is a critical piece in preventing substance misuse in youth. In spite of the efforts schools make by involving families directly and indirectly as regards prevention the vice is still rampant. So the question is, to what extent does family issues influence the effectiveness of preventive measures? It is against this critical concern that this objective was designed to investigate the views of students and teachers concerning family issues on effectiveness of substance abuse preventive measures.

4.6.1. Family Predisposing issues

A five-point rating scale was used to collect views from the students. Six constructs were presented to the students and teachers as indicators of family issues. They responded to the statements from the Likert's scale from strongly agree (5) to strongly disagree (1) and thus 5 represented a high level of influence of family issues on substance abuse while 1 indicating a low level of influence of family issues on substance abuse. This data was further analyzed on the basis of percentage, frequencies of the respondents and summarized as shown in Table 4.14.

Table 4.14: Family Issues predisposing students to substance abuse

Family issues	Respondent category	Level of Predisposing influence					Mean	Std dev	Ag.M
		VH 5	MH 4	NS 3	ML 2	ML 1			
Trading in substances	Students	22.22 % 60	42.59% 115	21.85% 59	3.35% 9	10.41% 28	3.46	1.381	3.545
	Teachers	23.72 % 14	30.50% 18	15.25 9	15.25 % 9	15.25% 14	3.63	1.388	
Separation of Parents	Students	23.70 % 64	50.74% 137	13.70% 37	6.675 % 18	5.19% 14	3.24	1.172	3.375
	Teachers	27.11 % 16	35.59% 21	15.35% 9	10.17 % 6	11.86% 7	3.51	1.023	
Weak family Cohesion	Students	25.55 % 69	27.03% 73	25.55% 69	15.19 % 4	6.675% 18	3.70	1.174	3.45
	Teachers	32.20 % 19	33.89% 20	11.86% 7	10.17 % 6	11.865 % 7	3.20	1.297	
Rural-urban migration	Students	25.55 % 69	42.22% 115	16.66% 45	11.85 % 3	3.33% 9	3.40	1.271	3.14
	Teachers	22.03 % 13	32.20% 19	20.33% 12	8.47 % 5	16.95% 37	3.88	.966	
Lack of parental care,	Students	27.03 % 73	40.74% 110	13.70% 37	5.17% 1 4	13.65% 37	3.70	1.174	3.435
	Teachers	33.89 % 20	32.20% 19	11.85% 7	10.17 % 6	11.86% 7	3.17	1.271	

Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = Moderately low 1 = Very low, STD=Standard Deviation, M=Mean, A. M=Aggregate Mean

Source: Field data (2022)

Findings from Table 4.14, reveal the presence of substance abuse psychosocial predisposing issues related to students family background that limit the effectiveness of substance abuse preventive measures in the County. The study reveals that 22.22% of students and 23.72% of teachers observe that family which trades in substances predispose children in abuse of

substances, while 42.59% of students and 30.50 of teachers are of the view that trading in substances has a moderately high influence. An indication that majority of the respondents hold the view that a family that trades in substances has a moderately limiting influence. This is reflected in an aggregate mean score of $\mu=3.545$ which is above the baseline of $\mu=3.00$ indicating that it has a limiting influence on effectiveness of substance abuse preventive measures. This is attributed to the fact that family members who are predisposed to substances carry them to school to sell to their fellow peers. This is in line with newspaper report (Lee, 2013) which observed that, with the increase of student drug pushers in the school compound, the accessibility of drugs among the young generations has increased.

Further assessment of psychosocial predisposing issues related to students family cohesion reveal that a higher proportion of the teachers hold the view that family cohesion has a very high limiting influence compared to students ($32.20\% > 25.55\%$), while 27.03% of students and 33.89% of teachers observe that weak family cohesion has a moderately high limiting influence on effectiveness of substance abuse preventive measures. This is justified by the divergence in views from students and teachers as reflected in the mean score $\mu=3.70 > 3.51$. The gap could be attributed to teachers better understanding of family dynamics related to family cohesion that predispose students to substance abuse. Lack of family cohesion has a potential of limiting influence on the young ones to abuse substances particularly where substance behaviour problems exist. This corroborates with Collins (2004) who pointed out factors that can affect the likelihood of alcohol abuse, thus, how parents behave often affects the behaviour of children, when parents drink excessively or abuse substances, children sometimes vow to completely abstain, more often however they follow the parental example. NACADA, (2021) supports this view in its Tenth Biannual Report developed from a study

that revealed that children as young as 4 years are using drugs and substances of abuse. In addition children of parents who consume any drug or alcohol were more likely to become alcohol abusers.

Further still, findings from Table 4.14 revealed that 27.03% of students and 33.89% of teachers were of the view that deficient parental monitoring has a very high influence on substance abuse, while 40.74% of students and 32.20% of teachers agreed that it has a moderately high influence over the same. The study established that majority of the respondents hold the view that deficient parental monitoring has a moderately high influence on substance abuse. This is further reflected in the aggregate mean of 3.435 which is above the baseline value of 3.00. This therefore implies that children are keen on observing what their parents for example do and imitate them without question. Deficiency in parenting will certainly predispose children to problem behaviour such as substance abuse. Similarly Lynn, et al., (2015) research has consistently shown that lack of parental involvement in the activities of their children predicts initiation and escalation of substance abuse and vice versa.

A higher proportion of teachers compared to students (27.11% > 23.70%) were of the opinion that a family where parents have separated has a very high influence on substance abuse among children, while a higher proportion of students compared to teachers (50.74% > 35.59%) hold the view that separation of parents has a moderately high influence, an indication that, majority of the students feel that a family with a separated background had a moderately high influence. The researcher's view is that in the absence of both/one father and/or mother figure that plays a supervisory role, children can easily be predisposed to substance abuse, thus separation of parents has a limiting influence. This is reflected in the

moderate mean score ($\mu=3.24$) for students and ($\mu= 3.51$) for teachers with an aggregate mean of 3.375, which is above the baseline value of 3.00. This study finding concur with Kristjánsson & ÁlfgeirLogi,(2010) who observed that, students who rarely received parental supervision were more likely to consume alcohol.

Finally, further assessment revealed that 25.55% of students and 22.03% of teachers hold the view that an urban area has a very high influence on students 'abuse of substances, while majority 42.22%>30.50% of students compared to teachers hold the view that it has a moderately high influence. The gap in the findings could be attributed to teachers serving in urban day secondary schools where abuse of spirits is highly prevalent due to high exposure of students to the spirits and students from urban schools moderately exposed to miraa that is sourced from the big towns in the county. However, 11.85% of students and 20.33% of teachers are not sure, the researcher's view from these findings is that urban setting has great potential of limiting influencing on the young ones to abuse substances. This corroborates with Lee, (2012) study conclusion that other than the ease of access to drugs in school compound, the young generations' urban setting is another source.

4.6.2. Influence of predisposing Family Issues on Effectiveness of Substance Abuse Preventive Measures

To assess the effectiveness of substance abuse preventive measures a five constructs opinions were included in the tool as shown in the Table 4.15.

Table 4.15: Predisposing family issues vs Effectiveness of Substance Abuse Preventive Measures

Family issues	Respondent	Level of Limiting Influence					Mean	Std. dev.	AG. M.
		VH 5	MH 4	NS 3	ML 2	VL 1			
Intra-family interaction	Students	35.55% 96	28.88% 78	13.70% 37	16.97% 46	4.81% 13	3.57	1.311	3.735
	Teachers	22.03% 136	30.50% 18	15.25% 9	15.25% 9	9	15.25	3.90	
Parental Role model	Students	18.51% 50	32.22% 87	27.03% 73	15.24% 41	6.69% 18	3.70	1.174	3.875
	Teachers	18.64% 11	39.98% 23	22.03% 13	11.86% 7	8.47% 15	4.05	1.057	
Family dialogue	Students	15.18% 41	30.37% 82	18.51% 50	18.51% 50	17.10% 46	3.52	1.175	3.74
	Teachers	18.64% 11	32.20% 19	23.72% 14	12.07% 7	12.07% 46	3.93	1.015	
Parental control interventions	Students	16.66% 45	35.55% 96	5.18% 14	28.88% 78	13.70% 37	3.17	1.271	3.34
	Teacher	23.72% 14	32.20% 19	13.55% 8	11.86% 7	18.64% 11	3.51	1.023	

Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = Moderately low 1 = Very Low, STD=Standard Deviation, M=Mean, A. M=Aggregate Mean N=329

Source: Field data (2022)

According to the study, an assessment on whether there is influence of family issues on the effectiveness of substance abuse preventive measures among students in secondary schools was determined. From Table 4.15, the substance abuse preventive measures that are identified and limited by family related substance abuse psychosocial issues range from engaging parents as role models, which is the most limited, family dialogue, intra-family

interactions and parental control interventions. Findings reveal that 18.51% of students (18.64% of teachers are of the view that role modelling has a very high limited influence on effectiveness of substance abuse preventive measures. The close proportion between teachers and students indicate that role modeling is highly limited due to family challenges associated with managing substance abuse by parents and teachers are limited in knowledge over the same. Findings further reveal that 32.22% of students and 38.98% of teachers hold the view that role modeling has a moderately high limited influence. The gap could be due to limited in knowledge of the students' involvement in the abuse of substances. The finding is largely attributed to recently recruited teachers who are yet to know or experience students' involvement in abuse of substances. This further impacts negatively on students who lack role modeling in their engagement with substance abuse activities. However, 27.03% of students and 22.03% of teachers are not sure whether role modeling is an effective remedy in dealing with substance abuse. Findings therefore indicate that a majority of the respondents hold the view that role modelling has a moderately high limiting influence on substance abuse. This implies that family members who do not set a good example to family membership increase risk for substance abuse for seeing is believing. Nash, et al., (2005) in their national data survey identified that adolescents who believe that their parents would strongly disapprove of them using substances are significantly less likely to use substance than adolescents whose parents only somewhat disapproved.

Further still, 15.18% of students and 18.64% of teachers are of the opinion that family round table dialogue had a very high limiting influence in addressing substance abuse, while 30.37% of students and 32.20% of teachers felt that round table dialogue had a moderately high limiting influence on effectiveness of substance abuse preventive measures. The study therefore established that a majority of the respondents felt that the strategy had a moderately

high limiting influence. An indication that family issues could easily hinder communication channel between membership which is a forum for resolutions of conflicts. This is contrary to the view of Foxcroft and Tsertsvadze (2012) that, open communication about substance abuse and good parent-child relationship serve as protective factors to teenagers' substance use.

Contrary, findings reveal that 18.51% of the students and 23.72% of teachers hold the view that round table dialogue has a moderately low limiting influence on effectiveness of substance abuse preventive measures. Further still, 17.10% of students and 12.07% of teachers observe that round table dialogue has a very low limiting influence on effective prevention. These findings are supported by the high aggregate mean of 3.74. In addition, the study established that a majority of the respondents feel that the strategy has a moderately low influence. An indication that a good proportion of students and teachers have a feeling that family dialogue provides communication channel between membership which is a forum for resolutions of conflicts. There is a high level of divergence in views between respondents as reflected in the standard deviation well above the baseline score ($\delta=1.175 > \delta=1.015$). This implies that adolescents consider dialogues as forums for parents pushing their ideas down their throats, something they do not buy.

According to the study findings intra-family interaction is ranked third as a limited measure. Findings reveal that, 35.55% of students and 22.03% of teachers are of the view that intra-family interaction is most limited by family issues and therefore has a very high limiting influence on effectiveness of substance abuse preventive measures. Further still 28.88% of students and 30.50% of teachers feel that intra-family interaction has a moderately high limiting influence. The gap is attributed to difference in the experience of teachers and students in matters of student's involvement in preventive measures whereby the students

admit experience lack of adequate time with their parents and teachers are more experienced and knowledgeable for they have more time with students and understand them better. The divergent views is articulated in and justified by the high level of standard deviation ($\delta=1.311>\delta=1.185$) in the study. This implies that time is a very important resource in family matters when addressing behaviour problems such as substance abuse. So once it is hindered then the effectiveness of substance abuse preventive measures suffer. This is in agreement with IG where one participant observed:

‘Parents are very key in cases of substance abuse. They need to spend more time with their children so as to understand them and more so their behaviour to effectively address cases of substance abuse’ (Hood, Feb.28, 2022).

On the contrary GOK, (2018) posits that family-based content is critical although adolescents spend less time with their parents and peers become more important, parents always remain an important influence on their lives. Consistent with these findings, enhancing the frequency and quality of parent-child communication is a common and effective target in substance use for students.

Further assessment revealed that (23.70%; N=64) of students and (13.55%; N=8) of teachers observed that self-management skills had a very strong influence on preventive measures of substance abuse while (28.88%; N=78) of students and (25.42%; N=15) of teachers were of the view that self-management had moderately strong influence. An indication that majority of the respondents agreed self-management skills can effectively deal with behavior problems inclusive of substance abuse. The strength of this aspect is reflected in a mean score of (μ) 3.68 for students and (μ) 3.20 for teachers which is above the baseline value of (μ) 3.00. This is similar to Monitoring the Future survey (NIDA, 2016) report that providing a stable home environment, warm supportive parenting, in the early years of a child’s life can

lead the child to develop strong self-regulation. Even though majority of the teachers were of the view that self-management skills were effective, a good number (23.72%; N=14) too were neutral and (22.03%; N=13) had the view that self-management had a moderately weak influence. Under 'others' in the student questionnaire, a participant asserted that:

'Students being trained in social skills to meet challenges on their own and adequate parental involvement are effective substance abuse preventive measures' (Feb. 18, 2022).

While teachers observed under 'others' that:

'Guidance sessions, role modeling and counseling sessions were effective family strategies mitigating against substance abuse' (Feb.22, 2022).

These findings were in agreement with a study conducted by NACADA, 2019 on the status of substances in Kenya, about 36 per cent of the pupils indicated that they would quit a difficult situation while on the extreme end about 17 per cent indicated they would not quit. These results were indicative of the need to boost self-control skills further.

However, a few in FGD indicated that self-management effectively addressed substance:

'We don't like the way some teachers handle our issues during counseling' (FGD 7, Feb. 22, 2022).

Finally, the study established that, while 35.55% of students and 32.20% of teachers hold the view that parental control interventions have a moderately high limiting influence on substance abuse preventive measures, 16.66% of students and 23.72% of teachers note that parental control interventions has a very high limiting influence due to family issues. According to the findings of the study, as manifested in the standard deviation, teachers are more congruent the extent to which parental control interventions operate than the students (stud dv 1.257<1.355). Further still, 35.55% of students and 32.20% of teachers hold the view that parental control interventions has a moderately high limiting influence due to

family issues. The close proportions is an evidence that majority of the students and teachers in secondary schools in Kakamega county feel that not all parental control measures are effective. In the view of the researcher, the young trust their own independence and fellow peers more than their parents. This is contrary to Dunne et al., 2017; Hayashi, 2016; Kindermann, 2015; Korir & Kipkemboi, (2014) report indicated that other successful programs that have found family measures that work alongside school programs are beneficial because active parental involvement in children's education is a critical piece in preventing substance misuse in youth. However, findings from FGD and interview guide showed validate questionnaire findings. During interview, one of the participants observed:

'Parental control if introduced at an early stage will be very effective in controlling behaviour problems such as substance abuse, since charity begins at home. I have seen cases where some students openly say the truth' (HoD, 5, Feb.25, 2022).

In support of this statement, in one of the interviews the education officers, asserted:

'Schools should involve parents in matters of substance abuse during occasions like annual general meeting which has proved an effective way of addressing substance abuse, (Ed March 8th, 2022).

Hypothesis Testing

4.6.3. Regression Analysis for Family Issues

To establish the level of influence of family issues and examining whether family issues was a significant predictor of effective preventive strategies of substance abuse, the study used a coefficient of determination (R^2) using regression analysis as shown in Table 4.16.

Table 4.16: Model Summary

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Students	1	.730 ^a	.532	.531	.61296
Teachers	1	.768 ^a	.589	.588	.57420

a. Predictors: (Constant), Family issues

From Table 4.16 the R value for students and teachers is at .730^a and .768^a respectively which shows that there exists an influence of family issues on effectiveness of preventive measures of substance abuse. R² shows .532 and .589 on variation of effectiveness of preventive measures of substance abuse caused by family issues.

An analysis of variance (ANOVA) was also done to ascertain whether family issues was a significant predictor of effectiveness of preventive measures of substance abuse. The results were summarized as shown in Table 4.17.

Table 4.17: ANOVA of Family Issues and Effectiveness of Preventive Measures

	Model		Sum of Squares	Df	Mean Square	F	Sig.
Students	1	Regression	155.999	1	155.999	415.202	.000 ^b
		Residual	137.137	269	.376		
		Total	293.137	270			
Teachers	1	Regression	72.792	1	72.792	24.071	.000 ^b
		Residual	20.345	58	.330		
		Total	93.127	59			

a. Dependent Variable: Preventive measures

b. Predictor: (Constant), Family issues

From Table 4.17 where $[F(1, 269) = 415.202, P < .05]$ and where $[F(1, 269) = 415.202, P < .05]$, it is evident that family issues influence effectiveness of preventive measures of substance abuse and thus a significant predictor. The results for linear regression indicates that the data fit the model. The predictor (family issues) account for 53.1% from students and 58.8% from teachers of the variation in the dependant variable as indicated by the Adjusted R Square = .531 and Adjusted R Square = .588 (Table 4.16). The model had a significant influence on preventive measures, $[F(1, 269) = 415.202, P < .05]$ and where $[F(1, 58) = 24.071, P < .05]$. This means that family issues affects effectiveness of substance abuse preventive measures among secondary school students and thus a significant predictor. From this regression, family issues was statistically significant hence can be used for model

fitting. We therefore reject the null hypothesis and accept the alternative hypothesis. This implies that effectiveness of substance abuse preventive measures in secondary schools in Kakamega County is dependent on the family determinant among secondary school students in Kakamega County. The results of the current study corroborate with Azeez, et al, (2020) study conducted in Nigeria to determine parental involvement, peer influence and openness to experience as determinants of undergraduates 'substance abuse in Ogun State, Nigeria. Findings revealed that parental involvement, peer influence and openness to experience positively and significantly contributed to substance abuse among university undergraduates ($R = .646$, $R^2 = 0.417$; $F(3, 387) = 91.526^{p < 0.05}$). This implies that parental involvement, peer influence and openness to experience contributed about 41.7% to substance abuse among university undergraduates in Ogun State and statistically significantly contributed to substance abuse.

4.7. Personality Issues Vs Effectiveness of Substance Abuse Preventive Measures

The fourth objective of the study was to examine influence of personality issues on effectiveness of substance abuse preventive measures. Personality issues can be considered as personal or individual risk factors (Winters & Lee, 2008). This objective originates from the concept that genetic background and personality traits are of special importance for identifying high-risk individuals (Hokm, 2018). A proper foundation for emotional growth, which greatly influences behaviour, is provided for by the environment in which the young people grow up. Schools therefore have an obligation to ensure that such an environment prevails. Failure to which students will not manage their emotions successfully and can be a recipe for behavioural problems, substance abuse included (Wanjama, Muraya, & Gichaga, 2013). That explains why sometimes substance abuse is said to stem from personality determinant (Hokm, 2018). It is believed that substance abusers have personality weaknesses,

making them vulnerable to substance abuse, however human beings have the capacity to deal with behaviour problems such as substance abuse. The objective was founded on the premise that students have the capacity to address substance abuse preventive measures in Kakamega County. However, this problem still persist despite several personality related preventive measures initiated in schools. So the question is, to what extent does personality predisposing issues influence the effectiveness of preventive measures? It is against this critical concern that this objective was designed to investigate the views of students and teachers. Given that teachers and students are the primary players in the issue of substance abuse in schools, their views were used as the baseline for the study.

4.8. Descriptive statistics for Personality Issues

A five-point rating scale was used to collect views from the students and teachers. Eight constructs were presented to the respondents as indicators of personality issues. They responded to the statements from the Likert scale from very high (5) to very low (1) and thus 5 represented a high level of influence of personality predisposing issues on substance abuse while 1 indicating a low level of influence. This data was further analyzed on the basis of percentages, frequencies, means, standard deviation and aggregate mean of the respondents as summarized in Table 4.17.

4.8.1 Personality Predisposing Issues Vs Substance Abuse

The participants were further asked to indicate the extent of influence of personality predisposing issues on effectiveness of substance abuse. Their response was as shown in Table 4.18

Table 4.18: Personality predisposing issues on substance abuse

Personality Issues	Respondents	Levels of Predisposing influence						Mean	Std dev	Ag.M
		SH 5	MH 4	NS 3	ML 2	ML 1				
Risk taking behaviour	Students	15.18% 41	17.03% 46	23.70% 64	25.56% 69	18.52% 50	3.84	2.765	3.775	
	Teachers	27.11% 1 6	37.28% 22	20.33% 12	10.17% 6	5.08% 3	3.71	1.287		
Lack ofcapacity to Cope with stress	Students	35.55% 9 6	28.88% 7 8	13.70% 37	16.97% 46	5.17% 14	3.75	2.714	3.75	
	Teachers	18.64% 1 1	38.98% 23	22.03% 13	11.86% 7	8.47% 5	3.75	1.168		
Lonely characters	Students	18.51% 5 0	32.22% 87	27.03% 73	15.24% 41	6.69% 18	3.63	1.162	3.755	
	Teachers	18.64% 11	32.20% 19	23.72% 1 4	12.07% 7	12.07% 7	3.88	1.019		
Aggressiveness	Students	15.18% 4 1	30.37% 8 2	18.51% 50	18.59% 51	17.10% 46	3.34	1.067	3.535	
	Teachers	13.55% 8	25.42% 15	23.72% 14	22.41% 13	13.79% 8	3.73	1.080		
Rebelliousness	Students	29.62% 8 0	30.00% 8 1	15.55% 42	12.59% 34	12.22% 33	3.41	1.206	3.41	
	Teachers	15.25% 9	16.94% 10	23.72% 14	25.42% 15	18.64% 11	3.41	1.134		
Self confidence	Students	15.55% 4 2	34.07% 9 2	18.51% 5 0	16.67% 45	15.19% 41	3.10	1.377	3.395	
	Teachers	35.59) 21	28.81% 17	13.55% 8	16.95% 10	5.08% 3	3.69	1.103		
Imitating behaviour	Students	26.7% 72	35.9% 97	15.6% 42	9.63% 2 6	12.22% 33	3.87	1.118	3.975	
	Teachers	18.64% 1 1	32.20% 1 9	27.11% 16	15.25% 9	6.78% 4	4.08	.988		
Followers of the majority	Students	31.85% 86	34.44% 93	11.48% 31	9.63% 26	12.59% 34	3.39	2.825	3.355	
	Teachers	15.25% 9	30.50% 18	18.64% 1 1	18.64% 11	16.95% 10	3.32	1.074		

Key: 5 = Very High 4 = Moderately High 3 = Not sure 2 = moderately low 1 = Very low STD=Standard Deviation, M=Mean, A. M=Aggregate Mean N=329

Source: Field data (2022)

Findings from Table 4.18, reveal the presence of substance abuse psychosocial predisposing issues related to personality that has a limiting influence on substance abuse in the County. According to the study the first personality issue that has a limiting influence is imitating behaviour. Findings reveal that 26.7% of students and 18.64% of the teachers observe that imitating behaviour has a very high limiting influence on substance abuse. Further still, the proportion of students is high compared to teachers (35.9% > 32.20%) that hold the view that imitating behaviour is moderately high. The gap in the findings is due to the fact that students have higher chances of knowing the imitating behaviors of their fellow students than teachers. This is because the students are socially closer to one another than to teachers. On the contrary while 9.63% of students and 15.25% of teachers hold the view that imitating character has a moderately low influence, 12.22% of students and 6.78% of teachers feel that imitating character has a very low limiting influence on substance abuse. Both findings are attributed to the students and teachers from schools that are highly disciplined. This is because students in the highly disciplined schools are trained to work independently across the curriculum. The findings are further attributed to students in boarding schools where exposure to substance abuse is limited by their school culture.

Further still, findings reveal that a bigger proportion of students compared to teachers 25.55% > 10.17% hold the view that risk taking behaviors among students has a moderately low influence on the abuse of substances, while 18.51% of students and 5.08% of teachers feel that it has a very low influence. Both findings are attributed to the fact that some students evaded disclosing knowledge of substance abuse and also the findings could be attributed to students who are exercising self-control against the fact that they are active participants in the vice. On the contrary, while 15.18% of students and 27.11% of teachers

were of the view that risk taking behavior has a very high influence on substance abuse, 17.03% of students and 37.28% of teachers feel that it has a moderately high influence. An indication in both findings that majority of teachers hold the view that risk taking behaviour has a moderately high influence. The gaps in the finding is attributed to social gaps between students and teachers. Teachers have more understanding of their students whereas students would not want to show their true identity. Further still, 23.70% of students and 20.33% of teachers were of the opinion that they were not sure whether risk taking behavior among students influence them to abuse substances. This is justified by the high level of divergence in views between students and teachers as reflected in the $(\chi^2 = 32.765 > 1.287)$. Risk taking behaviour is an attribute of total independence, a characteristic quite familiar with adolescents which account for the findings, whereas teachers perceive it as the cause of substance abuse. This corroborates with Dishion et al, (1999) that some school risk factors that can influence students to substance abuse are: inappropriate classroom behaviour such as aggression, impulsivity and poor social coping skills.

Further assessment revealed that 18.51% of students and 18.64% of teachers observe that lonely behaviour has a very high influence on substance abuse, whereas 32.22% of students and 32.20% of teachers hold the view that this aspect has a moderately high influence. Therefore majority of the respondents observe that lonely behaviour highly contributes to substance abuse. For the students, these findings are attributed to active abusers of substances. For the teachers the findings could be attributed to experienced teachers knowledgeable or exposed in the matters of abuse of substances. However, 27.03% of students and 23.72% of teachers were neutral. The gap could be attributed to active abusers of spirits who are covering their involvement in the vice for the fear of punishment. For the

teachers the findings could be attributed to the recent recruits who are not knowledgeable or exposed in the matters of abuse of spirits. The findings therefore implies that withdrawal syndromes which is unhealthy mental status does attract abuse of substances. This is further reflected in the high mean score of 3.63 for students and 3.88 for teachers. This is close to David Koech task force (2016) which revealed that youths are under serious threat from substances. Many commit arson because they are not provided with emotional support and are found to have been under some influence of substances.

Further, assessment revealed that 35.55 of students and (18.64%; N=11) of teachers were of the idea that coping with stress had a very strong influence on substance abuse, while (28.88%; N=78) of students and (38.95%; N=23) of teachers felt it had moderately strong influence. An indication that coping with stress is one aspect that is rated highly in the abuse of substances. This is supported by the moderate aggregate mean ($\mu = 3.75$) which is above the baseline value. To the researcher students look for ways of managing their psychological problems in the best way possible including coping with stress by abusing substances. This view is supported by Zullig, Huebner, Patton and Murray (2009) who reported that university students who witnessed stress due to anger, frustration and boredom, consume alcohol to fit in.

According to the study, the next most personality predisposing issue is lack of coping mechanism. This is reflected in a mean score of 3.75 for both students and teachers with an aggregate mean of 3.75. Findings revealed that a bigger proportion of students compared to teachers 35.55% > 18.64% hold the view that lack of coping with mechanism has a very high limiting influence on substance abuse. The higher proportion of teachers compared to

students is due to secrecy amongst students in particular those who are active in the abuse of miraa.

Further assessment revealed that while 15.18% of students and 13.55% of teachers are of the view that aggressiveness has a very high influence on the abuse of substance, 30.37% of students and 25.42% of teachers agree that it has moderately high influence. An indication that majority of the respondents hold the view that aggressiveness has a moderately high influence on substance abuse. This is supported by the moderate aggregate mean of ($\mu = 3.535$) which is above the baseline value. In the view of the researcher, sometimes aggressiveness is sustained with the help of substances which becomes a defense mechanism. This is in line with Manrique et al. (2013) study which further outlined the emotional problems faced by students as feelings of frustrations, depression, anxiety and low self-worth which predisposes learners to substances.

Finally, findings revealed that a good proportion of students compared to teachers 26.7% > 18.64% hold the view that self-confidence had a very high limiting influence on substance abuse, more still even a bigger proportion of students compared to teachers 35.90% > 32.20% has a moderately high limiting influence on abuse of substances. The findings could be attributed to that fact that students have a closer association on interactions with fellow students and in particular those who abuse substances end up having confidence in themselves while teachers could be limited in knowledge of the students' involvement in the abuse of substances because substances is a secretive activity. However, a good proportion (15.6%; N=42) of students and (27.11%; N=16) of teachers are neutral. The study therefore established that majority of the respondents hold the view that self-confidence has a moderately high limiting influence on substance abuse. The level of influence of this aspect

is reflected in a mean score of (μ) 3.87 for students and (μ) 4.08 for teachers. An indication that students without self-confidence believed that difficult tasks and situations were beyond their capabilities which would indirectly lead them to substance abuse to overcome. This corroborates with Sheykhjan et al. (2014) who asserts that low self-esteem lessens a student's desire to learn and the ability to focus thus leading to trivialities.

Focus group discussion corroborated the findings. Most of the students portrayed a favourable view in regard to influence of personality issues on substance abuse. Some of them especially boys pointed out under 'others' that some of the key personality predisposing issues of substance abuse were: care free, trusting, introvert and extrovert. However, a participant during FGD observed

'There are those students whose behavior is never dictated by what they see or hear what others say. They believe in themselves' (FGD 5, 23, 2022).

The findings from the interviews with the education officers agreed that personality predisposing issues strongly contributed to substance abuse among students. Commenting on personality predisposing issues, the education officer X stated:

'Failure of students not being engaged results in burnout that easily lead to behaviour problems such as substance abuse' (EO 8, Feb.19, 2022).

In support of this statement, a few of them observed;

'High handedness of school authority was the cause of substance abuse among students. Such a situation in schools mostly leads to strikes' (Feb.26, 2022)

This is in agreement with Makhandia (2016) study whose findings revealed that the way school administration manages student affairs may probably lead to substance abuse. High

handedness, lack of freedom and failure to address their grievances creates stress which can lead to abuse of drugs as depressors.

4.8.2. Descriptive Statistics for Effectiveness of Substance Abuse Preventive Measures

To assess the effectiveness of substance abuse preventive measures, eight constructs were included in the tool as shown in the Table 4.19 for students and teachers respectively.

Table 4.19: Personality issues Vs Effectiveness of Substance Abuse Preventive Measures

Personality related measures	Respondent category	Level of limiting influence					Mean	Std dev.	Ag. M
		VH 5	MH 4	NS 3	ML 2	VL 1			
One on one counselling	Students	15.55%	34.07%	18.51%	16.67%	15.19%	3.60	1.323	3.715
		42	92	50	45	41			
Gender based counselling	Teachers	28.81%	31.50%	15.25%	12.07%	12.07%	3.83	.985	3.645
		17	18	9	7	7			
Random Intervention	Students	26.66%	35.92%	15.55%	9.63%	12.22%	3.54	1.184	3.45
		72	92	42	26	33			
Group counselling	Teachers	18.64%	38.98%	22.03%	11.86%	8.47%	3.75	1.060	2.925
		11	23	13	7	5			
Individualised Guidance	Students	31.85%	34.44%	11.48%	9.63%	12.59%	3.43	1.186	3.915
		86	93	31	26	34			
Surrogate parenting	Teachers	18.64%	32.20%	23.72%	12.07%	12.07%	3.47	.989	3.685
		11	19	14	7	7			
Parental guidance	Students	27.77%	30.37%	25.92%	6.29%	9.63%	2.82	1.191	3.735
		75	82	70	10	26			
	Teachers	13.55%	25.42%	23.72%	22.41%	13.79%	3.03	1.313	
		8	15	14	13	13			
	Students	29.62%	30.00%	15.55%	12.59%	12.22%	3.75	1.244	
		80	1	42	34	33			
	Teachers	28.81%	31.50%	15.25%	12.07%	12.07%	4.08	.988	
		17	18	9	7	7			
	Students	19.25%	38.51%	21.85%	11.11%	9.26%	3.52	1.172	
		52	4	59	30	25			
	Teachers	15.25%	33.89%	18.64%	16.95%	15.25%	3.85	1.229	
		9	20	11	11	9			
	Student	9.6%	14.1%	18.1%	30.37%	27.77%	3.57	1.232	
		26	38	49	82	75			
	Teachers	16.94%	23.72%	15.25%	32.20%	11.86%	3.90	.989	
		11	14	9	19	6			

**Key: 5 = Very Strong 4 = Moderately Strong 3 = Neutral 2 = Moderately weak
1 = Very Weak, STD=Standard Deviation, M=Mean, A. M=Aggregate Mean
N=329**

Source: Field data (2022)

Findings from Table 4.19 indicate an assessment on the effectiveness of substance abuse preventive measures in relation to personality issues in secondary schools of Kakamega county. From Table 4.19, the substance abuse preventive measures that are identified and limited by personality predisposing issues of substance abuse range from individualized guidance sessions, parental guidance, one on one counseling, surrogate parenting and gender based counseling. Findings reveal that individualized guidance sessions is the most limited measure on effectiveness of substance abuse preventive intervention as reflected in an aggregate mean of 3.915. Findings reveal that 29.62% of students and 28.81 % of teachers indicate that individualized guidance sessions has a very high limited influence on effective prevention of substance abuse suggesting that both students and teachers have a feeling that individualized guidance suffers most since it is a strategy that is oftenly used in secondary schools. Further still, 30% of students and 31.50% of teachers hold the view that individualized guidance sessions has a very high limited influence on effective prevention of substance abuse. The findings are attributed to the difference in the experience of teachers and students in matters prevention of substance abuse whereby teachers are more experienced and knowledgeable than students. However 15.55% of students and 15.25% of teachers are neutral which could imply these are respondents from schools that do not engage students in this kind of strategy.

On the contrary, 12.59% of students and 12.07% of teachers hold the view that individualized guidance sessions has a very low limited influence on effective prevention of substance abuse. The findings are attributed to teachers and students from highly disciplined schools where students' involvement in abuse of substances is very limited and as such individualized guidance sessions is limited to a lesser extent.

Findings from Table 4.19 reveal that parental guidance is second most limited measure on effectiveness of substance abuse preventive intervention as reflected in an aggregate mean of 3.735. Findings reveal that 30.37% of students and 32.20% of teachers were of the opinion that involvement of parents in issues to do with substances had a moderately low influence on effective prevention of substance abuse. Similarly, 27.77% of students and 11.86% of teachers hold the view that this aspect has very low limited influence. The highest proportion of both teachers and students hold the view that parental guidance has a moderately low limited influence. This findings are attributed to the fact that parents play a crucial role in the area of prevention. On the contrary, 9.6% of students and 16.94% of teachers were of the view that this aspect had a very high influence. The study therefore established that majority of the respondents hold the view that involvement of parents in matters of substance abuse was effective. This is reflected in a mean score for teachers (μ) 3.90 and students (μ) 3.57 thus an indicator of the divergence in views between respondents. Students have no trust in their parents due to fear of the unknown and yet they play a very important role in the moral development of children. This is contrary to what NACADA, (2021) report recommends that counseling support system should be provided for learners with either users or non-users of substances. One of the teachers in charge of guidance and counseling commented:

'There is need for an enhanced programmer of guidance and counseling believe that students developing a positive

personal image will enhance self-respect and adherence to virtues than vices' (Hood, Feb, 28 2022).

Findings reveal that one on one counseling is the third in rank with an aggregate mean and that 15.55% of students and 28.81% of teachers hold the view that one-on-one counselling practice had a very high limited influence in prevention of substance abuse, while 34.07% of students and 30.5% of teachers are of the opinion that the strategy has a moderately high limited influence. However, 18.51% of students and 15.25% of teachers are not sure, whereas 16.66% of students and 12.07% of teachers hold the view that one-on-one counseling has moderately weak influence. This therefore imply that majority of the respondents hold the view that one-on-one strategy has moderately high limited influence, an indication that it does not effectively address substance abuse among students. This opinion is contrary to Ayieko (1988) study which observed that guidance and counselling played a pivotal role in students' behaviour, management and correction in schools. Further still, Boitt (2015) study findings showed that the guidance and counselling programmes in schools were ineffective because of lack of trained staff and facilities and poor implementation. Focus group discussion (FGD) and Interview guide (IG) validated the findings from quantitative data.

During the interview guide one of the Education Officer had this to say:

'Reports from the office reveal that guidance and counseling programme has been established in schools. However, its effectiveness is still a challenge since substance abuse cases are still on the rise, as evidenced in a number of strikes. The causes of these strikes are inclusive of substance abuse' (EO, March, 7, 2022).

This therefore implies that schools have embraced one-on-one counseling. This corroborates with National guidelines on alcohol and substance abuse (2021) which reported that prevention programs addressing individual psychological vulnerabilities help adolescents that are particularly at-risk to deal constructively with emotions arising from their personalities.

Further findings revealed that while (31.85%; N=86) of students and (23.72%; N=14) of teachers agreed that random searches on students had a very strong influence in dealing with substance abuse, (34.44%; N=93) of students and (33.89%; N=20) of teachers viewed it as having a moderately strong influence. This implies that a majority of the respondents felt that random searches had moderately strong influence. The time when this exercise is done informs the findings. This is normally done during opening day, after long and short holidays, after half term, during tea and lunch break, and before school outing. It is normally effective when students are ambushed either in class, dormitory or just before students report to school after an outing or holiday. This is similar to NACADA, (2021) report which posits that the school shall monitor the learners' abstinence through facilitation of random searches. However findings from (IG) revealed that students seem not to support the idea of random searches. During FGD some students commented:

'Any time teachers open to search our desks am never at peace. This is lack of trust for us. They embarrass us before our friends.'(FGD 5, 23, 2022).

Findings further revealed that while 19.25% of students and 15.25% of teachers hold the view that surrogate parenting has a very high limited influence in the area of prevention, 38.51% of students and 33.89% of teachers are of the view that it has a moderately high influence. Contrary, a good proportion of students 21.85% > 18.64% than teachers are not sure whether surrogate parenting was an effective way of dealing with substance abuse. Findings indicate that majority of the students are of the view that surrogate parenting was not effective as it was hindered by personality predisposing issues. This is reflected in a mean score of (μ) 3.52 for students and (μ) 3.85 for teachers. The results are attributed to the fact that surrogate parenting calls for commitment and devotion both from teachers and students

and by extension the school as a whole. This is close to the views of Onrust et al. (2016) that when targeting middle-aged children content should focus on teaching social skills, self-control and healthy behaviour in enhancing self- motivation.

This view is supported by Etsula, (2017) whose study revealed that harsh treatment from the administration, lack of freedom, and student's failure to have their grievances addressed creates stress which can lead to the abuse of drugs. This corroborates with what one teacher observed under 'others':

'We need to set a good example to the young ones. What we say and do should match ('Feb.22, 2022).

Hypothesis Testing

4.8.3. Influence of Personality Issues on the Effectiveness of Substance Abuse Preventive Measures

To examine the association between personality issues and effectiveness of substance abuse preventive measures, simple linear regression test was carried out to determine that *'There is no statistically significant influence of personality issues on effectiveness of substance abuse preventive measures among secondary school students.'*

4.8.4 Regression Analysis for Personality Issues

To establish the level of influence of personality issues and examining whether personality issues was a significant predictor of preventive measures of substance abuse, the study used a coefficient of determination (R^2) using regression analysis as shown in Tables 4.19 and 4.20.

Table 4.20: Linear Regression Analysis Between Personality Issues and Effectiveness of Preventive Measures.

Model Summary

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Students	1	.631 ^a	.433	.423	.43961
Teachers	1	.695 ^a	.483	.474	.45414

a. Predictors: (Constant), Personality issues

From Table 4.20 the R value for students and teachers is at .631 and .695^a respectively which shows that there exists an influence of personality issues on effectiveness of preventive measures of substance abuse. R² shows .433 and .483 on variation of effectiveness of preventive measures of substance abuse caused by personality issues

From Table 4.20 the R value is at .631^a and .695^a for students and teachers respectively which shows that there exists an influence of personality issues on effectiveness of preventive measures of substance abuse. R² shows .433 and .483 on variation of effectiveness of preventive measures of substance abuse caused by personality issues.

An analysis of variance (ANOVA) was also done to ascertain whether personality issues was a significant predictor of effectiveness of preventive measures of substance abuse. The results were summarized as shown in Table 4.21.

Table 4.21: ANOVA of Personality Issues and Preventive Measures

	Model		Sum of Squares	Df	Mean Square	F	Sig.
Students	1	Regression	20.159	1	20.159	80.959	.000 ^b
		Residual	90.977	269	.249		
		Total	93.127	270			
Teachers	1	Regression	10.993	1	10.993	53.301	.000 ^b
		Residual	11.756	58	.206		
		Total	22.748	58			

a. Dependent Variable: Preventive measures

b. Predictors: (Constant), personality issues

From Table 4.21 where $[F(1, 269) = 80.959, P < .05]$ and $[F(1, 58) = 53.301, P < .05]$ it is evident that personality issues influence effectiveness of preventive measures of substance abuse and thus a significant predictor.

Results for the ANOVA test as shown in Table 4.21 indicates that the model had a significant influence of preventive measures; $[F(1, 269) = 80.959, P < .05]$ and $[F(1, 58) = 53.301, P < .05]$; this indicated that the adopted linear regression model was a good fit to the study dataset. The model predictor (personality issues) was able to account for 42.3% from students and 47.4% from teachers of the variation in the effectiveness of preventive measures of substance abuse among secondary school students in Kakamega county as indicated by the Adjusted R Square=.423 for students and Adjusted R Square=.474 for teachers as shown in the model summary of Table 4.20. From the regression model, personality issues was statistically significant hence can be used for model fitting. We therefore reject the null hypothesis and accept the alternative hypothesis. This implies that effectiveness of substance abuse preventive measures in secondary schools in Kakamega County is dependent on the personality issues among secondary school students in Kakamega County. This is close to the study of Pere (2016) which sought to examine the preventative strategies influencing drug abuse reduction among the undergraduate students enrolled in public university campuses in Nairobi County. There was statistically significant association between personal image and drug abuse reduction among students in public university campuses in Nairobi County. The resulting relation between these variables was significant 0.05, $\chi^2(144, N = 1430) = 135.727$, $p < 0.05$. The study therefore conclude that there is a statistically significant relationship between positive personal image among university students and drug abuse reduction. The findings tend to concur with Otingi (2012) who asserted that self-esteem acts as social

vaccine that empowers individuals and inoculates them against undesirable behaviours. There was statistically significant association between guidance and counseling and drug abuse reduction among students in public university campuses in Nairobi County.

The Regression Model

This study employed a multivariate regression model in order to determine the importance of the independent variables with regard to the dependent variable which was preventive measures. This is helpful in determining the statistical significance of the predictor variables used in this study. The study investigated how well the predictor variables will predict preventive measures. The regression model used was as follows;

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

Y = Preventive Measures

a = Y intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ = the slope of the regression line for each independent variable

X_1 = Co-curricular Issues

X_2 = Peer Issues

X_3 = Personality Issues

X_4 = Family Issues ε = Error term.

Regression Model

Table 4.22: Model Summary

		R	R Square	Adjusted R Square	Std. Error of the Estimate
Teachers	1	.802 ^a	.643	.617	.33212
Students	1	.445 ^a	.198	.185	.45239

a. Predictors: (Constant), Family issues, Personality issues, Co-curricular issues, Peer issues

From Table 4.22, R value which is the correlation between the predictor and the dependent variable both for teachers and students were .445^a and .802^a. The findings suggested that there was a positive influence of the independent variables on preventive measures. The coefficient of determination (R^2) which indicates the proportion of variance in the dependent variable that was accounted for by the predictor(s) in our sample data was .198 and .643 which is 19.8% and 64.3% proportion of variance of preventive measures as a result of the independent variables. Since R^2 is always between 0 and 100%, a level of 0 showing none of the variability of the response data while 100% showing that the model explains all the variability of the response data around its mean, 19.8% and 64.3% are therefore, values signifying that the model fits the data to some extent.

An analysis of variance (ANOVA) was also done to ascertain whether the independent variables were a significant predictor of preventive measures. The results were summarized in Table 4.23.

Table 4.23: ANOVA a

			Sum of Squares	Df	Mean Square	F	Sig.
Students	1	Regression	12.093	4	3.023	14.772	.000 ^b
		Residual	48.913	239	.205		
		Total	61.006	243			
Teachers	1	Regression	10.735	4	2.684	24.331	.000 ^b
		Residual	5.956	54	.110		

Total	16.692	58
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a. Dependent Variable: Overall Effectiveness

b. Predictors: (Constant), Family issues, Co-curricular issues, Personality issues, Peer issues)

From Table 4.23 the ANOVA findings [F (4, 54) =24.331, P<.05)] and [F (4, 239) =14.772, P<.05)] where the significance value of 0.00^b depicts that there exists a significant influence of the predictor variables (Co-curricular issues, peer issues, personality issues and family issues) on the response variable (Preventive measures).

Table 4.24: Coefficients of Regression Equation

		Unstandardized Coefficients		Standardized Coefficients			
Model		B	Std. Error	Beta	t	Sig.	
Students 1	(Constant)	1.801	.229		7.878	.000	
	Co-curricular issues	.142	.051	.172	2.801	.006	
	Peer issues	.098	.051	.117	1.912	.057	
	Personality issues	.160	.037	.257	4.299	.000	
	Family issues	.111	.043	.157	2.583	.010	
Teachers 1	(Constant)	.422	.359		1.176	.245	
	Co-curricular issues	.006	.071	.008	.081	.936	
	Peer issues	.166	.086	.219	1.929	.059	
	Personality issues	.506	.091	.585	5.554	.000	
	Family issues	.143	.065	.184	2.204	.032	

The multiple regression was used in order to determine the relationship between preventive measures and the other variables which were co-curricular, peer, personality and family issues. From Table 4.24, the multiple linear regression equation model for students and teachers that was fit for this study is as follows;

$$Y = 1.801 + 0.172X_1 + 0.257X_3 + 0.157X_4, Y = 0.422 + 0.585X_3 + 0.184X_4$$

From the linear regression equation, the coefficients indicate how much the independent variables vary with preventive measures when all other variables are kept constant. $\beta_1 = 0.172$ shows that an increase in a unit of co-curricular issues results in 0.172 increase in effectiveness of preventive measures. From the model, this predictor is statistically significant and was used in fitting the model. $\beta_2 = 0.117$ depicts that an increase in a unit of peer issues result in an increase of 0.117 in effectiveness of peer related preventive measures. From this model this variable is not statistically significant hence it was not fitted in the model. $\beta_3 = 0.257$ shows that an increase in a unit of personality issues results in 0.257 increase on preventive measures. From the model, this predictor is statistically significant hence it was used in model fitting. $\beta_4 = 0.157$ shows that an increase in a unit of family issues results in a 0.157 increase on preventive measures. This predictor is also statistically significant and was used in fitting the model. From Table 4.24 it is evident that co-curricular, personality and family issues according to students the predictor variables were statistically significant and would highly influence preventive measures.

From the multiple linear regression equation, according to teachers, the coefficients indicate how much the independent variables vary with preventive measures when all other variables are kept constant. $\beta_1 = 0.008$ shows that an increase in a unit of co-curricular issues results in 0.008 increase in preventive measures. From the model, this predictor is not statistically significant and was not used in fitting the model. $\beta_2 = 0.219$ depicts that an increase in a unit of peer issues result in an increase of 0.219 in preventive measures. From this model this variable is not statistically significant hence it was not fitted in the model. $\beta_3 = 0.585$ shows that an increase in a unit of personality issues results in 0.585 increase on preventive

measures. From the model, this predictor is statistically significant hence it was used in model fitting. $\beta_4 = 0.184$ shows that an increase in a unit of family issues results in a 0.184 increase on preventive measures. This predictor is also statistically significant and was used in fitting the model. From Table 4.24, it is evident that personality and family issues according to teachers are predictor variables that were statistically significant and would highly influence preventive measures.

Tests of Hypotheses

The study's hypotheses about the independent variables' effects on the dependent one were put to the test. Multiple regression analysis was used to determine the impact of each independent variable on the measures under consideration. Hypotheses were tested at 95% level of Confidence limit or 5 % level of significance. This significance level (5%) was adopted because of the expert recommendations for survey studies as per (Uwe, 2014). The researcher came up with conclusions on the hypotheses that were formulated in this study as shown in Table 4.25.

Table 4.25: Results of Hypotheses Tests

	Hypothesis	Decision
1	There is no statistically significant influence of co-curricular issues on effectiveness of substance abuse preventive measures among students	The null hypothesis is rejected and the alternative hypothesis accepted
2	There is no statistically significant influence of peer issues on effectiveness of substance abuse preventive measures among students.	The null hypothesis is rejected and the alternative hypothesis rejected
3	There is no statistically significant influence of family issues on effectiveness of substance abuse preventive	The null hypothesis is rejected and the alternative hypothesis

	measures among students.	accepted
4	There is no statistically significant influence of personality issues on effectiveness of substance abuse preventive measures among students.	The null hypothesis is rejected and the alternative hypothesis accepted

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter represents summary of the findings, conclusions drawn, and recommendations based on the conclusions and suggestions for further research.

5.2 Summary of the Findings

The study sought to investigate influence of psycho-social predisposing issues of substance abuse on their effectiveness of preventive measures among secondary school students in Kakamega County. Specifically the study entailed establishing the relationship between co-curricular issues, peer issues, family issues, personality issues of substance abuse and the effectiveness of preventive measures among secondary school students.

5.2.1 Influence of Co-curricular Issues on Effectiveness of Substance Abuse Preventive Measures among Students

The first objective of the study established that co-curricular issues has a statistically significant influence on effectiveness of substance abuse preventive measures. Therefore, the hypothesis **H₀₁**: There is no statistically significant influence of co-curricular issues on effectiveness of substance abuse preventive measures among students was rejected. It is evident that co-curricular issues influence effectiveness of substance abuse preventive measures and thus a significant predictor. The implication is that co-curricular issues such as competitive games and sports, clubs, stars in co-curricular, and time allocated have limiting influence, on effectiveness of abuse of substance preventive measures. The inference drawn from the findings is that co-curricular activities with a very low influence is a protector factor in relation to substance abuse preventive measures.

The study further established, that co-curricular issues influence effectiveness of substance abuse preventive measures.

5.2.2 Influence of Peer Issues on Effectiveness of Substance Abuse Preventive Measures among Students

The second objective of the study established that peer issues has a statistically significant influence on effectiveness of substance abuse preventive measures. Therefore, the hypothesis **H₀₂**: There is no statistically significant influence of peer issues on effectiveness of substance abuse preventive measures among students was rejected. It is evident that peer issues have a limiting influence on effectiveness of preventive measures of substance abuse and thus a significant predictor. The study established that peer grouping, social pressure, substance sales and spending leisure time together are critical ways in which substance abuse problem is hastened among students in the study area.

Overall, the study established that peer issues determined effectiveness of substance abuse preventive measures. The study further established that peer to peer talk is the most limited strategy in addressing substance abuse... This was then followed by role play games, guest speakers, debates and peer guided practices strategies in dealing with substance abuse.

5.2.3 Influence of Family Issues on Effectiveness of Substance Abuse Preventive Measures among Students

The third objective of the study established is that family issues has a statistically significant influence on effectiveness of substance abuse preventive measures among secondary school students. Pursuant to this, the study established that family involvement in substance trade

had the biggest limited influence followed by lack of family cohesion, limited parental care, separation of parents, rural urban migration and lastly financial stability and instability.

In the context of effectiveness of preventive measures, the study established that family issues had limiting influence on effectiveness of substance abuse preventive measures. The most limited preventive measure was role modeling which is key in reduction of substance abuse..

The study also established a significant relationship between family issues and effectiveness of substance abuse preventive measures. Therefore, the hypothesis **H₀₃**: There is no statistically significant influence of family issues on effectiveness of substance abuse preventive measures among students was rejected. It is evident that family issues have limiting influence on effectiveness of preventive measures against substance abuse and thus a significant predictor. The inference drawn from this finding is that effectiveness of substance abuse preventive measures in secondary schools in Kakamega County is dependent on family predisposing issues.

5.2.4: Influence of Personality Issues on Effectiveness of Substance Abuse Preventive Measures Among Secondary School Students.

The fourth objective of the study established that imitating character, risk taking behaviour, lonely characters, students lacking capacity to cope with stress, aggressiveness and self-confidence have a limiting influence on the abuse of substances. The study also identified and ranked personality predisposing issues that limit effectiveness of substance abuse preventive measures. It established that individualized based guidance sessions is the most

limited measure followed by parental guidance, one-on-one counseling, guidance, surrogate parenting and random preventive measures.

As a result, the study established a significant relationship between personality issues and effectiveness of substance abuse preventive measures. Thus personality issues is a significant predictor of preventive measures of substance abuse. Therefore, the hypothesis Ho₄: There is no statistically significant influence of personality issues on effectiveness of substance abuse preventive measures among students was rejected.

5.3 Conclusions

The study established that there are substances that are abused by secondary school students in Kakamega County. The substance range from traditional brew which is the most abused. It is sequentially followed by bang, spirits, miraa, kubera and lastly by cigarettes. Further to this, the study established that there are substance abuse psycho-social issues related to co-curriculum practices that have limiting influence. Rugby has the highest limiting influence. Rugby is sequentially followed by soccer, drama and lastly by sports.

The substance abuse preventive measures that are limited by the co-curricular practices ranges from the practices of using open communication channel which is the most limited, This is sequentially followed by the measure of administrative interventions by the school management then the one of carrying out random checks among the students followed by the measure of enforcement of public laws and policies and lastly by the measure of selecting what co-curricular practices to engage into.

The study also established presence of substance abuse psycho-social pre-disposing issues that are related to peer influence and have limiting influence on effectiveness of substance abuse preventive measures in the county. The peer related issues range from the aspect of social pressure which has the biggest limiting influence. The aspect is sequentially followed by the issue of peer grouping, then the issues of involvement of some peers in the sale of substances, the issue of freedom to socialize with peers and lastly the aspects on issues of difference in financial capacity of peers. Further to this, the study established that the substance abuse preventive measures that are limited by the peer-related substance abuse predisposing psycho-social issues range from the measure of peer to peer talk which is the most limited. This is sequentially followed by the measure of role playing among peers then the measure of engaging guest or expert speakers which is followed by the measure of engaging the students' peers in debates and lastly peer-guided practices.

Further to this, the student established presence of substance abuse psycho-social predisposing issues related to student's family backgrounds that limit the effectiveness of substance abuse preventive measures in the county. The family related issues ranged from family involvement in substance trade which had the biggest limited influence. This is followed by the issue of lack of family cohesion, then the issues of limited parental care which is followed by separation of parents then rural-urban migration and lastly by the issues of external in financial stability and instability. The substance abuse preventive measures that are limited by family related substance abuse psycho-social issues ranged from the measure of engaging parents as role models which is the most limited. This is followed by the measure of family dialogue, then the one of intra-family interactions and lastly by the measure of engaging parental control.

The study established that there are substance abuse psycho-social issues related to students' personality that limit effectiveness of substance abuse preventive measure in secondary schools in Kakamega County. The noted students' personality issues range from the issues of having imitating character which has the biggest limiting influence. This is followed by the issues of students with risk-taking behavior, students who are lonely characters, students lacking capacity to cope with stress, the issues of aggressiveness followed by the issues of rebelliousness, issues of self-confidence and lastly the issues of some students being followers of the majority in the most circumstances. The substance abuse preventive interventions that are limited by the substance abuse psycho-social issues that are related to students' personality range from the measure of individual based guidance sessions which is most limited. This is followed by the measure of parental guidance, then the one to one counseling. These measures are sequentially followed by the measure of surrogate parenting gender-based counseling and lastly by random searches among students intervention.

5.4 Recommendations

On the basis of the findings and conclusion of the study, the study recommends that:

The current substance abuse preventive measures should be restructured in a way to minimise the influence of psychosocial predisposing issues.

Teachers should provide social and emotional support to students since these highly promotes prevention of substance abuse.

There is need for school stakeholders be trained in the area of psychosocial predisposing issues to inform them in decision making, shaping values and attitudes of students against substances abused.

The school policy of substance abuse should be reviewed in the perspective of the prevailing cocurricular practices, peer related issue, family background and personality characteristics.

5.5 Suggestions for Further Research

- i) A longitudinal study should be conducted to give a better perspective of the association between personality issues and effectiveness of substance abuse preventive measures among secondary students.
- ii) This study focused on form threes. It is imperative that a study be undertaken across classes on psychosocial issues and effectiveness of preventive measures in Kakamega County in order to differentiate the approaches in resolving substance abuse problem at different levels.

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APPENDICES

Appendix I: Letter of Introduction to the Respondents

MasindeMuliro University of Science and Technology,
Department of Educational Psychology,
P.O. BOX 190,
Kakamega.

The respondents in secondary schools of Kakamega County
Education officers, Principals, Deputy principals, Guidance and counseling teachers, Class
teachers and Students.

Thro`

Kakamega County Director of Education,
P.O Box 352,
Kakamega.

Dear Sir/Madam,

Re: Appointment as a Respondent in Research

I am a student at MasindeMuliro University of science and technology. I am pursuing a PhD in Educational Psychology. I am expected to conduct a research in partial fulfillment of the course requirement.

You have been identified as one of the respondents in this study. Kindly respond to items in the questionnaire, interview guide and focus group discussion guide as honestly as possible. Your responses will be kept confidential. Your cooperation is most welcome. The findings of this study may enrich the country's national substance abuse preventive interventions. It is likely that teachers, schools and training colleges will find this study a rich resource for preparation of more meaningful lessons on substance abuse preventive interventions. The work once ready will be published.

Thank you.

Yours faithfully

Felistus, O. Nyamoma.

Appendix 11: Participant Informed Consent Form

I confirm that:

I have read and understood the questionnaire information sheet for the above study and have had an opportunity to ask questions.

I understand that my participation in this study is voluntary and that am free to withdraw any time without giving any reason(s).

I therefore agree to take part in the study.

.....			
Name of participant	age/form	Date	Sign

.....		
Name of Researcher	Date	Sign

Appendix I11: Self administered Questionnaire for Students

Dear participant,

Thank you for agreeing to participate in this survey. Kindly complete all questions as honestly as possible because there are no right and wrong answers. The questionnaire is anonymous, and strict confidentiality is promised. You are therefore not required to write your name. Answer questions frankly and truthfully. Never give untrue answer.

Instructions: Place a tick (✓) where applicable.

Part One: Personal Data

NAME OF SCHOOL: _____

1 Gender Male () Female ()

2Age 16-18yrs () 19-20 yrs. () over 21 yrs ()

3 School Setting: Boys Boarding () Boys Day and Boarding () Girls Boarding () Girls Day () Girls Day and Boarding () Mixed day () Mixed day and boarding ()

4Category: National school () Extra county () County school () Sub county school ()

5a Religion: Christian () Muslim () any other specify ()

Section 2a: Tick (✓) to indicate the extent to which you agree with the following statements on how co-curricular activities make students abuse substance .Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4=agree and 5=strongly agree

6 a) What is the status of substance abuse in your school?

b).The following substances are commonly abused during co-curricular activities in schools:	1	2	3	4	5
Tobacco Cigarretes Shisha					
Alcohol Beer wines spirits traditional brew					
Stimulants					
Miraa Cocaine Kuber					
Narcotic Opium/Marijuana Heroin					
Cannabis Sativa Bang Hashish					
Any other. Specify-----					
7a) Students abuse substances during: games competetion drama festival educational trips inter-school symposiums Any other(specify)-----					

8 The following co-curricular issues predispose students to substance abuse:	1	2	3	4	5
a) Competitive games					
b) Educational trips					
c) Clubs					
d) Stars in cocurricular					
e) Frequent participation					
f) Time allocation					
Any other (specify)-----					
Section 2b: By way of a tick(✓) indicate the extent to which you agree with the following statements on the effectiveness of substance abuse preventive measures					
9a)The following statements to an extent contribute to effectiveness of preventive measures on substance abuse:					
• Student population • School location					
Nature of co-curricular					
Random checks					
Open communication					
Co-curricular resources					

Section 3a: Tick (✓)to indicate the extent to which you agree with the following statements about peer issues predisposing students to substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree
--

a) Religious pressure for identification.					
b) Social pressure in seeking acceptance from their peers.					
c) Economic pressure for identification.					
d) Substance sales by some students.					
e) Substances make them sleep					
f) Spending Leisure time together.					
g) Sharing of resources behaviour					
Section 3b: By way of a tick(✓) indicate the extent to which you agree with the following statements on effectiveness of substance abuse preventive measures					
12) Indicate the extent to which each of the following preventive measure is applied in schools:	1	2	3	4	5
Peer-to-peer talk					
Inter-class debate					
Invitation of experts					
Self-management					
Guided practice					
Role playing games					
Any other (specify)-----					
Section 4a: Tick (✓) to indicate the extent to which you agree with the following statements about personality issues pre-disposing students to substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree					
15)The following personality issues contribute to abuse of substances by students:					

Risk-taking behaviour Copying with stress Away of keeping themselves busy Want to out do others because of their aggressiveness Rebelling the authority and the law Low self- eteem Easily convinced by their peers Majority do so Any other (specify)-----					
Section 4b: Tick (√) to indicate the extent to which you agree with the following statements on substance education as preventive measures of substance abuse					
16. Indicate the extent to which each of the following school-based programmes practices help students deal with substance abuse: one on one counseling Gender-based counseling Many assignments Dormitory-based counseling Guidance Surrogate parenting Involvementof parent Any other (specify)-----					
Section 5a: Tick (√) to indicate the extent to which you agree with the following statements about Family issues that pre-dispose students to substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree					
17)Students who abuse substances come from homes that: Trading in substance Separation of parents Weak family cohesion Economically stable Living in urban area	1	2	3	4	5

Any other (specify)-----					
5b: Indicate the extent to which you agree with the following statements on social peer support as preventive measures of substance abuse					
18-Parents spending time with their children					
- Parents being role model					
-Family dialogue					
-Self-management programmes at home					
-Strict parental control					
-Parent spending time with their children					
Any other (specify)-----					

Thanks for your cooperation

Appendix IV: Self administered Teachers Questionnaire

Instructions: Place a tick (✓) where applicable.

NAME OF SCHOOL: _____

Part One: Personal Data

1) **Gender:** male () female ()

2 a). **Position:** Class Teacher () HOD Guidance and counseling ()

b). **Teacher in :**

a) boarding school

b) day school

c) public school

d) private school

3 a). **Teaching experience,** 1 and below yrs.(), 2-5 yrs. (), 6-10 yrs. (), over 10 yrs. ()

b) How many schools have you practiced teaching since you were employed?

One () two () three () four () five and above ()

4). **School setting:** Boys boarding () Girls boarding () Boys day and boarding() Girls day and boarding() Girls day () Mixed day () Mixed day and boarding ()

5a) **Category:** National school () Extra county school () County school ()
Sub county school ()

b) **Ownership:** Public () Private ()

Section 2a:

6What is the status of substance abuse in your school

Tick (✓) to indicate the extent to which you agree with the following statements on how co-curricular activities predispose students to substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4=agree and 5=strongly agree

7).The following substances are commonly abused in schools:	1	2	3	4	5
Tobacco Local brew Spirits Miraa Bang Cocaine Marijuana Hashish Kuber Any other. Specify-----					
7) The following co-curricular activities to an extent provide students with network for substance abuse: Soccer Rugby Athletics Volleyball Clubs Any other(specify)-----					
8a)Students who are stars in co-curricular activities to an extent influence others to abuse substance	1	2	3	4	5
b) Students' frequent participation in co-curricular activities to an extent provide a loophole to substance abuse?					
c) Time allocated for each of these co-curricular activities to an extent provide a loophole for substance abuse.					
d) Competitive activity					
Section 2b: By way of a tick(√) indicate the extent to which you agree with the following statements on the effectiveness of substance abuse preventive measures					

9)The following statements to an extent contribute to the effectiveness of preventive measures on substance abuse i) Nature of co-curricular available in school ii) Location of the school iii) Student population in school iv) Co-curricular resources available in school Random checks Open communication					
10) The following leadership levels to an extent effectively address substance abuse; Peer counselors Prefects School administration Support staff Teachers	1	2	3	4	5
Section 3a: Tick (✓)to indicate the extent to which you agree with the following statements about peer predisposition issues on substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree					
i) Peer grouping					
ii) Social pressure					
iii) Economic status pressure					
iv)substance sales					
v) Religious affiliation					
vi) Resource sharing behaviour					
vii)) Spending leisure time together.					
Section 3b: By way of a tick(✓) indicate the extent to which you agree with the following statements about the effectiveness of substance abus preventive measures					
13)Indicate the extent to which each of the following social skills address substance abuse among the students in school peer to peer talk	1	2	3	4	5

Inter-class debate					
self-management					
Guided practice					
Role playing games					
Invitation of experts					
Section 4a: Tick (✓) to indicate the extent to which you agree with the following statements about personality-related issues and substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree					
16)The following personality related-determinants contribute to students' abuse of substance					
Risk-taking behaviour					
Coping with stress					
Being on their own					
Aggressiveness					
Rebelliousness					
Low self-esteem					
Easily convinced					
Majority do so					
Section 4b: Tick (✓) to indicate the extent to which you agree with the following statements on the effectiveness of preventive measures of substance abuse					
17) Indicate the extent to which you agree with the following statements on substance education on the effectiveness of Preventive measures of substance abuse					
Self-monitoring					
one on one counseling					
Gender-based counseling					
Dormitory-based counseling					
Religious-based counseling					

Surrogate parenting					
Involvement of parents					
Section 5a: Tick (✓) to indicate the extent to which you agree with the following statements about family-related issues on substance abuse. Use a scale where 1=strongly disagree, 2= disagree, 3=not really sure, 4= agree and 5=strongly agree					
18) The following family issues to an extent predispose students to substance abuse	1	2	3	4	5
Trading in substances					
Separation of parents					
Economically stable					
Defficient parental monitoring					
Living in urban area					
Lack of parental cohesion					
5b: Indicate the extent to which you agree with the following statements on effectiveness of Preventive measures of substance abuse					
19a)Strict parental control					
b) Role modeling of parents					
c)Family dialogue					
d)Self-management programmes					
e)Parents spending time with their children					

Any Other-----

Thanks for your cooperation

AppendixV:Interview Guide for Guidance and Counseling HOD

INSTRUCTIONS: Place a tick () where applicable. Where an explanation is required use the space provided.

Section A: Personal data:

1. Gender male () female ()

2. Age 20-29yrs () 30-39 yrs. () 40-49 yrs. () over 50yrs ()
- 3.Experience: 1-3yrs() 4-6yrs () 7-9yrs() over 10yrs ()
4. School setting: boarding boys () Day boys () Boarding girls () Day girls ()
Boarding and Day girls () Mixed day () Mixed day and boarding ()

Section B: Position of substance abuse in schools

5a.What is the status of substance abuse in your school

b.What are the commonly abused substances in your school?

.....

.....

.....

6.Tick from the list below what according to you are the causes of substance abuse in your school

Co-curricular issues

Family issues

Peer issues

Personality issues

Any Others

Section C:Co-curricular related issues of substance abuse on effectiveness of substance abuse preventive measures

Tick from the list below what makes sports activities predispose students to substance abuse

Competitive games

Peak- time of sport activity

Time allocated

Nature of sports activity

The environment in which the sport takes place

Stars/ celebrities

Any-Others-----

8. How have you mitigated against the following

Co-curricular related factor

Section D: Peer-related issues and the extent of effectiveness of substance abuse preventive measures

9 Tick from the list below what makes peer issues predispose students to substance abuse

a) Peer grouping for identity.					
b) Social pressure in seeking acceptance from their peers.					
c) Economic pressure for identification.					
d) Substance sales by some students.					
e) Substances make them sleep					
f) Spending Leisure time together.					

Any Others

10 Tick from the list below to indicate the effective peer related remedy against substance abuse the school has embraced in dealing with substance abuse

i) peer to peer talk
ii) Inter-class debate
iii) self-management
iv) Guided practice
v) Role playing games
vi) Invitation of experts

Others.....

Section E: Family issues and the extent of effectiveness of substance abuse preventive intervention

13. Identify family issues that contribute to substance abuse

.....
.....
.....

14. Tick to indicate the most effective ways of dealing with family issues influence on substance abuse ()

a)Strict parental control					
b) Role modeling of parents					
c)Family dialogue					
d)Self-management programmes					
e)Parents spending time with their children					

Any Other-----

Section D: Personality issues and the extent of effectiveness of substance abuse preventive measures

11. What are some of the students character traits that contribute to substance abuse?

12. From the list below, tick to indicate the most effective ways your school has all along embraced in mitigating against the influence of personality factors on substance abuse

Self esteem

One on one counselling

Gender-based counselling

Decion making

Religious-based counselling

Surrogate parenting

Involvement of parents

Any Others

.....
.....
.....

12. In your view do the services students receive help them deal more effectively with their problem of S.A?

.....

14).What recommendations would you give educators so as to realize success in curbing substance abuse in Kenyan secondary schools?

Thanks for your cooperation

AppendixV1: Interview Guide for Education Officer

INSTRUCTIONS: Place a tick () where applicable. Where an explanation is required use the space provided. **Section A: Personal**

data:

1. Gender male () female ()
3. Experience: 1-3yrs () 4-6yrs () 7-9yrs () over 10yrs ()

Section B: Position of substance abuse in school

- 4 In your opinion what would you say about the status of substance abuse in the County?

5 What are the commonly abused substances in Kakamega County?
.....

6. Tick from the list below what according to you are the causes of substance abuse in the County?

Co-curricular related issues

Family issues

Peer related-issues

Personality issues

What other other are likely to influence students to abuse substances

7 Comment on the effectiveness of substance abuse preventive measures in schools

8 How has your office helped in addressing effective substance abuse prevention in the area of:

a) Substance abuse awareness

b) Guidance and counselling

c)Social support

d) School leadership

9 What recommendations would you give educators so as to realize success in curbing substance abuse in Kenyan secondary schools?

Thanks for co-operation

Appendix V11: Focus Group Discussion Guide

The purpose for this FGD is to gain insight on substance abuse among students more specifically the effectiveness of preventive interventions. Information gathered through this FGD will be made available to legitimate and interested stakeholders. We want to know about the extent of preventive interventions against substance abuse in your school, the presence of the tape recorder is only to enhance the study. It is important for the Ministry of Education (MOE) to understand better the current status of substance abuse in different school types in the study area and make adequate changes to address the effectiveness of substance abuse preventive interventions in the light of psycho-social predisposing factors in secondary schools. Please note that this is not a test but just information- collecting exercise. In order to help address the substance problem in schools, your contribution in this research is important. Therefore, you are kindly requested to provide the researcher with accurate information. Remember there is no right or wrong answers. Your responses will be treated as confidential.

What is the status of sub-abuse in your school

In your own opinion what are the common places where these substances are mostly abused

What issue listed below strongly influence students to abuse substances in your school

Co-curricular activities

Personality issues ()

Family issues ()

Peer issues ()

Any Others_____

Tick to indicate in your view what makes co-curricular influence students to abuse substance

Some are competitive and require drugs to succeed ()

Gender-based activities ()

The environment in which the activity takes place()

Popular students in the activities are sometimes of bad influence ()

Type of activity()

Frequency of activity()

Which strategies do you think the school should employ in dealing with co-curricular influence on substance abuse

(a) Tick to indicate in your view what makes peer issues make students abuse substances

Competition and feeling of Superiority ()

For identification with peer ()

Seeking independence from parents ()

Increase attention to fellow peers ()

Want to experiment ()

(b) What measures according to you can your school employ in dealing with peer issues on substance abuse

Others _____

(b) What are the most effective ways your school has all along employed in fighting against personality issues predisposing students to substance abuse

(a) Identify family issues that cause substance abuse among students

(b) Tick to indicate the most effective ways of dealing with family issues on a substance abuse

Increase time spent with parents ()

Adequate parental involvement ()

Ask parents to come to school for negotiation. ()

Role-modeling of parents ()

Self-management ()

Guidance ()

Counseling ()

Others _____

(a) Tick to indicate students personality issues that contribute to substance abuse

Irritability ()

Aggressive ()

Rebellious ()

Out-ward-looking ()

Easily convinced ()

Trusting ()

Low-self esteem ()

Any Others_____

b) Which ways identified above are most effective in controlling substances abuse?

What recommendations would you give education office so as to realize success in dealing with S.A in our school?

Appendix VIII: The Target study population of secondary schools in Kakamega County

Sub-Counties	Schools	Teachers	Students	Girls	Boys	Mixed day	Mixed day & boarding	
Kakamega Central	24	326	6399	7	1	14	2	
Lugari	32	230	6613	4	3	20	5	
Butere	29	260	6218	6	1	20	2	
Kakamega North	48	275	11767	3	3	28	14	
Kakamega South	29	285	6262	5	1	21	2	
Kakamega East	42	260	7449	4	2	33	2	
Mumias West	26	341	13643	7	3	41	3	
Mumias East				2	1			
Matete	18	255	4766	4	1	13	2	
Khwisero	22	262	4795			12	3	
Matungu	38	261	4499	3	2	23	2	
Likuyani	35	258	5998	6	4	21	2	
Navakholo	27	283	5537	1	2	21	4	
Total	396	3286	30888	54	25	247	34	

Source: Researchers' (2018)

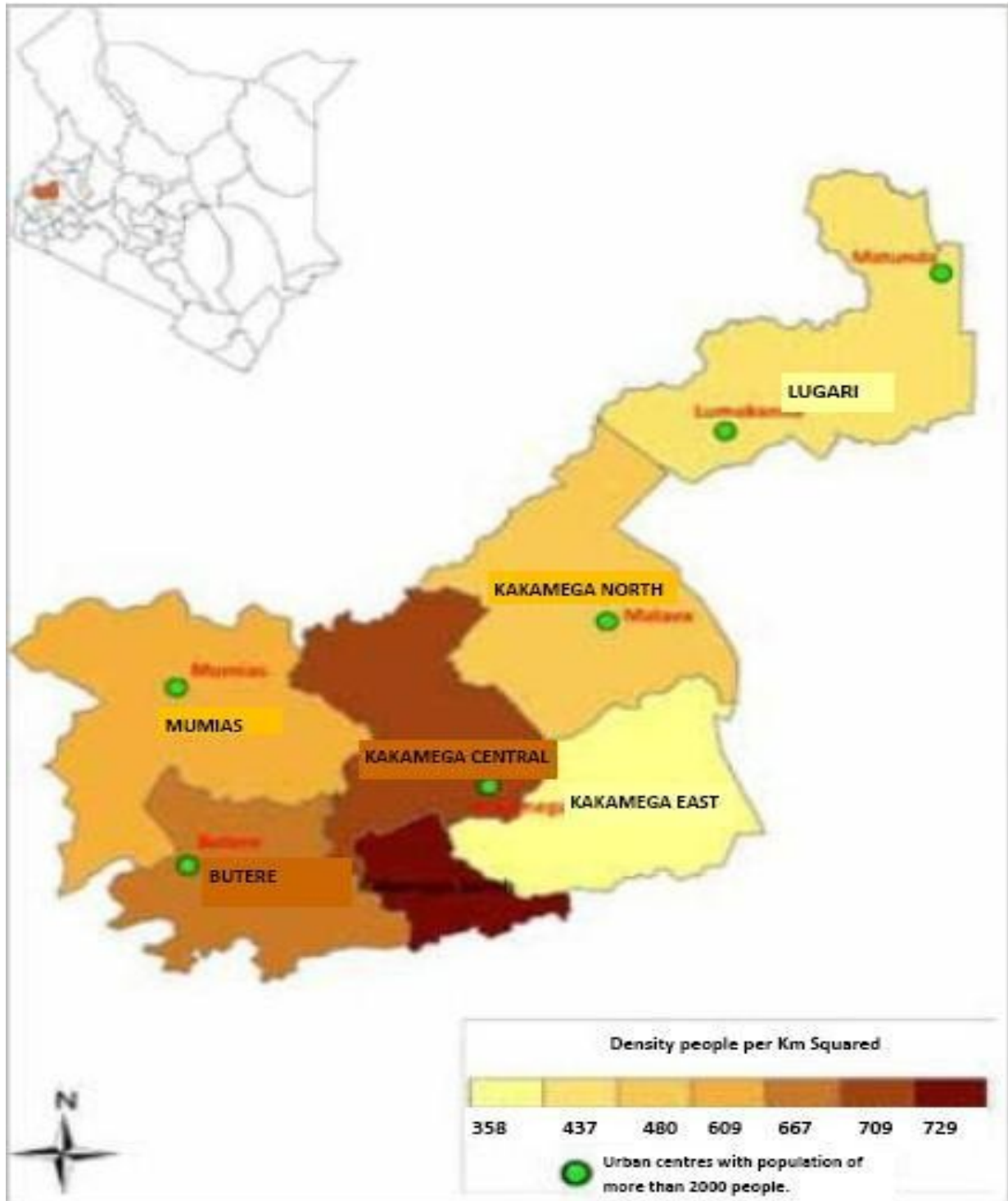
Appendix IX: Krejcie and Morgan (1979:608)

Required Sample Size [†]								
Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

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Source: Krejcie and Morgan (1979:608) as quoted in Mulusa (1988:86)

Appendix X: Map of Kakamega County



Appendix XI: The Target study population of secondary schools in Kakamega County



STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

PUBLIC SECONDARY SCHOOLS ENROLMENT - 2021

S/NO		SCHOOL	FORM 1		FORM 2		FORM 3		FORM 4		Grand Total		TOTAL
			B	G	B	G	B	G	B	G	B	G	
BUTERE SUB COUNTY													
1	1	BUMAMU GIRLS	0	62	0	86	0	76	0	63	0	287	287
2	2	BUCHENYA GIRLS	0	123	0	127	0	93	0	99	0	442	442
3	3	BUKOLWE	81	78	72	43	72	43	65	41	205	290	495
4	4	BULANDA	37	21	23	11	32	28	35	12	127	72	199
5	5	BUTERE BOYS	277	0	206	0	156	0	145	0	784	0	784
6	6	BUTERE GIRLS	0	553	0	466	0	450	0	424	0	1893	1893
7	7	ESHIKOMERE GIRLS	0	30	0	35	0	45	0	28	0	138	138
8	8	ESHITARI	52	31	39	30	37	24	42	27	170	112	282
9	9	IBOKOLO	50	53	50	37	37	35	35	34	172	159	331
10	10	IMANGA	46	32	25	29	26	27	25	20	122	108	230
11	11	INAYA	50	21	34	18	51	28	39	16	174	83	257
12	12	ITUTI	26	44	25	36	35	28	21	17	107	125	232
13	13	LUNZA	153	0	116	0	109	0	101	0	479	0	479
14	14	MABOLE BOYS	138	0	114	0	139	0	90	0	481	0	481
15	15	MAHONDO	36	19	29	27	27	18	24	26	116	90	206

16	16	MANYALA	63	67	74	45	46	44	45	53	228	209	437
17	17	MASABA	38	42	16	21	15	20	9	15	78	98	176
18	18	MULUWA	36	42	34	40	30	32	15	19	115	133	248
19	19	SHIBANGA	68	62	45	47	40	37	16	30	169	176	345
20	20	SHIBEMBE	35	44	33	26	36	18	19	17	123	105	228
21	21	SHINAMWENYULI	23	49	45	43	35	39	23	16	126	147	273
22	22	SHIRAHA	48	46	48	42	42	38	48	28	186	154	340
23	23	SHITSITSWI	74	58	59	68	61	60	52	38	246	224	470
24	24	ST BENEDICT MUKOYE GIRLS	0	42	0	39	0	37	0	23	0	141	141
25	25	ST FRANCIS ESHIREMBE	34	27	20	20	24	16	20	22	98	85	183
26	26	SHIKUNGA	67	58	45	50	54	53	58	58	224	219	443
27	27	ST PETERS MUYUNDI GIRLS	0	15	0	10	0	11	0	15	0	51	51
28	28	SHIATASALA	97	95	103	79	55	63	44	54	299	291	590
29	29	ST CECILIA LUFUMBO GIRLS	0	121	0	88	0	61	0	59	0	329	329
30	30	MUTOMA GIRLS	0	38	0	38	0	43	0	38	0	157	157
31	31	BULULWE	37	42	20	37	25	15	19	12	101	106	207
		KAKAMEGA NORTH											
	1	BUKHAKUNGA	85	178	87	105	86	62	60	74	419	318	737
	2	BULUPI	99	98	52	46	46	39	56	19	255	202	457
	3	CHEGULO	26	28	16	33	36	27	18	22	96	110	206
	4	CHIMORONI	66	68	46	53	43	43	48	38	203	202	405
	5	IKOLI	35	38	25	24	17	35	23	20	100	117	217
	6	ISANJIRO GIRLS	0	73	0	67	0	78	0	61	0	279	279
	7	KAKUNGA GIRLS	0	78	0	87	0	53	0	42	0	260	260
	8	KALENDA	0	41	0	32	0	31	0	26	0	130	130
	9	KIMANG'ETI BOYS	81	0	58	0	50	0	48	0	237	0	237
	10	KIMANG'ETI GIRLS	0	100	0	74	0	50	0	53	0	277	277
	11	KUVASALI	25	37	34	28	14	24	9	9	82	98	180

	12	LUGUSI	111	0	103	0	87	0	62	0	363	0	363
	13	LUKALA	49	28	20	27	12	33	25	20	106	108	214
	14	LUKUME	22	23	20	25	16	17	26	15	84	80	164
	15	LWANDA K.	55	61	41	52	38	34	29	40	163	187	350
	16	LWANDETI	126	128	83	73	60	62	58	56	327	319	646
	17	MAHIRA	57	49	45	43	44	35	54	35	200	162	362
	18	MALAVA BOYS	220	0	170	0	177	0	194	0	761	0	761
	19	MALAVA GIRLS	0	160	0	114	0	71	0	90	0	435	435
	20	MANG'ULIRO	33	46	20	28	22	30	23	23	98	127	225
	21	MANDA	12	18	15	25	15	18	20	16	62	77	139
	22	MATETE	26	41	31	25	29	38	30	23	116	127	243
	23	MATIOLI 'K'	64	38	28	31	25	29	15	16	132	114	246
	24	MATSAKHA	39	24	22	10	23	19	33	20	117	73	190
	25	MAVUSI	32	81	48	48	31	47	44	51	155	227	382
	26	MAYUGE	21	24	14	23	13	22	13	14	61	53	114
	27	MUGAI	78	105	76	112	76	77	51	39	281	333	614
	28	MUKHONJE K	29	26	16	14	15	13	9	17	69	70	139
	29	MUTSUMA	26	32	29	31	21	24	25	23	101	110	211
	30	NAMAGARA	87	106	62	70	57	58	61	40	267	274	541
	31	NAMANJA	60	80	55	53	46	38	44	34	205	205	410
	32	NAMATALA GIRLS	0	60	0	75	0	79	0	36	0	250	250
	33	NAMUSHIYA	21	23	17	25	26	21	15	17	79	94	173
	34	SAMITSI BOYS	98	0	27	0	58	0	50	0	233	0	233
	35	SAMITSI GIRLS	0	169	0	136	0	93	0	118	0	516	516
	36	SAWAWA	22	20	21	27	19	17	11	13	73	77	150
	37	SHAMBERERE	145	0	70	0	73	0	52	0	340	0	340
	38	SHAMONI	111	76	77	103	100	72	52	54	340	305	645
	39	SHIANDICHE	54	56	65	75	78	72	76	72	273	275	548

	40	SHIRUGU	16	15	13	17	8	11	17	18	54	61	115
	41	SHIVANGA	33	54	13	24	17	20	22	24	85	122	207
	42	SILUNGAI BOYS	195	0	234	0	182	0	148	0	759	0	759
	43	ST.ANTONY KAKOI	111	59	125	62	114	49	74	54	425	223	648
	44	ST.MARY'S SHIHOME	0	62	0	74	0	101	0	91	0	328	328
	45	SULUNGAI GIRLS	0	148	0	175	0	173	0	118	0	614	614
	46	TANDE	65	34	49	18	45	34	43	16	202	102	304
	47	TOMBO	45	69	38	66	61	62	36	43	180	240	420
	48	TUMBENI	24	38	30	40	35	30	24	18	113	126	239
	49	VASHELE	14	22	4	11	3	8	23	23	44	64	108
MUMIAS WEST SUB COUNTY													
	1	ACK MILIMANI GIRLS	0	63	0	41	0	56	0	35	0	195	195
	2	BUCHIFI SEC	122	80	77	44	73	55	45	38	317	217	534
	3	BUMIA GIRLS SEC	0	105	0	103	0	89	0	79	0	376	376
	4	EMUKHUWA GIRLS	0	80	0	60	0	60	0	37	0	237	237
	5	ICHINGA MUSLIM	30	32	24	35	22	24	31	13	107	104	211
	6	IHONJE SEC	24	25	24	24	17	24	24	17	89	90	179
	7	MUMIAS MUSLIM GIRLS	0	92	0	55	0	53	0	55	0	255	255
	8	MUMIAS MUSLIM BOYS	157	0	110	0	80	0	85	0	432	0	432
	9	MUSANDA SEC	86	65	76	56	89	62	71	36	322	219	541
	10	SHIBALE ACK SEC	18	25	25	23	18	29	15	12	76	82	156
	11	ST ANDREWS ESHIKALAME	50	33	23	33	23	32	26	14	122	112	234
	12	ST BEDAS BUKAYA	95	69	81	55	72	37	67	26	315	187	502
	13	ST MICHAELS INGUSI SEC	59	54	64	71	75	69	80	61	278	255	533
	14	ST ROMANOS MATAWA	35	31	24	23	22	20	29	11	110	85	195
	15	ST VINCENT BUTENDE	70	61	24	61	22	35	41	32	200	189	389
	16	ST. CHRISTOPHER ENYAPORA SEC	43	44	47	45	44	27	29	27	172	134	306
	17	ST. ELIAS IYABO SEC	17	24	25	15	46	54	28	21	116	114	230

	18	ST. ELIZABETH LUREKO GIRLS	0	105	0	103	0	89	0	79	376	0	376
	19	ST. JOHN'S BUMALA MIXED	19	18	18	12	11	9	11	10	59	49	108
	20	ST. JOSEPH LUKONGO SEC	16	16	19	8	17	12	23	11	75	47	122
	21	ST. JOSEPH UGANA SEC	34	41	20	22	17	23	20	8	91	94	185
	22	ST. PETER'S MUMIAS BOYS' HIGH SCHOOL	497	0	344	0	359	0	347	0	1547	0	1547
	23	ST. STEPHEN'S EBUBAKA MIXED	21	22	28	34	27	24	11	22	87	102	189
	24	ST. STEPHEN'S ESHIHAKA SEC	33	38	333	30	34	16	7	17	107	101	208
	25	ST.ANGELA VOCATIONAL SCH FOR THE DEAF	0	67	0	76	0	68	0	63	0	274	274
	26	ST.MARY'S MUMIAS GIRLS SECONDARY SCHOOL	0	282	0	219	0	294	0	243	0	1038	1038
	27	ST.PAUL'S AHONG'NJO SECONDARY SCHOOL	88	108	73	103	66	72	67	55	294	338	632
	28	BOOKER ACADEMY	67	20	91	52	74	43	69	47	301	162	463
	29	MUMIAS ACADEMY	14	16	18	16	23	12	31	20	86	64	150
	30	REHEMA ACADEMY	0	9	0	5	0	18	0	35		67	67
	31	ST. JOHN'S – SHIHAKA	5	9	7	5	15	12	27	16	54	42	96
	32	ST. JOSEPH'S ACADEMY	20	30	28	22	35	65	76	61	159	178	337
		MUMIAS EAST SUB COUNTY											
	1	ACK ST. PETERS KHABAKAYA	18	31	30	19	22	15	23	21	93	86	179
	2	EBUBOLE MIXED SECONDARY	44	50	16	27	30	29	26	17	116	123	239
	3	ELUCHE SECONDARY	37	26	22	26	34	23	27	16	120	91	211
	4	EPANJA SECONDARY	22	24	23	28	21	33	13	16	79	101	180
	5	ST. GABRIELS ISONGO	64	56	42	33	50	36	30	19	186	144	330
	6	MAKUNGA SEC SCHOOL	79	54	49	57	50	47	38	56	216	214	430
	7	LUBINU BOYS	230	0	247	0	214	0	945	0	1636	0	1636
	8	MAHOLA MIXED	13	14	15	8	18	14	19	18	65	54	119
	9	MUSANGO MIXED	23	27	33	32	29	35	16	17	101	111	212
	10	ST. JOHNS KHAIMBA	13	11	14	11	30	24	14	10	71	56	127
	11	ST. LUKES SHANDEREMA	40	48	17	24	38	28	19	23	114	123	237
	12	SHITOTO GIRLS	0	73	0	77	0	80	0	85	0	315	315

	13	ST. ANNES INDANGALASIA	12	18	12	14	23	20	8	7	55	59	114
	14	ST. JOSEPHS SHIBINGA	56	62	59	103	53	93		29	168	287	455
	15	ST. MARTHAS MWITOTI	330	259	258	191	222	151	129	100	939	701	1640
	16	ST. MATHEWS MUNG'ANG'A	26	42	35	28	17	22	19	26	97	118	215
	17	ST. MICHAELS EMAKHWALE	37	53	83	64	62	52	54	35	236	204	440
	18	ST. PATRICKS EBUBERE	27	37	32	43	41	50	27	27	127	157	284
	19	ST. PAULS EBUSIA	94	98	59	69	57	60	64	41	274	268	542
	20	ST PAULS LUBINU GIRLS	0	99	0	82	0	154	0	106	0	441	441
	21	ST. PETERS KHAUNGA	55	70	36	23	15	16	21	35	127	144	271
	22	ST. PHILIPS EBWALIRO	7	8	4	28	18	17	11	12	40	65	105
	23	ST. STEPHENS MARABA	39	41	41	30	36	40	32	24	148	135	283
	24	ST. STEPHENS ACK ESHIAKHULO	18	23	21	24	39	17	28	23	106	87	193
	25	ST. STEPHEN KAMASHIA	19	34	30	18	24	19	37	16	110	87	197
	26	ST. THERESAS BUMINI	128	140	91	107	58	99	35	68	312	414	726
	27	ST. TERESA ESHISENYES		40		41		40		39	0	160	160
		MATUNGU SUB COUNTY											
	1	ACK KOYONZO BOYS	239	-	245	-	250	-	255	-	-	893	893
	2	ACK KOYONZO GIRLS	-	95	-	93	-	95	-	70	-	706	706
	3	BUSOMBI MUSLIM	32	37	34	28	35	20	19	15	120	100	220
	4	EJINJA MIXED	60	60	50	42	40	47	35	30			
	5	ESHIBANZE MUSLIM	40	50	40	46	28	25	16	6			
	6	ESHIKHONDI	32	35	30	36	25	25	15	22			
	7	ESHIRUMBWE	28	28	56	48	42	23	55	42			
	8	M.S.W BULIMBO GIRLS	-	238	-	224	-	180	-	213			
	9	MAKUNDA MUSLIM	30	36	52	41	45	40	44	39			
	10	MATUNGU SDA SEC	16	27	13	15	16	20	11	14			
	11	MUNAMI	45	47	45	47	498	50	39	48			
	12	NGAIRWE	30	30	25	26	25	28	32	30			

	13	ST. CECILIA MAKOKHWE	30	25	25	29	25	17	26	20			
	14	ST. CHARLES KHALABA	65	70	55	43	41	44	35	28			
	15	ST. CHARLES LUNG'ANYIRO	65	67	40	55	30	35	26	34			
	16	ST. GABRIEL MIRERE	87	83	62	65	60	62	58	58			
	17	ST. JAMES NAMAMBA	175		142		121		123	109			
	18	ST. JOHN'S MUKHWEYA	43	20	27	35	26	19	28	16			
	19	ST. JOSEPH INDANGALASIA	95	97	114	96	87	76	101	69			
	20	ST. LUKE'S KHABUKOSHE	55	55	30	39	30	35	18	20			
	21	ST. MARY'S NAMALASIRE	40	35	39	30	31	30	17	22			
	22	ST. MATHIAS KHOLERA	172	-	108	-	120	-	104	-			
	23	ST. MAURICE MWIRA	45	44	49	52	46	35	38	39			
	24	ST. PETER'S LUBANGA	50	54	74	36	68	65	58	35			
	25	ST. STEPHEN'S NAMULUNGU	50	61	64	57	55	30	32	43			
	26	ST. TERESA'S ITETE	178	179	120	89	93	100	44	48			
	27	ST. JOSEPH 'S NAMBEREKEYA	33	36	26	22	17	23	13	19			
	28	ST. STEPHEN'S MUNGAHA	20	23	27	23	14	14	9	11			
	29	EBUSAMBE	19	16	13	13	11	16	10	17			
	30	NAMULUNGU MUSLIM	35	36	30	30	25	33	9	18			
	31	ST. FRANCIS SHIYABO	40	46	32	40	30	48	18	16			
	32	NAMASANDA	15	17	16	15	11	15	13	14			
	33	ST. MARK IMAKALE	50	58	30	32	28	31	23	24			
	34	EMANANI MUSLUM	30	40	31	40	33	33	13	17			
	35	ST. JOSEPH BULONGA	20	16	11	20	7	23					
	36	ST. EMMANUEL LUTASIO	15	15	10	15	15	15	13	17			
	37	NAMANBA GIRLS	-	120	-	105		33	-	-			
	38	ACK ST. PAULS MUNGOORE	30	33	20	23	20	24	16	19			
		LUGARI SUB COUNTY											
	1	ST. LUKES LUMAKANDA	110	0	100	0	109	0	103	0	422	0	422

	2	BISHOP SULUMETI GIRLS	0	106	0	158	0	155	0	147	0	620	620
	3	SA FORESTAL	84	67	78	71	74	69	41	50	277	257	534
	4	MUGUNGA	63	50	70	60	83	68	63	51	279	229	508
	5	MWAMBA	39	46	21	28	19	20	18	19	97	113	210
	6	MUNYUKI	93	88	122	94	111	67	69	61	395	310	705
	7	LUMAMA	47	61	60	31	35	40	40	29	182	161	343
	8	MANYONYI	0	116	0	66	0	60	0	61	0	303	303
	9	MBAYA	29	28	20	23	22	32	30	29	101	112	213
	10	ST FRANCIS MAJENGO	51	55	41	49	22	41	24	26	138	171	309
	11	LUMAKANDA T/S	46	58	40	36	24	34	30	27	140	154	294
	12	SAVALA	45	30	32	16	25	32	30	26	132	104	236
	13	MAUTUMA	77	0	76	0	68	0	71	0	292	0	292
	14	MUKUYU GIRLS	0	67	0	69	0	65	0	78	0	268	268
	15	ST. CECILIA	0	116	0	109	0	107	0	102	0	434	434
	16	HANDOW	91	66	76	79	80	74	77	63	324	282	606
	17	ST. AUGUSTINE MLIMANI	91	60	88	68	87	61	79	46	345	235	580
	18	IMMACULATE HEART	17	69	35	39	40	41	37	36	129	179	308
	19	MUKONGE	23	29	18	21	31	29	27	31	99	110	209
	20	AIC SIPANDE	34	49	32	43	30	31	23	25	119	126	265
	21	LWANDA LUGARI	54	51	45	38	59	46	36	24	194	159	353
	22	ST. BONIFACE MBAGARA	25	30	31	34	36	32	21	24	113	120	233
	23	MACHO MUSLIM	15	8	26	24	16	19	12	7	69	58	127
	24	IVONA MIXED	15	27	19	24	15	21	11	10	60	82	142
	25	ARCH BISHOP NJENGA	0	325	0	302	0	236	0	218	0	1081	1081
	26	CHEKALINI	54	36	29	32	33	34	47	31	163	133	296
	27	ST. PAULS LUGARI	125	0	122	0	105	0	102	0	416	0	416
	28	LUNYITO	39	61	23	45	26	44	24	45	112	203	305
	29	HOLY FAMILY MUSEMBE	77	65	48	53	41	38	39	46	205	202	407

	30	MUFUTU	51	61	39	60	52	51	33	24	175	186	371
	31	ST. CHARLES LWANGA KOROMAITI	55	68	43	51	37	36	22	29	157	204	361
	32	ANGAYU	42	42	30	31	35	38	22	19	129	130	259
		LIKUYANI SUB COUNTY											
	1	MATUNDA S.A	121	99	135	87	115	77	88	63			785
	2	ST. TERESA	51	64	42	32	45	30	37	34			335
	3	MWIBA S.A	63	72	23	36	35	27	47	39			342
	4	HOLY CROSS SANGO	0	36	0	31	0	28	0	15			110
	5	ST. FRANCIS KISIGAME	15	26	10	11	7	13	18	13			113
	6	ST.ANNE'S NZOIA	0	75	0	95	0	71	0	95			336
	7	FRIENDS SECONDARY KONGONI	93	61	56	52	58	59	43	33			455
	8	ST.JOHN THE BAPTIST	102	0	126	0	83	0	79	0			390
	9	ST. ELIZABETH LIKUYANI	0	130	0	98	0	88	0	51			367
	10	ST.JOSEPH LUMINO	44	28	27	20	14	18	21	20			192
	11	FRIENDS SECONDARY MBURURU	42	37	37	28	45	33	37	23			282
	12	ST JUDE SEREGEYA	47	68	31	26	51	44	34	28			329
	13	ESHIKULU GIRLS	0	115	0	115	0	95	0	58			383
	14	ESHIKULU BOYS	150	0	96	0	85	0	94	0			425
	15	ST.PETERS BOYS MOI'S BRIDGE	80	0	120	0	101	0	109	0			410
	16	ST.BENEDICT LUGULU	48	42	19	32	27	18	17	22			225
	17	ST.PETERS GIRLS MOI'S BRIDGE	0	120	0	90	0	110	0	100			420
	18	ST.HENTRY'S SAISI GIRLS	0	49	0	67	0	75	0	43			234
	19	ST.JOSEPH NYORITIS	26	36	18	24	43	33	30	38			248
	20	MAPERA	61	49	43	45	52	31	34	32			347
	21	ST.VERONICA MIREMBE	0	60	0	45	0	36	0	24			165
	22	IVUGWI SECONDARY	56	33	48	47	60	36	63	42			385
	23	ALIGULA	31	33	28	42	32	38	16	25			245
	24	MOI GIRLS NANGILI	0	278	0	190	0	159	0	191			818

	25	ST.AUGUSTINE'S SOYSAMBU	95	87	81	90	79	71	77	46			626
	26	FRIENDS SECONDARY BINYENYA	71	91	48	69	29	46	52	48			454
	27	MARY LUSWETI SECONDARY	35	23	29	28	26	36	13	10			200
	28	ST.MICHAEL KILIMANI	52	56	46	47	22	35	36	37			331
	29	ST.JOHN'S MTONI	58	52	26	35	35	25	29	17			277
	30	NASIANDA SECONDARY	50	45	36	44	32	37	46	50			340
	31	ST.HENTRYS SAISI WABUGE BOYS	50	0	60	0	46	0	47	0			203
	32	ST.STEPHEN LWANDA	82	77	76	74	70	68	43	42			532
	33	FRIENDS SCHOOL MATISI	20	19	21	19	19	13	17	19			147
	34	ST.MONICA	59	67	47	42	37	38	15	28			333
	35	ST.JOSEPH'S KOGO	80	73	107	68	109	67	71	48			615
		KHWISERO SUB COUNTY											
	1	MWIHILA HIGH	246		171		93		123		633		633
	2	SHIONGO	46	80	49	61	51	43	39	36	135	218	405
	3	MUNDOLI GIRLS		68		74		59		54		255	255
	4	SHIRALI	35	45	36	32	37	33	25	27	133	137	270
	5	EKATSOMBERO	31	36	21	21	22	24	21	20	95	101	196
	6	MUNDAHA	12	17	22	22	26	28	11	26	74	90	164
	7	MUNJITI	35	33	24	30	31	29	19	21	109	113	222
	8	EMWIRU	76	77	56	65	40	69	35	54	207	265	472
	9	KHWISERO GIRLS		130		140		94		71		435	435
	10	NAMASOLI	70	68	69	48	89	54	62	37	290	207	497
	11	MWIHILA GIRLS		47		17		17		16		97	97
	12	ESHIBINGA	81	49	99	71	93	64	74	50	347	234	581
	13	EKAMBULI	42	0	49	14	34	31	45	28	170	73	243
	14	LUANDA DUDI	37	32	25	13	24	11	29	15	115	71	186
	15	EMWANIRO	52	68	26	44	26	29	23	35	127	176	303
	16	EMUKHUNZULU	14	23	11	14	6	20	13	17	44	74	118

	17	EMATUNDU DEAF	24		22		10		20		76		76
	18	EMALINDI GIRLS		209		73		90		83		455	455
	19	MULWANDA	63	91	56	65	47	46	33	24	199	226	425
	20	KHWISERO MIXED	110	80	81	56	52	39	49	53			520
	21	ESHINUTSA	67	97	51	46	41	43	38	40	197	225	422
	22	IKOMERO	77	64	64	56	32	37	62	42	235	196	431
	23	SHIRO TSA	32	20	19	32	21	13	18	25	90	90	180
		KAKAMEGA SOUTH											
	1	MALINYA GIRLS	0	46	0	50	0	54	0	50	0	200	200
	2	EREGI GIRLS	0	343	0	263	0	354	0	287	0	1248	1248
	3	MUSINGU HIGH	380	0	366	0	397	0	306	0	1449	0	1449
	4	SHIKUNGA	106	43	114	66	96	50	87	42	403	201	604
	5	FRIENDS LIRHEMBE	40	27	25	36	30	26	0	31	126	125	251
	6	LIRHEMBE GIRLS	0	76	0	64	0	51	0	30	0	221	221
	7	FR.ORTNER	0	40	0	46	0	46	0	35	0	167	167
	8	MAKHOKHO	160	0	134	0	120	0	111		525	0	525
	9	FRIENDS LUSUI	34	44	38	42	29	40	31	40	132	166	298
	10	C.O.G IREMELE	24	35	27	21	28	21	21	29	100	106	206
	11	MUSALI	15	13	11	12	7	22	12	10	45	57	102
	12	SHIKOKHO	226	184	179	124	113	83	132	59	650	450	1100
	13	FRIENDS SCH.SHIVEYE	55	56	51	60	58	48	55	56	219	220	439
	14	ST.BONVENTURE SHIMANYIRO	44	27	22	18	22	41	29	12	117	98	215
	15	BUSHIANGALA	125	71	53	42	56	35	72	50	306	198	504
	16	O.L.A SHITOLI	19	13	17	17	22	8	15	13	73	51	124
	17	IMALABA	26	42	29	38	32	33	21	19	108	132	240
	18	SHIVAGALA	21	24	35	39	31	49	28	26	119	139	258
	19	SHISESIA	9	11	7	9	14	11	16	8	46	39	85
	20	SHIDUHA	50	66	40	52	32	36	23	22	145	176	321

	21	SHICHINJI	45	51	57	54	56	51	43	33	201	189	390
	22	IMBALE	42	80	17	61	27	50	17	65	103	256	359
	23	BURENDWA	35	47	42	51	33	39	24	32	134	169	303
	24	SHIKUMU	14	33	21	24	22	23	19	14	76	94	170
	25	O.L.Q.P. SHIKONDI GIRLS	0	153	0	101	0	70	0	50	0	374	374
	26	IVONDA	21	22	23	22	16	25	18	17	78	84	162
	27	FRIENDS SCH. LUSIOLA	45	59	60	55	42	64	27	29	174	207	381
	28	SHAMUSINJIRI	24	18	22	26	18	24	9	9	73	77	150
	29	MUSOLI GIRLS	0	347	0	223	0	235	0	185	0	990	990
		MATETE SUB COUNTY											
	1	KIVAYWA	242	0	272	0	275	0	248	0			1037
	2	NAMBILIMA S.A	44	46	18	22	30	32	18	22			232
	3	LWANDETI DEB	110	128	75	96	71	96	81	67			724
	4	MARUKUSI	54	71	59	70	44	65	40	46			449
	5	NZOIA DEB	57	58	41	45	40	52	30	36			359
	6	MATURU	37	43	43	44	45	54	43	43			352
	7	LUKHOKHO	0	78	0	120	0	98	0	107			403
	8	MAHANGA 'K'	40	37	45	45	43	32	26	14			282
	9	CHENJENI	31	24	23	13	17	24	17	24			173
	10	CHIMOI	83	0	77	0	66	0	0	43			269
	11	MUHOMO	31	47	42	32	38	42	29	32			293
	12	MAKHUKHUNI	63	31	58	36	89	39	81	23			420
	13	VUYIKA	27	39	27	39	19	33	22	42			248
	14	MAYOYO S.A GIRLS	0	56	0	35	0	35	0	37			163
	15	KULUMBENI	44	67	58	53	54	60	56	58			450
	16	ST MUKASA GIRLS	0	60	0	71	0	73	0	54			258
		NAVAKHOLO SUB COUNTY											
	1	CHEBUYUSI BOYS	475	0	186	0	214	0	370	0	1245	0	1245

	2	FRIENDS MIXED SECONDARY MUSAGA	46	45	44	50	45	60	17	31	152	186	338
	3	NAMIRAMA GIRLS	0	130	0	98	0	94	0	63	0	385	385
	4	NAVAKHOLO SECONDARY ONDARY	119	119	92	92	80	81	60	67	351	359	710
	5	SIRIGOI SECONDARY	44	34	30	28	26	24	35	24	135	110	245
	6	SIVILIE SECONDARY	143	103	107	90	101	61	87	53	438	307	745
	7	ST. CAROLI LWANGA LUTASO	53	50	44	56	66	63	55	45	218	214	432
	8	ST.THOMAS AQ . BUCHANGU	57	57	44	44	47	46	27	28	175	175	350
	9	FRIENDS SEC SCHOOL SIMULI	19	34	16	35	16	29	11	14	62	112	174
	10	BUHAYI M SECONDARY	27	33	28	23	40	24	24	24	119	104	223
	11	MUNGAKHA F. SCHOOL	29	29	36	36	37	37	22	22	124	124	248
	12	NAMUNDERA M . SECONDARY	36	48	43	54	34	37	31	23	144	162	306
	13	SIDIKHO SECONDARY	144	101	123	87	107	87	87	44	461	319	780
	14	SISOKHE SECONDARY	31	34	25	28	20	16	15	21	91	99	190
	15	ST.J .BUDONGA SECONDARY	48	49	49	48	50	47	42	42	189	186	375
	16	ST. KIZITO SECONDARY LUSUMU	95	96	82	92	104	70	104	58	385	316	701
	17	ST.PAUL LWAKHUPA SECONDARY	28	35	51	51	41	43	44	28	164	157	321
	18	NANG'ANDA SEC ONDARY	30	38	38	34	37	20	17	22	122	114	236
	19	ST. RAPHAEL'S BURANGASI SECONDARY	38	38	39	39	40	43	11	20	128	140	268
	20	BUSHILI SECONDARY	59	60	29	28	35	30	32	30	155	148	303
	21	EMATIHA SECONDARY	50	40	35	30	40	30	18	12	143	112	255
	22	ESUMEYA SECONDARY	43	40	40	33	26	20	25	20	134	113	247
	23	INGOTSE HIGH	216	0	206	0	218	0	212	0	852	0	852
	24	SHIKOMARI SECONDARY	77	77	68	68	58	58	60	40	263	243	506
	25	SHINOYI SECONDARY	61	60	50	30	39	38	40	30	190	158	348
	26	ST. PAULS EMULAKHA SECONDARY	96	93	111	74	90	74	95	62	392	303	695
	27	ST.MARY'S EBUTENJE GIRLS	0	45	0	47	0	36	0	24	0	152	152
	28	NAMBACHA MIXED SECONDARY	18	15	20	15	23	27	36	34	97	91	188
		MATUNGU SUB COUNTY											

1	ACK KOYONZO BOYS	239	-	245	-	250	-	255	-	893	-	893
2	ACK KOYONZO GIRLS	-	95	-	93	-	95	-	70	-	706	706
3	BUSOMBI MUSLIM	32	37	34	28	35	20	19	15	120	100	220
4	EJINJA MIXED	60	60	50	42	40	47	35	30	185	179	364
5	ESHIBANZE MUSLIM	40	50	40	46	28	25	16	6	125	127	252
6	ESHIKHONDI	32	35	30	36	25	25	15	22	102	118	220
7	ESHIRUMBWE	28	28	56	48	42	23	55	42	181	141	322
8	M.S.W BULIMBO GIRLS	-	238	-	224	-	180	-	213			
9	MAKUNDA MUSLIM	30	36	52	41	45	40	44	39			
10	MATUNGU SDA SEC	16	27	13	15	16	20	11	14			
11	MUNAMI	45	47	45	47	498	50	39	48			
12	NGAIRWE	30	30	25	26	25	28	32	30			
13	ST. CECILIA MAKOKHWE	30	25	25	29	25	17	26	20			
14	ST. CHARLES KHALABA	65	70	55	43	41	44	35	28			
15	ST. CHARLES LUNG'ANYIRO	65	67	40	55	30	35	26	34			
16	ST. GABRIEL MIRERE	87	83	62	65	60	62	58	58			
17	ST. JAMES NAMAMBA	175		142		121		123	109			
18	ST. JOHN'S MUKHWEYA	43	20	27	35	26	19	28	16			
19	ST. JOSEPH INDANGALASIA	95	97	114	96	87	76	101	69			
20	ST. LUKE'S KHABUKOSHE	55	55	30	39	30	35	18	20			
21	ST. MARY'S NAMALASIRE	40	35	39	30	31	30	17	22			
22	ST. MATHIAS KHOLERA	172	-	108	-	120	-	104	-			
23	ST. MAURICE MWIRA	45	44	49	52	46	35	38	39			
24	ST. PETER'S LUBANGA	50	54	74	36	68	65	58	35			
25	ST. STEPHEN'S NAMULUNGU	50	61	64	57	55	30	32	43			
26	ST. TERESA'S ITETE	178	179	120	89	93	100	44	48			
27	ST. JOSEPH 'S NAMBEREKEYA	33	36	26	22	17	23	13	19			
28	ST. STEPHEN'S MUNGAKHA	20	23	27	23	14	14	9	11			

	29	EBUSAMBE	19	16	13	13	11	16	10	17			
	30	NAMULUNGU MUSLIM	35	36	30	30	25	33	9	18			
	31	ST. FRANCIS SHIYABO	40	46	32	40	30	48	18	16			
	32	NAMASANDA	15	17	16	15	11	15	13	14			
	33	ST. MARK IMAKALE	50	58	30	32	28	31	23	24			
	34	EMANANI MUSLUM	30	40	31	40	33	33	13	17			
	35	ST.JOSEPH BULONGA	20	16	11	20	7	23					
	36	ST. EMMANUEL LUTASIO	15	15	10	15	15	15	13	17			
	37	NAMANBA GIRLS	-	120	-	105		33	-	-			
	38	ACK ST.PAULS MUNGOORE	30	33	20	23	20	24	16	19			
		KAKAMEGA EAST											
	1	BISHOP SULUMETI-MUKOMARI	33	11	14	17	19	12	21	20	88	61	149
	2	BUKHAYWA	83	95	78	84	53	86	52	54	266	319	585
	3	BULOVI	26	24	18	16	23	19	26	20	93	79	172
	4	LUKUSI	53	49	51	37	51	36	24	31	179	153	332
	5	HANDIDI	61	44	63	58	46	51	52	56	222	209	431
	6	ILEHO	80	82	43	52	45	52	32	59	200	245	445
	7	IVAKALE	26	16	26	25	15	21	10	12	77	74	151
	8	LUNYU	43	39	36	39	40	33	23	21	142	132	274
	9	MAGALE	44	40	34	44	33	34	35	34	142	156	298
	10	SHANDEREMA	0	128	0	122	0	82	0	119	0	451	451
	11	IKUYWA	27	19	25	24	16	19	17	19	85	81	166
	12	LUBAO	145	82	85	50	56	50	38	38	324	220	549
	13	ST. PHILIPS MUKOMARI G.	68	0	100	0	85	0	58	0	311	0	311
	14	INGOLOMOSIO	47	39	33	29	26	28	19	15	125	111	236
	15	LIKHOVERO	15	14	15	13	18	15	14	16	62	58	120
	16	LUGANGO	25	21	16	16	9	13	11	8	61	58	119
	17	SHAGUNGU	22	17	33	22	24	15	11	21	90	75	165

18	SHIHUMBU	0	54	0	61	0	38	0	21	0	174	174
19	SOLYO	64	40	26	25	24	14	19	6			218
20	SHANJERO	61	92	55	67	50	53	30	30	196	242	438
21	ST.AGNES – SHIBUYE	303	0	215	0	197	0	177	0	892	0	892
22	KWIRENYI	63	71	39	46	45	38	27	60	174	215	389
23	MUGOMARI	36	32	10	15	19	12	22	20	87	79	166
24	SHITACHI	48	49	48	49	40	20	24	32	148	158	306
25	SHILALYO	36	18	25	12	9	24	18	8	88	62	150
26	MUKHONJE	28	31	19	20	11	28	17	40	75	119	194
27	MUKUMU BOYS	0	359	0	331	0	326	0	311	0	1327	1327
28	MUSENO	26	33	19	18	33	32	30	29	108	112	220
29	MUSINGU DAY	9	15	26	13	25	22	9	9	59	69	128
30	SHIDODO	71	86	58	69	49	56	58	71	236	282	518
31	SHIPALO	70	74	40	51	57	64	65	72	232	261	493
32	MUNDULU	12	10	12	7	9	3	11	13	38	39	77
33	MALIMILI	67	69	80	73	56	61	55	51	258	254	512
34	MUKUMU GIRLS	400	0	367	0	364	0	374	0	1505	0	1505
35	MURHANDA	10	17	19	17	23	21	13	20	65	75	140
36	LIRHANDA MIXED	39	21	37	35	44	31	26	20	146	107	253
37	SHISWA	14	10	8	6	14	11	17	12	53	39	92
38	INJIRA	38	26	39	29	34	18	13	9	124	82	206
39	LIRHANDA GIRLS	106	0	121	0	108	0	136	0	471	0	471
40	LUGALA	69	57	52	45	46	46	50	55	217	203	420
41	LWANDA	88	95	86	94	78	89	42	53	294	331	625
42	SHABWALI	49	45	47	36	32	46	44	45	172	172	344
43	SHAMILOLI	10	13	10	11	13	19	9	17	42	60	102
44	MUKULUSU	46	37	51	43	27	28	25	24	149	132	284
45	ITENYI	6	7	11	15	19	17	32	6	68	45	113

	46	ST. PETERS SEMINARY	0	91	0	100	0	110	0	52	0	353	353
	47	ST. CHARLES LWANGA	0	104	0	106	0	110	0	104	0	424	424
	48	KAMBIRI VICTORY	14	15	22	19	22	24	18	16	77	73	150
		NAVAKHOLO SUB COUNTY											
	1	CHEBUYUSI BOYS	475	0	186	0	214	0	370	0	1245	0	1245
	2	FRIENDS MIXED SECONDARY MUSAGA	46	45	44	50	45	60	17	31	152	186	338
	3	NAMIRAMA GIRLS	0	130	0	98	0	94	0	63	0	385	385
	4	NAVAKHOLO SECONDARY ONDARY	119	119	92	92	80	81	60	67	351	359	710
	5	SIRIGOI SECONDARY	44	34	30	28	26	24	35	24	135	110	245
	6	SIVILIE SECONDARY	143	103	107	90	101	61	87	53	438	307	745
	7	ST. CAROLI LWANGA LUTASO	53	50	44	56	66	63	55	45	218	214	432
	8	ST.THOMAS AQ . BUCHANGU	57	57	44	44	47	46	27	28	175	175	350
	9	FRIENDS SEC SCHOOL SIMULI	19	34	16	35	16	29	11	14	62	112	174
	10	BUHAYI M SECONDARY	27	33	28	23	40	24	24	24	119	104	223
	11	MUNGAKHA F. SCHOOL	29	29	36	36	37	37	22	22	124	124	248
	12	NAMUNDERA M . SECONDARY	36	48	43	54	34	37	31	23	144	162	306
	13	SIDIKHO SECONDARY	144	101	123	87	107	87	87	44	461	319	780
	14	SISOKHE SECONDARY	31	34	25	28	20	16	15	21	91	99	190
	15	ST.J .BUDONGA SECONDARY	48	49	49	48	50	47	42	42	189	186	375
	16	ST. KIZITO SECONDARY LUSUMU	95	96	82	92	104	70	104	58	385	316	701
	17	ST.PAUL LWAKHUPA SECONDARY	28	35	51	51	41	43	44	28	164	157	321
	18	NANG'ANDA SEC ONDARY	30	38	38	34	37	20	17	22	122	114	236
	19	ST. RAPHAEL'S BURANGASI SECONDARY	38	38	39	39	40	43	11	20	128	140	268
	20	BUSHILI SECONDARY	59	60	29	28	35	30	32	30	155	148	303
	21	EMATIHA SECONDARY	50	40	35	30	40	30	18	12	143	112	255
	22	ESUMEYA SECONDARY	43	40	40	33	26	20	25	20	134	113	247
	23	INGOTSE HIGH	216	0	206	0	218	0	212	0	852	0	852
	24	SHIKOMARI SECONDARY	77	77	68	68	58	58	60	40	263	243	506

	25	SHINOYI SECONDARY	61	60	50	30	39	38	40	30	190	158	348
	26	ST. PAULS EMULAKHA SECONDARY	96	93	111	74	90	74	95	62	392	303	695
	27	ST.MARY'S EBUTENJE GIRLS	0	45	0	47	0	36	0	24	0	152	152
	28	NAMBACHA MIXED SECONDARY	18	15	20	15	23	27	36	34	97	91	188
		KAKAMEGA CENTRAL SUB COUNTY											
	1	KILIMO GIRLS	-	136	-	139	-	133	-	102	-	510	510
	2	SHISANGO GIRLS	-	59	-	28	-	27	-	34	-	148	148
	3	MATIOLI BOYS	123	-	123	-	124	-	-	-	462	-	462
	4	SHIKOTI MIXED	60	66	63	62	46	50	23	30	197	203	400
	5	EBWAMBWA	70	88	49	61	40	34	28	43	187	226	413
	6	MWIYALA SEC	43	52	43	40	57	47	25	29	168	168	336
	7	MARABA SECONDARY	31	21	25	22	33	20	15	18	104	81	185
	8	ESOKONE SECONDARY	13	11	16	16	12	15	10	11	51	53	104
	9	KAKAMEGA MUSLIM	40	52	33	43	30	42	19	29	122	166	288
	10	INDANGALASIA	38	56	26	46	25	37	45	48	134	187	321
	11	ROSTERMAN	40	46	44	34	30	38	32	34	154	144	298
	12	MATENDE GIRLS	-	89	-	112	-	100	-	124	-	425	425
	13	KAKAMEGA HIGH	497	-	407	-	405	-	347	-	1656	-	1656
	14	BISHOP SULUMETI	-	238	-	217	-	149	-	154	-	758	758
	15	KAKAMEGA TOWNSHIP	63	70	55	54	44	29	45	22	-	-	-
	16	ESHISIRU	78	53	58	65	48	52	57	40	230	220	450
	17	IBINZO GIRLS	-	151	-	119	-	76	-	76	-	419	419

Source: CEO (2018)

Appendix XII:Form three enrolment in Kakamega County

School type	Population	Proportional sample size	sample %
Girl Boarding	4,960	32	8.4
Girl Day/Boarding	2,529	16	4.2
Girl Day	2,645	17	4.5
Boys Boarding	4,802	31	8.1
Boys Day/ Boarding	2,756	18	4.7
Mixed Day	29,667	189	49.6
Mixed Day/ Boarding	12,316	78	20.5
Total	59675	381	100

Source: Education office,Kakamega County (2018)