

**ATTACHMENT STYLES AS PREDICTORS OF BEHAVIORS AMONG
SECONDARY SCHOOL STUDENTS IN NAIROBI COUNTY, KENYA**

OWINO WALTER ODERA

**THESIS SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE
OF DOCTOR OF PHILOSOPHY IN EDUCATIONAL GUIDANCE AND
COUNSELING OF MAASAI MARA UNIVERSITY**

2022

DECLARATION

This thesis is my original work and has not been presented for a degree in this or any other university

Signature

Owino Walter Odera
DE05/4007/2014

Date

We confirm that the work reported in this thesis was carried out by the candidate under our supervision as University supervisors:

Signature

Dr. Mukolwe Asakhulu
Senior Lecturer,
Department of Education Foundations and Psychology,
School of Education,
Maasai Mara University

Date

Signature

Prof. Jonathan Mwanja
Professor,
Department of Educational Psychology,
School of Education,
South Eastern Kenya University

Date

DEDICATION

I dedicate this thesis to my beloved mother Jane Atieno who instilled and nurtured in me a love for education, discipline and hard work and has supported me in all my endeavors.

I am thankful for her love and prayers.

ACKNOWLEDGEMENTS

First and foremost, my gratitude is to God for giving me the grace to pursue my studies to the doctoral level. I thank Maasai Mara University for the opportunity to obtain my PhD at the university. My sincere gratitude goes to my supervisors Professor Jonathan Mwanja of South Eastern Kenya University and Dr. Newton Mukolwe of Maasai Mara University for their guidance and support throughout from the beginning to the end of the journey. I am grateful to Dr. Mwaura Kimani from the department of Education Foundations and Psychology for immense support he gave during my coursework and preparation of my thesis. My gratitude goes to Dr. Ayodi and the staff of the KEMI campus that were very helpful at the time I took classes at that campus. My gratitude also goes to Dr. Philomena Ndambuki of Kenyatta University and all lecturers who taught me coursework at KEMI. I want to thank Mr. Jotham Mithika for his assistance in collection, entry and analysis of data. I also appreciate the school heads, guidance and counseling teachers and students from the secondary schools where data for this study was collected for their cooperation. I want to express gratitude to Dr. Graceann Kimaru and Dr. Simon Njagi who were ahead of me and provided invaluable insights on the journey towards acquiring my PhD. I want to thank my colleague Purity Mutonyi for constant encouragement in the long academic journey. My heartfelt gratitude also goes to my parents for their love and prayers and inspiring in me hope for a better future.

ABSTRACT

Students in secondary schools are going through the adolescent stage during which there is an increased desire to experiment with a number of risky activities including sexual and substance use activities. Aggression and suicidal behaviors are also prevalent during adolescence. Such behaviors could be partly related to problems in the attachment phenomenon. The nature of attachment to parents/guardians and other attachment figures influences adjustment and behavior across the human lifespan. Much of research on attachment has however been done in Western countries. The influence of attachment in adolescents has received less attention especially in Kenya. Thus, the current study sought to investigate the relationships between secondary school students' attachment styles and risky sexual behavior, substance use, aggressive behavior and suicidal behavior. The following objectives guided this study: to establish the relationship between students' attachment styles and risky sexual behavior; to determine the relationship between students' attachment styles and substance use; to determine the relationship between students' attachment styles and aggressive behavior and lastly to establish the relationship between students' attachment styles and suicidal behavior. The study was anchored on the Attachment Theory by John Bowlby. A correlational research design was used. Data on attachment styles and students' deviant behavior was collected using self-administered questionnaires. The study targeted a population of 10,451 Form Three students in public secondary schools in Nairobi County. Purposive sampling was used to select three sub-counties in Nairobi County. Stratified random sampling was used to select nine schools and random sampling was used to select a sample of 385 students. Nine guidance and counseling teachers also provided information pertaining to students' involvement in deviant behaviors and relationships with their parents. Statistical Package for Social Sciences (SPSS version 22) software aided in analyzing the data. Descriptive statistics are presented in tables and figures. Pearson product moment correlation at $\alpha = .05$ was used to determine bivariate relationships among the study variables and the study hypotheses were tested using multiple regression analyses at $\alpha = .05$. Analysis of variance (ANOVA) was used to test the fitness of the regression models at $\alpha = .05$. The study found that secure attachment style predicted lower levels of risky sexual behavior ($\beta = -.182, p = .001$), lower levels of substance use ($\beta = -.117, p = .028$) and lower levels of aggressive behavior ($\beta = -.116, p = .028$). Preoccupied attachment style predicted higher levels of risky sexual behavior ($\beta = .176, p = .003$), aggressive behavior ($\beta = .117, p = .048$) and suicidal behavior ($\beta = .487, p < .001$). Dismissing attachment style predicted higher levels of substance use ($\beta = .174, p = .004$), aggressive behavior ($\beta = .157, p = .008$) and suicidal behavior ($\beta = .122, p = .018$). These findings indicate that insecure attachment styles predicted involvement in risky sexual behavior, substance use, aggressive behavior and suicidal behavior while secure attachment style was protective against risky sexual behavior, substance use and aggressive behavior. The study therefore recommends that students' attachment styles should be addressed in school guidance and counseling programs and that guidance and counseling teachers should work together with parents and guardians to enhance formation of secure attachment among students as this will reduce their risk of involvement in problem behaviors. The findings of this study may help guidance and counseling teachers, counselors working with adolescents as well as parents, guardians and stakeholders in education to design strategies to reduce students' involvement in deviant behavior.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
ABSTRACT	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS.....	xi
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.0 Introduction.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem	11
1.3 Purpose of the Study	12
1.4 Objectives of the Study	13
1.5 Null Hypotheses	13
1.6 Significance of the Study.....	14
1.7 Scope of the Study	15
1.8 Limitations of the Study	16
1.9 Assumptions of the Study.....	17
1.10 Operational Definition of Terms	18
CHAPTER TWO.....	21
LITERATURE REVIEW	21
2.0 Introduction.....	21
2.1 Contextualization of the Study.....	21
2.2 Attachment Styles and Risky Sexual Behaviors among Secondary School Students	24
2.3 Attachment Styles and Substance Use among Secondary School Students.....	41
2.4 Attachment Styles and Aggressive Behavior among Secondary School Students	56
2.5 Attachment Styles and Suicidal Behavior among Secondary School Students.....	69

2.6 Summary of Reviewed Literature and Gap Identification.....	85
2.7 Theoretical Framework: Attachment Theory (John Bowlby 1969, 1973, 1980).....	86
2.8 Conceptual Framework	89
CHAPTER THREE	92
RESEARCH METHODOLOGY	92
3.0 Introduction.....	92
3.1 Research Design.....	92
3.2 Study Variables	93
3.3 Location of the Study	93
3.4 Target Population.....	95
3.5 Sample Size and Sampling Procedure.....	95
3.6 Research Instrument	97
3.7 Pilot Study	98
3.7.1 Validity of the Study Instruments	99
3.7.2 Reliability of the Study Instruments.....	100
3.8 Data Collection Techniques.....	102
3.9 Data Analysis Procedures	103
3.10 Logistical and Ethical Considerations	104
CHAPTER FOUR	106
4.0 Introduction.....	106
4.1 General and Demographic Information.....	107
4.1.1 Response Rate	107
4.1.2 Demographic Characteristics of Respondents.....	108
4.2 Hypothesis Testing	116
4.2.1 Attachment Styles and Risky Sexual Behavior among Secondary School Students.....	117
4.2.2 Attachment Styles and Substance Use Behavior among Secondary School Students.....	128
4.2.3 Attachment Styles and Aggressive Behavior among Secondary School Students.....	139
4.2.4 Attachment Styles and Suicidal Behavior among Secondary School Students	150
CHAPTER FIVE.....	162

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	162
5.0 Introduction.....	162
5.1 Summary of the Study Findings	162
5.2 Conclusions.....	163
5.4 Policy Recommendations	167
5.5 Recommendations for Further Research	168
REFERENCES.....	170
APPENDICES.....	196
Appendix I: Letter to the Respondents.....	196
Appendix II: Students’ Questionnaire.....	197
Appendix III: Time Frame	202
Appendix IV: Proposed Budget.....	203
Appendix V: Map of Nairobi County	204
Appendix VI: Research Permit	205
Appendix VII: Letter of Research Authorization – Ministry of Education	206
Appendix VIII: Letter of Research Authorization – Maasai Mara University.....	207

LIST OF TABLES

Table 1: Reliability Coefficients for Subscales of the Attachment Styles Questionnaire	101
Table 2: Reliability Coefficients for Subscales measuring Selected Behaviors	102
Table 3: Bivariate Correlations between Attachment Styles and Risky Sexual Behavior	117
Table 4: ANOVA for Risky Sexual Behavior.....	118
Table 5: Model Summary for Risky Sexual Behavior	119
Table 6: Regression Coefficients for Risky Sexual Behavior.....	119
Table 7: Bivariate Correlations between Attachment Styles and Substance use Behavior	129
Table 8: ANOVA for Substance Use Behavior	130
Table 9: Model Summary for Substance Use Behavior	131
Table 10: Regression Coefficients for Substance Use Behavior.....	131
Table 11: Bivariate Correlations between Attachment Styles and.....	140
Table 12: ANOVA for Aggressive Behavior.....	141
Table 13: Model Summary for Aggressive Behavior.....	142
Table 14: Regression Coefficients for Aggressive Behavior.....	142
Table 15: Bivariate Correlations between Attachment Styles and Suicidal Behavior	151
Table 16: ANOVA for Suicidal Behavior	152
Table 17: Model Summary for Suicidal Behavior	153
Table 18: Regression Coefficients for Suicidal Behavior	153

LIST OF FIGURES

Figure 1: Conceptual Framework showing the relationship between attachment styles and selected behaviors.....	90
Figure 2: Distribution of students according to age and sex.....	108
Figure 3: distribution of Students according to sex and school type.....	109
Figure 4: Distribution of Students by Parents' Marital Status and Sex.....	110
Figure 5: Distribution of Students by Sex and type of home.....	111
Figure 6: Means of Students' Attachment Styles by Sex	112
Figure 7: Means of Attachment Styles by Type of Students' Homes	113
Figure 8: Means of Students' Behaviors by Sex	115

ABBREVIATIONS AND ACRONYMS

AFIDEP	African Institute for Development Policy
ASQ	Attachment Styles Questionnaire
BPAQ	Buss-Perry Aggression Questionnaire
IWM	Internal Working Models
KCSE	Kenya Certificate of Secondary Education
NACOSTI	National Council for Science, Technology and Innovation
SAHMSA	Substance Abuse and Mental Health Services Administration
SPSS	Statistical Package for the Social Sciences
STI	Sexually Transmitted Infections
SBQ-R	Suicide Behaviors Questionnaire –Revised
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presents the background to the study, the statement of the problem, the purpose of the study and the objectives and hypotheses that guided the study. The chapter also presents the limitations of the study, significance of the study, assumptions of the study and operational definition of terms.

1.1 Background of the Study

Attachment to caregivers is indispensable for the survival of an infant (Bowlby, 1969). An infant forms secure or insecure attachment to the caregiver depending on the quality of care received from the caregiver and availability of the caregiver. Available and nurturing caregivers foster secure attachment and those who are unavailable or fail to provide adequate care will encourage insecure attachment in their children (Moullin et al., 2018). Infants form mental models of attachment relationships which Bowlby (1973) called “internal working models” (IWM) of attachment relationships.

The mental models of attachment consist of a “self-image” which is the infants’ perception of him or herself and an “other image” which is the infant’s perception of the caregiver. An infant with secure attachment to the caregiver feels worthy of the love, care and attention from the caregiver and sees the caregiver as a person who is available, caring and responsive (Moullin et al., 2018). On the other hand, an infant with insecure

attachment to the caregiver feels undeserving of the caregiver's love, care and attention and thinks of the caregiver as one who is unreliable, undependable or hostile (Moullin et al., 2018).

Parents are the primary attachment figures because they are often the main caregivers. They are important in the lives of adolescents and continue to act as attachment figures. However, other family members, friends, peers and other people adolescents form relationships with will play the role of secondary attachment figures in their lives (Fairbairn et al., 2018). The quality of the attachment with primary attachment figures will be replicated in secondary attachment relationships. This is because the "self-image" and the "other image" that result from attachment relationships with primary attachment figures do not change much over time and are the means by which early attachment relationships influence subsequent relationships as well as adjustment in adolescence and adulthood (Bowlby, 1973; Fairbairn et al. 2018). These mental models of attachment are also the determinants of individuals' attachment styles (Bartholomew & Horowitz, 1991; Mikulincer & Shaver, 2012).

Adolescents with secure attachment styles perceive themselves as worthy of the love, care and attention of attachment figures and perceive attachment figures as caring, loving and available. Although they have a positive view of attachment figures, they do not need their approval for self-validation nor worry about their ability (Mikulincer & Shaver, 2012). Insecure attachment styles are characterized by high levels of attachment anxiety

and attachment avoidance which result from having caregivers who were unresponsive, uncaring, rejecting or unavailable (Mikulincer & Shaver, 2012).

Adolescents with preoccupied attachment styles manifest high levels of attachment anxiety. They view themselves as underserving of the attachment figures' love and attention but still greatly desire the attachment figure's attention. They worry excessively about the availability of attachment figures and fear abandonment or rejection by them. They find validation through the approval and acceptance of other people and put a lot of effort in seeking and maintaining intimacy and closeness with the attachment figure (Chow et al., 2017; Sheinbaum et al., 2015). Adolescents with dismissing attachment styles have high levels of attachment avoidance. They have positive self-image and find validation of their self-worth from within themselves but they distrust attachment figures. They aspire for emotional independence and self-reliance out of fear that attachment figures will reject or disappoint them if they attempt to form close relationships (Chow et al., 2017; Sheinbaum et al., 2015).

Lastly, adolescents with fearful attachment styles manifest high levels of attachment anxiety and attachment avoidance. They have a negative self-image and a negative image of attachment figures. They have a desire to be loved and to feel close to attachment figures but they also feel unlovable and undeserving of the attachment figures' love and attention and fear rejection by the attachment figures. They therefore avoid close relationships while also craving attention from others (Mikulincer & Shaver, 2012).

The current study adopted the four dimensional model of attachment styles and investigated whether these attachment styles predicted involvement in selected behaviors among secondary school students in Nairobi County. During adolescence, there is a sharp increase in vulnerability to and occurrence of various deviant behaviors (Monahan et al., 2015; Hasan & Husain, 2016; Babore et al., 2016). The current study considered risky sexual behavior, substance use, aggressive behavior and suicidal behavior among secondary school students in Nairobi County.

The first behavior considered in the current study was risky sexual behavior. Researchers consider early initiation into sex, having sex with multiple partners, inconsistent or non-use of condoms and contraceptives, having sex while intoxicated with alcohol or other substances, sex with older partners and transactional sex to be risky sexual behaviors (Chen et al., 2017; Keto et al., 2020; Pinyopornpanish et al., 2017). Risky sexual behavior is a common phenomenon among adolescents. A study by Arruda et al. (2020) of Brazilian adolescents revealed that 23% of boys and 33% of girls did not use any protection the first time they engaged in sex. Only 14% of sexually active boys and 24% of sexually active girls used protection consistently.

It is estimated that 82% of adolescents living with the HIV/AIDS virus are in Sub Sahara Africa (Idele et al., 2014) and this is attributed to high rates of risky sexual behavior (Melesse et al., 2020). A review of data collected in demographic health surveys from Sub Saharan countries by Ali et al. (2021) confirmed high prevalence of risky sexual behavior in African youth. For instance, the review found that 15.7% of female

adolescents from Gabon and 32.7% of Ivorian male adolescents had had more than two sex partners in the 12 months preceding the study. Adolescent females who engaged in sex without condoms ranged from 32.6% in Gabon to 93.2% among Sierra Leoneans. For males, unprotected sex ranged from 19.8% in Gabon to 84.5% in Sierra Leone.

A study by Obare et al. (2016) found low rate of contraceptive use among sexually active adolescents in Kenya. Mbuthia et al. (2019) surveyed sexual behavior among first year students enrolling in two universities located at the Kenyan coast and found that 14% of respondents had initiated sex when they were between 7 and 14 years old and only 32.2% of the sexually active respondents consistently used condoms. In Nairobi County, Ochieng (2013) reported that 35.6% of male and 9.6% of female adolescents were sexually experienced and that, 30.6% of males and 28.5% of females did not use contraceptives or condoms the first time they had sex. Only 48% of the surveyed adolescents used contraceptives in their most recent sexual activity. Wamaitha (2017) conducted a survey of 15 to 24 year old females in informal settlement in Nairobi County and found that 11% of the respondents had initiated sex before they turned 14. Thirty three percent of the sexually active respondents had two or more partners in the past year and 47% used condoms sometimes and 20% never used condoms.

Substance use was the second behavior considered in the current study. Substance use among adolescents is a major concern globally. A survey by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2021) found that in the year 2020, 10.1% of American adolescents used marijuana, 1.6% misused prescription pain

relievers, 6.5% used tobacco products and 8.2% consumed alcohol. A study done in Italy by Cannizzaro et al. (2022) found that 77.2% of male and 69.6% of female high school students were regular consumers of alcoholic beverages and more than half of them binged on alcohol. The same study found that 41.5% of males and 28% of females consumed nicotine. In Africa, Kanyoni et al. (2015) reported that over half of 14 to 35-year-old Rwandan youths had used one or more substances in their lifetime with most having used alcohol (50.6%).

In Kenya, Waithima (2017) did a survey on substance use among secondary school students in Nyeri County. Overall, 57.4% of the students reported lifetime use of at least one psychoactive substance with the most commonly used substance being alcohol (48.6%). A similar survey in Kiambu County by Kiambi (2018) revealed that alcohol, tobacco and marijuana were frequently used by secondary school students. In Nairobi County, Owino (2017) observed high prevalence of drinking, cigarette smoking, marijuana use and use of other substances among the youth. More than 80% of students surveyed by Kingendo (2015) in Nairobi County had witnessed their schoolmates using drugs.

The third behavior the current study looked at was aggression. Aggression involves willful actions intended to cause physical or psychological harm on another person (Eltink et al., 2018) and peaks in adolescence. Physical aggression involves threats of physical harm, physically attacking or fighting with someone, rape, robbery or even homicide. Verbal aggression entails communication aimed at inflicting psychological

pain on another person such as insulting someone and making nasty remarks about them (Ristić-Dimitrijević, 2011). Aggression is common during adolescence. A population based survey of 9th to 12th grade students in the United States found that 23.6% of students had been in a fight in the 12 months preceding the study (Kann et al., 2018). In a study with a sample of Norwegian adolescents, Henriksen et al. (2021) found that 22% of the respondents had engaged in physical aggression. A study by Lakhdir et al. (2020) based on data from a nationally representative sample of Pakistani adolescents revealed that 41% of the sampled adolescents had been physically aggressive at least one time in the one year preceding the study.

A review by UNESCO (2019) reported that students in Sub Saharan African countries reported the highest rate of bullying (48.2%) compared to students from North African (42.7%) or Middle East countries (41.1%). In comparison, less than 25% of American, European and Caribbean students reported bullying. Bullying, which involves aspects of verbal and physical aggression and other hurtful actions is common in Kenyan schools. In a study by Mutiso et al. (2019), only 13.6% of students sampled from secondary schools had experienced no bullying. In Nairobi County, Itigi (2017) found that physical aggression such as being hit, kicked or beaten and verbal aggression in form of insults and students spreading malicious rumors about each other were common bullying behaviors in secondary schools.

Suicidal behavior was the fourth behavior investigated in this study. Approximately 1.4% of people who die each year die as a result of suicide and it is among the top five causes

of death among 15 to 29 year old youths (Bitta et al., 2018). In a survey done in the united states in the year 2020, among 12 to 17 year old adolescents, 12 % seriously thought of committing suicide, 5.3% devised suicide plans and 2.5 % went ahead and attempted suicide (SAHMSA, 2021). Lim et al. (2019) did a meta-analysis of studies that looked at lifetime and 12 month prevalence of suicidal behavior in adolescence globally. For suicide attempts, lifetime prevalence was 6% and 12 month prevalence was 4.5%. For suicidal ideation, lifetime prevalence was 18% and 12 month prevalence was 14.2%.

In Nairobi County, Ngondi (2016) investigated whether performance in K.C.S.E would predict symptoms of anxiety, depression and suicidal ideation in 16 to 19 year old individuals who had just received their results. Besides finding no significant association between K.C.S.E results and suicidal ideation, the study found that 17% of the respondents had had suicidal ideations even before K.C.S.E results were released which suggests that suicidal behavior is a common occurrence among students in the county. Mugambi et al. (2020) who found that 21.5% of 14 to 22 year old secondary school students from informal settlements in Nairobi County reported suicidal behaviors. They found that 12.6% of the respondents had made suicide plans while 4.8% had made suicide attempts. The same study also established that suicidal behavior was more prevalent among respondents who also had symptoms of depression and posttraumatic stress disorders. Fifty one percent of such respondents had made suicide plans and 22.9% had attempted suicide.

The current study was relevant for several reasons. First of all, the aforementioned behaviors are prevalent in adolescents not just globally but also in Nairobi County. Existing research suggests that insecure attachment styles may predict problem behavior. Pakdaman et al. (2016) found that preoccupied, dismissing and fearful attachment styles were positively correlated with loneliness and depression in Iranian undergraduate students. Lacasa et al. (2015) found that preoccupied attachment style predicted internalizing and externalizing behavior in 14 to 18 year old Spanish adolescents. Cömert and Ögel (2014) reported that Turkish adolescents with dismissing and preoccupied attachment styles were more likely to have used substances relative to those with secure attachment styles.

The second reason this study was pertinent is that researchers have found parenting behaviors or attitudes that may cause insecure attachment in adolescents in Nairobi County. For instance, Kariuki et al. (2015) found that a high number of adolescents in Nairobi County perceived their parents to be using harsh words and corporal punishment. In a study involving day school students by Gitonga (2013), 38.7% and 17.1% of respondents reported that their mothers and fathers were emotionally neglectful, respectively. Kombech (2017) reported that secondary school students felt no emotional attachment to their mothers (18.4%) and to their fathers (36.3%). Moreover, many parents are busy making a living so they spend little time with their children and let house helps and teachers raise their children (Ngesu & Kyule, 2019; Kagendo, 2017).

Although mental models of attachment are relatively stable, ongoing relationships with caregivers may modify these representations of attachment in the growing child (Allen et al., 2018). Children can interpret parental absence, rejection or under protection as lack of interest and this causes an emotional disconnection between children and their parents and can erode attachment bonds (Khasakhala, 2012). A study by Dean (2017) found that poor parenting practices were predictors of fearful and preoccupied attachment styles whereas adverse childhood experiences predicted fearful, preoccupied and dismissing attachment styles. Tussey et al. (2018) found that physical abuse in childhood, witnessing parental violence and poor relationships with parents resulted in higher levels of attachment anxiety and avoidance.

Wambua et al. (2018) noted that very few studies have addressed attachment in adolescents in African countries. Available studies concur with those done in other parts of the world in regards to the beneficial effects of secure attachment in adolescents. For instance, Rawatlal et al. (2015) reported that secure attachment to parents predicted fewer depression symptoms while Barber (2017) found that insecure attachment predicted offending and antisocial behavior in South African adolescents. In Uganda, Okello et al. (2014) found that adolescents who had been affected by war but had secure attachment to parents had fewer anxiety and depression symptoms. In Nairobi County, Abubakar et al. (2013) found that secure attachment to parents and peers predicted identity formation, mental health and life satisfaction of both disabled and non-disabled adolescents. In another study, Wambua et al. (2018) found that insecure attachment predicted emotional and behavior problems among adolescents from low income and middle-income

households. Furthermore, Majimbo (2017) reported that academic performance was negatively correlated with insecure attachment in Nairobi County.

Risky sexual behavior, substance use, aggression and suicidal behavior have been reported in Nairobi County (Gitonga et al., 2017; Itegi, 2017; Kingendo, 2015; Mugambi et al., 2020; Ngondi, 2016; Ochieng, 2013; Owino, 2017) and insecure attachment in adolescence has been associated with greater risk of various problem behaviors (Cömert & Ögel, 2014; Lacasa et al., 2015 & Pakdaman et al., 2016). At the same time, parenting practices that may be detrimental to secure adolescent attachment have been observed in Nairobi County (Kariuki et al., 2015; Kombech, 2017; Ngesu & Kyule, 2019 & Kagendo, 2017). In this context, this study investigated whether attachment styles predict the selected deviant behaviors among secondary school students in Nairobi County.

1.2 Statement of the Problem

Secondary school students are at a developmental stage where their risk of engaging in harmful behaviors like risky sex, substance use, interpersonal aggression and suicidal behavior is increased. In recent years, studies have found high prevalence of such harmful behavior among secondary school students in Nairobi County. Nairobi County recorded approximately 11,795 cases of teenage pregnancies, far greater than second placed Kakamega County with 6,686 cases between January and May 2020 (AFIDEP, 2020). A high prevalence of substance use among secondary school students in the county has been reported with one study finding that 80% of surveyed students had observed alcohol, tobacco, marijuana and other substances being used in their schools.

Students in Nairobi County are also prone to aggression in form of physical assaults, verbal abuse and bullying by fellow students (Opere et al., 2019). Worrying levels of suicidal behavior in form of suicidal ideation, making suicide plans and attempting suicide has been reported among secondary school students in the county.

Insecure attachment styles are associated with higher risk of engaging in the aforementioned behaviors according to existing research on attachment in adolescence although the findings are not entirely consistent. This research has mostly been done in western countries and there is scarcity of similar studies in Kenya. In addition, parenting behaviors such as harsh punishment, emotional neglect and abandonment which may weaken the attachment bonds between secondary school students and their parents are common in Nairobi County (Kariuki et al., 2015) and adolescents are spending more time on the internet and social media and less time bonding with parents (Micheni & Muketha, 2019). In this context, the current study investigated whether secure or insecure attachment styles, which are grounded in the attachment theory, predict involvement in risky sexual behavior, substance use, aggressive behavior and suicidal behavior among secondary school students in Nairobi County.

1.3 Purpose of the Study

The purpose of the study was to investigate the extent to which attachment styles predict selected behaviors among secondary school students in Nairobi County.

1.4 Objectives of the Study

The study was guided by the following objectives:

- 1) To determine the extent to which attachment styles predict risky sexual behavior among secondary school students in Nairobi County, Kenya.
- 2) To establish the extent to which attachment styles predict substance use behavior among secondary school students in Nairobi County, Kenya.
- 3) To find out the extent to which attachment styles predict aggressive behavior among secondary school students in Nairobi County, Kenya.
- 4) To determine the extent to which attachment styles predict suicidal behavior among secondary school students in Nairobi County, Kenya.

1.5 Null Hypotheses

The following hypotheses were tested in this study:

Ho₁: There is no statistically significant relationship between students' attachment styles and risky sexual behavior among secondary school students in Nairobi County, Kenya.

Ho₂: There is no statistically significant relationship between students' attachment styles and substance use behavior among secondary school students in Nairobi County, Kenya.

Ho₃: There is no statistically significant relationship between students' attachment styles and aggressive behavior among secondary school students in Nairobi County, Kenya.

Ho₄: There is no statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in Nairobi County, Kenya.

1.6 Significance of the Study

The findings of the study may be useful to teachers involved in guidance and counseling in schools and counselors working with adolescents. The knowledge of how students' attachment styles relates to risky sexual behavior, substance use, aggressive behavior and suicidal behavior may help teachers and school counselors in designing interventions to reduce these behaviors.

The findings of this study may aid school administrators and other policy makers in the education sector in understanding how students' attachment styles relate with the selected problem behaviors. Rather than relying on interventions that only involve students presenting with these behaviors, school administrators and policy makers, with the understanding of how attachment styles influence problem behaviors, will be able to formulate holistic interventions that involve parents, guardians and other family members who are students' attachment figures.

Community based and non-governmental organizations that are involved with adolescents may also benefit from the findings of this study. The knowledge of how students' attachment styles relate to their behaviors may help these organizations formulate policies for behavior change that involve not only the students but also their

parents, guardians, families who are the students' attachment figures. Parents and guardians who care for students may also benefit from the findings of the study as they will gain empirical understanding of how attachment influences the wellbeing of adolescents. They may adjust their parenting behaviors to foster secure attachment with their children.

The findings of the study will contribute to the existing literature on how attachment styles influence the problem behavior of students. Although risky sexual behavior, substance use, aggressive behavior and suicidal behavior are concepts that have been widely studied in Kenya, how they relate to attachment security has not received much attention especially among students in secondary schools in Kenya and this study will help fill this gap.

1.7 Scope of the Study

The study took place in Nairobi County which was purposely selected owing to the high prevalence of risky sexual behavior, substance use, aggression and suicidal behavior among secondary school students. Since Nairobi County is large with 79 public schools in 14 Sub-Counties, only three sub-counties were purposively selected for the study. This helped to make the study manageable.

For the purpose of the study, Form Three students were sampled. The participants were randomly sampled and participation was voluntary. Form Three students were selected since they have been in secondary school longer than Form One and Form Two students

and were not preparing for their final examinations like the Form Four students. Attachment styles were measured on a self-report questionnaire filed by the students. Thus, attachment styles were measured only from the students' perspective.

1.8 Limitations of the Study

The study was conducted only in Nairobi County. Since Nairobi is an urban county with social and demographic characteristics different from most of the country, the findings of the study may only be generalized to the entire population of secondary school students in Kenya with caution. To mitigate this limitation, random sampling was used to select a representative sample of students with diverse backgrounds. Self-report measures were used in the study therefore it is not possible to completely rule out bias in students' responses especially in regards to questions related to sexual behavior, substance use and suicidal behavior which are very personal. To mitigate this limitation, the purpose of the study was explained and participation was voluntary. Students were instructed not to write anything on the questionnaires that may identify them in order to assure them their responses were anonymous and confidential. There were no locally developed standardized scales to measure the variables in the study therefore the researcher had to develop scales to measure substance use, risky sexual behavior and suicidal behavior and adapt items from standardized scales that have been used in other countries to measure attachment styles and aggressive behavior. To mitigate this limitation, the questionnaire was pilot tested in order to ensure it was valid and reliable before being employed in the study.

1.9 Assumptions of the Study

The study made the following assumptions;

- (i) Respondents would cooperate, give honest responses and complete the study questionnaires and the scales as required and expected to yield adequate data for testing of the study hypotheses.
- (ii) That the students have an attachment figure(s) in their lives
- (iii) That attachment styles influenced risky sexual behavior, substance use, aggressive behavior and suicidal behavior among secondary school students
- (iv) That the sample embraced adequate degree of representativeness

1.10 Operational Definition of Terms

The following terms are defined as used in this study;

Adolescent: in this study refers to a person aged between 13 and 19 years which is the age bracket that most secondary school students fall in. These individuals are undergoing rapid physical, emotional and social changes and have a propensity for problem behavior given their tendency to experiment and take risks.

Aggressive behaviors: in this study refer to willful action by a student intended to cause physical or psychological harm to another person. It may entail actions such as hitting and punching someone with the aim of causing pain to their body or insulting and denigrating another person to cause them emotional pain.

Attachment: in this study refers to enduring emotional bonds between students and attachment figures who may be parents, guardians, friends and romantic partners which provide emotional security and intimacy

Attachment anxiety refers to students' worry about availability and accessibility of attachment figures and fear of rejection or abandonment by attachment figures

Attachment avoidance refers to students' discomfort with interpersonal closeness, physical or emotional intimacy and a desire to remain emotionally independent and emotionally unexpressive in relationships with attachment figures

Attachment figures refer to important people in the lives of students including parents/guardians, peers and romantic partners with whom attachment bonds may be formed

Attachment styles refer to the extent of students' attachment anxiety or attachment avoidance which are influenced by students' perception of themselves as

deserving of love and care from attachment figures and of the attachment figures as trustworthy, caring and available if needed

Dismissing attachment refer to attachment style characterized by high levels of attachment avoidance low attachment anxiety. They have a positive view of themselves, find validation from within but they minimize closeness and reliance on attachment figures because they distrust the attachment figures to love and care for them and to be available when needed

Fearful attachment refers to attachment style characterized by both high attachment anxiety and high attachment avoidance. They have a negative view of themselves feeling unworthy of love and care while also having a negative view of attachment figures who they view as untrustworthy. They desire closeness to attachment figures but at the same time fear rejection.

Insecure attachment in this study refers to attachment styles characterized by high levels of attachment anxiety or avoidance. Students may have preoccupied, dismissing or fearful attachment styles depending on the level of attachment anxiety and avoidance

Preoccupied attachment refers to an attachment style characterized by high attachment anxiety and low attachment avoidance. They have a negative view of themselves and a positive view of attachment figures. Students perceive themselves as undeserving of care and attention from attachment figures so they make much effort to get the attachment figures' attention and care

Public secondary schools refer to government owned learning institutions attended by learners who have completed their primary school education and runs from Form One to Form Four. Learners in secondary schools are in their adolescent years

Risky sexual behaviors: refer to sexual behavior that may harm the health and wellbeing of secondary school students such as sexual activity at young age, inconsistent or non-use of condoms, having sex in exchange for money and having multiple sex partners

Secure attachment refers to an attachment style characterized by low attachment anxiety and low attachment avoidance. Students perceive themselves as worthy of care and attention from attachment figures and perceive attachment figures as trustworthy and available when needed. They have a positive self-image and a positive image of the attachment figure

Substance use behaviors: refer to the deliberate consumption of psychoactive substances including alcohol, tobacco, marijuana and *khat*

Suicidal behaviors: refer to suicidal ideation, making suicide plans and suicide attempts

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter begins with a brief contextualization of the study and then presents a review of literature relevant to the study. A review of previous studies that have examined the relationships between attachment and risky sexual behavior, substance use, aggressive behavior and suicidal behavior is presented. John Bowlby's attachment theory which guided the study is presented in this chapter. The final section of the chapter shows the conceptual framework which describes the hypothesized relationships among the study variables.

2.1 Contextualization of the Study

Secondary school students in Nairobi County are mostly adolescents because their ages range between 10 and 19 years, the age group the World Health Organization classifies as adolescents (W.H.O, 2008). During adolescence, students undergo extensive physical, cognitive, social and emotional development as they transition from childhood to adulthood (Milkman & Wanderg, 2012; Sarracino & Innamorati, 2012). As they develop, they also explore new behaviors and engage in risk taking behaviors. Keyzers et al. (2019) consider experimentation with new behavior and risk taking as normative for adolescents. As they try new behaviors and take occasional risks, adolescents are able to put their developing decision-making skills to the test and experience the consequences

of their own decisions. Moreover, by experimenting with different behaviors, adolescents are able to refine their identities (DiClemente et al., 2009).

DiClemente et al (2009) maintain that even though it is normative for adolescents to try out new behaviors and take risks from time to time, adolescents may not be capable of fully appreciating the potential harm in engaging in risky sexual behavior, substance use and other deviant behaviors. Such behaviors are not only harmful to the adolescent in the short term, they also predict involvement in similar deviant behavior in adulthood (Perera, 2013). Research over time has established that the tendency to engage in deviant behavior peaks during adolescence (Babore et al., 2016; Hasan & Husain, 2016; Monahan et al., 2015). Secondary school students' deviant behavior is therefore an issue of concern to parents, teachers and stakeholders in the educational sector.

As adolescents develop in the physical, social, cognitive and emotional domains, their relationships with parents are also evolving. According to Kruger et al. (2014), with growing cognitive ability, as well as social and emotional development, adolescents are driven towards greater freedom and autonomy from their parents. With this autonomy, adolescents spend less time with their parents and form closer relationship with peers (Keyzers et al., 2019). They become more susceptible to negative peer influence. In addition to adolescents' increasing autonomy from parents, parents are busier and spend less time with their children (Kagendo, 2017; Ngesu & Kyule, 2019). This leaves adolescents with plenty of unsupervised time they can use to engage in harmful behavior. Moreover, many students are increasingly alienated from their parents because parents are harsh towards them (Kariuki et al., 2015) or emotionally unavailable (Kombech,

2017). Internet technology has become more easily accessible especially in urban centers like Nairobi. Adolescents spend more time interacting with social media and less time bonding with parents (Micheni & Muketha, 2019).

The parent-child relationship remains important despite adolescents' increasing autonomy. Attachment is one way through which parenting influences adolescents' adjustment and behavior. Parenting characterized by trust, communication, warmth and responsiveness fosters secure attachment with the parent (Keyzers et al., 2019). According to Groh et al. (2014) children internalize this attachment relationship in the form of mental images of the self in relation to the attachment figure. This mental image, or the internal working model, determines an adolescent's attachment style in relation to secondary attachment figures. As adolescents continue maturing, peers, romantic partners and other significant people in their lives become secondary attachment figures. Adolescents who had secure attachments to their primary attachment figures will have secure attachment styles while those who had insecure attachments to primary attachment figures will have insecure attachment styles.

Earlier studies have revealed that secure parent-child relationships predict better adjustment and less involvement in deviant behaviors. Studies examining attachment styles conceptualized in terms of attachment anxiety and attachment avoidance have also shown that secure attachment styles, characterized by lower levels of attachment anxiety and attachment avoidance, have the same effect as secure parent-child attachment on adolescents. Most of the research on attachment has focused on children and adults or on

the parent-adolescent attachment relationship with fewer studies examining attachment styles in adolescents. This study sought to fill this gap by investigating whether attachment styles predict deviant behavior among secondary school students in Nairobi County.

2.2 Attachment Styles and Risky Sexual Behaviors among Secondary School

Students

Researchers have applied the attachment theory to explain adolescents' engagement in risky sexual behavior. Empirical research has shown that there are links between attachment security and individuals' sexual behavior (Mikulincer & Shaver, 2016). Some research has looked into secure parental attachment as a possible predictor of risky sexual behavior and there is evidence that insecure attachment to parents predicts risky sexual behavior. Adolescents with secure attachment to their parents enjoy more supportive relationships with their parents and communicate more openly with them even though they are at a developmental stage where they are becoming more autonomous and spending more time with peers (Ying et al., 2015).

Past research has shown that adolescents with close relationships with parents have fewer tendencies to engage in risk taking behavior. For instance, Fairley (2016) carried out a study to determine whether risky sexual behavior of 12 to 19 year old American adolescents was associated with how they perceived their relationships with their parents. Data was collected from a large sample of 11,504 adolescents. Adolescents who felt close to the mothers and fathers were less likely to engage in sexual intercourse before turning

14. The chances of engaging in unprotected sex without using condoms or birth control pills was lower among adolescents who felt close to their mothers and fathers and those who reported higher parental involvement, communication and monitoring. In addition, adolescents in the study who reported feeling close to their parents and higher parental involvement were less likely to report having had multiple sexual partners over a period of 12 months. That study revealed that adolescents' closeness to their parents offered protection against risky sexual behavior but did not directly address the link between attachment styles and risky sexual behavior in adolescents which was done in the current study.

In another study, Godinez (2018) examined whether engaging in unprotected sex was linked to attachment to parents in a sample of adolescents who had a mean age of 16.49 years. The study compared adolescents' perception of attachment to their parents between those who had had unprotected sex and those who had never engaged in unprotected sex. The Inventory of Parent and Peer Attachment was administered to measure parental attachment in terms of trust, communication and alienation. Independent samples t-test revealed that adolescents who had never engaged themselves in unprotected sex had a higher score on trust ($t = 3.14, p = .002$), higher score on communication ($t = 2.31, p = .023$), less alienation ($t = -2.26, p = .026$) and a higher total score for attachment to their mothers ($t = 3.03, p = .003$) compared to those who had had unprotected sex.

Likewise, Godinez (2018) found that adolescents who had never engaged in unprotected sex had higher scores on trust ($t = 2.49, p = .015$), higher score on communication ($t =$

1.06, $p = .291$), less alienation ($t = -2.31, p = .023$) and a higher total score for attachment to their fathers ($t = 2.03, p = .045$). Thus, that study showed that adolescents with secure attachment to their parents were less likely to participate in risky sexual behavior. Attachment styles were not addressed in that study so the current study sought to extend those findings but by considering the association between attachment styles and risky sexual behavior. The sample in the study by Godinez (2018) was small ($n = 96$) and was mostly female (70.7%) hence it was not adequately representative of the adolescent population. The current study was undertaken in a larger and more representative sample of adolescents.

Insecure attachment to parents in early childhood can predict risk taking behavior in adolescence. For instance, a study by Reyes et al. (2021) examined whether attachment to one's mother at nine months of age predicted involvement in multiple risk taking behaviors in late adolescence. Maternal attachment was assessed when children were nine months old using data provided by the mothers and then the children were followed up when they were 14 and 17 years old. It emerged that the adolescents who had had insecure attachments to their mothers as children were significantly more likely to take part in risky sexual behavior among other risk taking behaviors.

Empirical research into links between risky sexual behavior and attachment styles has shown a connection between insecure attachment styles and greater risk of involving oneself in risky sexual behavior. In one study, Potard et al. (2017) investigated whether quality of attachment as reported by young French adolescents was related to their sexual

behavior. Three hundred and twelve middle school students with a mean age of 13.8 years participated in the study. Participants filled the Inventory of Parental and Peer Attachment scale and the scores were used to classify them according to their attachment styles. Adolescents who had ambivalent attachment styles were found to be more likely to engage in sexual intercourse at that young age in comparison to adolescents who had secure attachment styles. At the same time, the study revealed that adolescents who had avoidant attachment styles were either sexually abstinent or they engaged in sexual relations while deliberately avoiding any emotional attachment.

Potard et al. (2017) observed that adolescents with ambivalent attachment styles had a strong desire for closeness. Such adolescents may assume that having sexual intercourse with their opposite sex partners will achieve that closeness and that sex is an indicator of the quality of their relationships. Conversely, adolescents with avoidant attachment styles were inclined towards casual sex because they found it difficult to maintain emotional attachment to one partner. The study by Potard et al. (2017) revealed that avoidant and anxious attachment styles predicted participation in risky sexual behavior in young French adolescents who differ demographically from secondary school students in Nairobi County. The current study attempted to replicate those findings in older adolescents in Kenya.

Anxious attachment style was able to predict risky sexual behavior in a study by Paulk and Zayae (2013). Their study sought to ascertain whether attachment styles predicted risky sexual behavior in a sample of 258 American adolescents with a mean age of 16.6

years. The researchers started by establishing which adolescents had had sexual intercourse and then computed a measure of risky sexual behavior using age at which adolescents first had sexual intercourse, total number of sex partners and consistency of condom use as indicators of risky sexual behavior. Attachment anxiety and avoidance was measured with the Experiences in Close Relationships scale. Linear regression analysis revealed that anxious attachment predicted risky sexual behavior ($\beta = -0.117, p < 0.05$) but attachment avoidance did not ($\beta = -0.060, p = 0.393$). The regression model was able to explain 11% of the variance in risky sexual behavior.

Paulk and Zayae (2013) attributed the finding that attachment avoidance was not a predictor of risky sexual behavior in their study to the fact that adolescents with higher levels of attachment avoidance are distrustful of other people and are therefore less likely to enter into intimate relationships where sexual intercourse would be possible. A similar finding was reported in a study by Lemelin et al. (2014) where the links between attachment and sexual behavior was investigated in a sample of 16 to 20 year old Canadian adolescents. Attachment avoidance predicted later onset of sexual intercourse ($r = -.30, p < .001$). The researchers noted that adolescents with higher levels of attachment avoidance formed fewer and less stable friendships and romantic relationships because they were uncomfortable with close interpersonal relationships hence they had fewer opportunities to engage in sexual activities. The studies by Paulk and Zayae (2013) and Lemelin et al (2014) demonstrated that attachment anxiety predicted risky sexual behavior in adolescent samples while attachment avoidance seemed not to be associated with risky sexual behavior. The current study sought to replicate the earlier studies

among adolescents attending secondary schools in Kenya to ascertain the relationship between attachment anxiety and avoidance and risky sexual behavior.

A study by Ahrens et al. (2012) also found that attachment anxiety was a predictor of risky sexual behavior. The study, which examined the relationship between risky sexual behavior and the anxious and avoidant dimensions of attachment, involved 1,225 adult women varying in age from 18 to 67 years. The study found that attachment anxiety predicted greater odds of respondents having had sex with people they did not know very well, having two or more sex partners in the previous one year and having a history of contracting a sexually transmitted infection. Attachment avoidance on the other hand did not predict greater odds of those outcomes. Ahrens et al (2012) did their study with a sample of adult women therefore, even though attachment anxiety was associated with risky sexual behavior, that finding may not be generalized to adolescents. There was need therefore for a similar study with an adolescent sample.

Attachment avoidance is also a predictor of risky sexual behaviors. In one study with two cohorts of American adolescents (mean age 16.5 years for the first cohort and 15.78 years for the second cohort), Saint-Eloi Cadely et al. (2020) reported that adolescents with avoidant attachment demonstrated less commitment to sexual partners, became sexually active at a younger age, took less time to know sexual partners and had more sexual partners in total but used condoms at a higher rate. It was interesting that the adolescents with avoidant attachment were keen to use condoms while engaging in sexual activities that are otherwise seen as risky. The authors concluded that such adolescents had no

interest in intimacy or commitment and only had sex in order to lose their virginity. They took care to avoid pregnancies that may tie them to a sex partner.

Deol et al. (2014) examined data collected from 277 adolescents aged between 12 and 17 years who were taking part in an ongoing longitudinal study. Attachment styles were assessed using Experiences in Close Relationships scale while risky sexual behavior was a composite of number of sexual partners, condom use, and drug or alcohol consumption just before engaging in sexual activities. Analysis of this data revealed that attachment avoidance was a significant predictor of involvement in risky sexual behavior ($\beta = .206, p = .014$). Attachment anxiety predicted *less* involvement in risky sexual behavior in that study ($\beta = -.287, p = .001$), a finding that was unexpected given that high level of attachment anxiety has been associated with greater odds of engaging in risky sexual behavior in other studies such as Potard et al. (2017).

A later study by Thibodeau et al. (2017) partly corroborated the findings by Deol et al. (2014). They analyzed data from 1,900 sexually active Canadian adolescents to determine whether childhood neglect was associated with attachment and risky sexual behavior. They found that a history of childhood neglect among the 13 to 17 year old adolescents resulted in attachment characterized by high levels of avoidance. Their analysis further revealed that adolescents with higher levels of attachment avoidance had more sexual partners and tended to engage in casual sex that did not involve emotional intimacy with people they did not take time to know well. This, according to the

researchers, was because adolescents with high levels of attachment avoidance were not willing to commit to long term relationships that involve emotional intimacy.

Results from the studies by Deol et al. (2014), Thibodeau et al. (2017) and Cadely Saint-Eloi et al. (2020) linked attachment avoidance with risky sexual behavior in adolescents. Attachment anxiety was not associated with risky sexual behavior in the studies by Deol et al. (2014) and Thibodeau et al. (2017). These studies contributed to the existing literature that shows associations between insecure attachment styles and risky sexual behavior in adolescent populations. However, there was need to replicate the studies in the Kenyan context since the samples in those studies were drawn from European populations.

Similar findings were reported in another study that involved older individuals with a mean age of 21.31 years. In that study, Dumas-Koylass (2013) had 269 participants complete the Experiences in Close Relationships Revised (ECR-R) to measure their attachment styles and the Sexual Risk Survey to obtain a score for involvement in risky sexual behavior. Participants with fearful and dismissive attachment styles which are both characterized by high levels of attachment avoidance were more likely to take part in risky and impulsive sexual activities when compared to participants with secure attachment styles. Participants with preoccupied attachment styles were however no more likely to engage in risky sexual behavior when compared to those with secure attachment styles. The researcher hypothesized that respondents with preoccupied attachment styles

had experienced rejection by caregivers and had learnt to avoid risky environments such as those involving risky sexual behavior.

Tucker et al. (2022) carried out a study to determine whether involvement in high risk sexual behavior could be prospectively predicted by insecure attachment styles and also tested whether frequent alcohol use mediated the relationship between insecure attachment styles and involvement in high risk sexual behaviors. Data was collected in three annual waves from 2,371 respondents who were 19 years old at the beginning of the study. Attachment avoidance predicted fewer sex partners but respondents with avoidant attachment were more likely to have sex without condoms. Attachment anxiety did not directly predict risky sexual behavior but the pattern that emerged across the three waves was that higher attachment anxiety predicted more frequent alcohol use and alcohol use was associated with higher number of sexual partners and sex without condoms in committed relationships and with casual sex partners. Thus, the findings of the study by Tucker et al. (2022) supported findings reported by Dumas-Koylass (2013) in that attachment avoidance but not attachment anxiety was associated with risky sexual behavior in adult samples. The current study sought to extend these earlier studies in adolescents in order to determine whether attachment styles predicted risky sexual behavior in adolescents.

A study by Matson et al. (2014) found that insecure attachment was predictor of involvement in risky sexual behavior as well as infection with a sexually transmitted infection in a longitudinal study. Data was collected quarterly over an 18 month period

from 122 adolescent girls who were aged between 16 and 19 years at the onset of the study. The respondents were classified as having secure or insecure attachment styles using a self-administered computerized questionnaire. The respondents reported their sexual and substance use behaviors as well as their sex partners'. The respondents' urine was tested quarterly for chlamydia and gonorrhea. When adolescents classified as having insecure attachment were compared with adolescents classified as having secure attachment, those with insecure attachment were twice as likely to get an STI infection [OR: 2.00, 95% CI: 1.002, 4.00], had more sex partners [OR: 2.68, 95% CI: 1.49, 4.83], engaged in unplanned sexual activity after consuming alcohol [OR: 2.16, 95% CI: 1.12, 4.15] and had concurrent sexual partners [OR: 2.00, 95% CI: 0.98, 4.09]. The findings of that study contribute to the body of findings linking insecure attachment to risky sexual behavior although the study was done with female respondents only. The current study was done with a representative sample of adolescents to build upon earlier studies.

Insecure attachment has been found to predict compulsive sexual behavior which entails constant preoccupation with sexual fantasies, sexual urges and sexual behaviors that may result in adverse consequences (Gola & Potenza, 2018). Efrati and Gola (2018) examined the link between sexual behavior and insecure attachment in Israeli adolescents aged between 14 and 18 years. Six hundred and eighteen adolescents were classified on the basis of their sexual behaviors as abstainers, fantasizers and those having compulsive sexual behavior. When the three groups were compared, adolescents with compulsive sexual behavior had significantly higher levels of attachment anxiety relative to the other

two groups. In addition, adolescents with compulsive sexual behavior engaged in sexual activities at higher rates than the fantasizers and abstainers.

Sex addiction is a concept related to compulsive sexual behavior. It is defined as intense involvement in sexual activities which may involve pornography viewing, masturbation, sexual fantasies and taking part in sexual intercourse without taking into consideration possible negative consequences (Andreassen et al., 2018). Sex addiction has also been linked to insecure attachment. In one study, Kotera and Rhodes (2019) examined predictors of sex addiction in adults in a sample of 51 men and 53 women. The Revised Adult Attachment Scale was used to measure attachment among participants along three dimensions, that is, close, dependent and anxious attachment. Close and dependent attachments as measured by the scale are aspects of secure attachment styles. The results of the study showed that sex addiction was negatively correlated with close attachment ($r = -.23, p < .05$) and positively correlated with anxious attachment ($r = .40, p < .01$). Moreover, anxious attachment was a mediator in the relationship between sex addiction and adverse childhood experiences as well as the relationship between sex addiction and narcissism.

A study by Kircaburun et al. (2021) examined psychological correlates of sex addiction in a sample of adults varying in age from 18 to 81 years. The study involved a large community sample with 24,380 participants. Attachment anxiety predicted sex addiction in that study but attachment avoidance did not. The authors of the study posited that individuals with anxious attachment had difficulty forming intimate relationships and

they compensated for their lack of intimacy through excessive sexual fantasies or by involving themselves in sexual relationships motivated by fear of separation or abandonment. The findings of that study supported those reported by Kotera and Rhodes (2019) where anxious attachment was linked to sex addiction as well as Efrati and Gola (2018) where it was linked to compulsive sexual behavior in adolescents. Sex addiction and compulsive sexual behavior are correlates of risky sexual behavior (Andreassen et al., 2018) hence those studies suggest a link between risky sexual behavior and anxious attachment.

Individuals with insecure attachment styles have been found to have less restrictive attitudes towards casual sex and are more open to engaging in sexual activities with people they are not in committed relationships with. In a study by Hackathorn and Malm (2022) for example, interactions between parental rejection, attachment and attitudes towards sex were examined in a sample of 335 respondents with a mean age of 19.48 years. Parental rejection was found to be a predictor of insecure attachment in that study. Participants with high levels of attachment anxiety as well as those with high levels of attachment avoidance endorsed more positive attitudes towards casual sex relative to respondents with secure attachment styles.

Individuals with insecure attachment styles are not only more open to casual sex, they are also more tolerant towards transactional sex where a person receives valuable gifts from a wealthier individual in return for sexual companionship. As study by Ipolyi et al. (2021) investigated whether toleration of transactional sex was influenced by participants' self-

esteem, motivation and attachment. Participants completed the Acceptance of Sugar Relationships in Older Men & Women Scale to obtain a score of toleration of transactional sex and attachment was measured using the Experiences in Close Relationships Scale. Correlations between toleration of transactional sex with attachment anxiety and avoidance was obtained for younger adults (mean age = 21.17 years) and older adults (mean age = 48.86 years) separately. Among younger adults toleration of transactional sex was significantly correlated with attachment anxiety ($r = .151, p < .001$) and attachment avoidance ($r = .178, p < .001$). Stronger correlations were found in the older adults between toleration of transactional sex and attachment anxiety ($r = 0.252; p < 0.001$) and attachment avoidance ($r = 0.300; p < 0.001$). The studies by Ipolyi et al. (2021) and Hackathorn and Malm (2022) show that individuals with insecure attachment styles are more inclined towards casual sex and transactional sex which are among risky sexual behaviors (Chen et al, 2017). The studies, however, were done with older samples therefore findings may not generalize to adolescents. The current study sought to replicate the findings in a sample of adolescents locally.

Studies have also shown that attachment security influences sexual behavior within romantic relationships. In one study, Barbaro et al. (2018) investigated associations between attachment to romantic partners and perpetration of sexual coercion against romantic partners. The sample in that study consisted of adults with a mean age of 31.9 years who were in romantic relationships. Attachment anxiety was associated with sexual coercion against one's partner in both men and women. The association between sexual coercion and attachment anxiety was stronger in men who also reported high levels of

attachment avoidance. Respondents with insecure attachment towards their romantic partners were more likely to pressure their partners to engage in sexual activities they may not want to engage in using tactics such as threatening physical violence and emotional manipulation.

Barbaro et al. (2018) concluded that respondents with anxious attachment may coerce their partners into sexual activity because of their desire to elicit their partners' attention, desire to maintain proximity with their partners and desire to maintain emotional closeness with their partners. Respondents with anxious attachment may use sex as a manipulation tool within romantic relationships.

A study by Brewer and Forrest-Redfern (2020) found that individuals with attachment anxiety were more likely to comply with sexual demands even if they did not wish to take part in sexual activities. In that study, 158 heterosexual women with a mean age of 26.78 years who were in romantic relationships were recruited by the researchers. The aim was to find out whether respondents' perceptions of unwanted sex and their tendency to comply to partners' sexual demands was connected to attachment anxiety and acceptance of rape myths. The study found that women who had high levels of attachment anxiety were more likely to have a history of complying with partners' sexual demands. Such women were also less likely to confront their partners. The authors noted that the women's sexual compliance and fear of confronting their partners were consistent with anxious attachment.

Insecure attachment has been associated with behaviors individuals engage in in order to make themselves more sexually appealing to other people. For instance, Brassard et al. (2018) investigated whether attachment security was associated with sexualized behavior in a sample of 587 Canadian adults with a mean age of 23.3 years. The respondents completed the Experiences in Close Relationships Scale to measure attachment anxiety and attachment avoidance and a scale to measure sexualized behavior. Respondents with high attachment anxiety invested too much in their sexual appearance and had greater tendency to sexually objectify themselves. Anxiously attached respondents also tended to adopt sexually seductive behavior in their relationships.

In the study by Brassard et al. (2018), respondents with avoidant attachment also had a tendency towards seductive sexual behavior in relationships and did not attach much meaning to sexuality so they were more likely to engage in sex with people they were not emotionally committed to. According to Brassard et al. (2016) sexualized behavior is associated with sexual risk taking and early sexual debut in adolescents. Therefore, by engaging in sexualized behaviors like dressing suggestively, adolescents with insecure attachment are more susceptible to engaging themselves in risky sexual behaviors. The findings by Brassard et al. (2018) also contribute to the existing literature on the links between attachment styles and risky sexual behavior.

The studies reviewed above suggest that risky sexual behavior is associated with insecure attachment styles or insecure attachment to parents. However, the evidence is not conclusive because some researchers have not found any links between attachment and

risky sexual behavior. In one study with a sample of 137 female college students aged 18 to 25 years, Yarkovsky and Timmons-Fritz (2013) did not find any relationship between insecure attachment and risky sexual behavior. No significant correlations were observed between anxious attachment and vaginal or oral sex at an early age but the study found that women with anxious attachment styles were more likely to be victimized by their partners in relationships ($r = .30, p < .001$).

A study by Marroquin (2021) did not find any relationship between attachment to parents and risky sexual behavior in adolescent girls. The study sought to determine whether perceived attachment to parents and sharing activities such as working on school projects or going shopping with parents was associated with the girls' sexual behavior. The study revealed that on average, the girls had sex for the first time when they were 15.31 years old and there was no relationship between the age when girls first had sex and their perceived attachment to their mothers or fathers. Undertaking activities with mothers or fathers was also not significantly related to age at the first time the girls had sex.

The study also found that using or not using condoms the first time the girls had sex was not significantly associated with perceived attachment to their mothers or fathers. Moreover, stronger perceived attachment to fathers significantly raised the odds of girls taking drugs or alcohol the first time they had sex. In sum, the findings reported by Marroquin (2021) concurred with those of Yarkovsky and Timmons-Fritz (2013) but contradicted other findings that show connections between poor parental attachment and involvement in risky sexual behavior. It should be noted however that the respondents in

those two studies were all female hence the findings may not be generalized to male adolescents. In addition, they did not consider attachment styles. The current study aimed at filling these gaps by examining the relationship between attachment styles and risky sexual behavior in a representative sample of adolescents.

Exchanging sexually explicit or suggestive messages, pictures or videos using electronic communication devices like smartphones is known as sexting (Klettke et al., 2014) and is a correlate of risky sexual behavior such as unprotected sex among adolescents (Kosenko et al., 2017). A study by Trub and Starks (2017) into sexting behavior in a sample of 92 young American women aged between 18 and 29 years found that attachment anxiety and attachment avoidance were predictors of sexting behavior. In addition, sexting predicted sex without condoms among respondents who were in relationships. Norman (2017) looked into possible associations between adolescents' sexting behavior, attachment and various parenting behaviors. Three hundred and five participants aged between 14 and 18 years took part in the study. The study found that higher levels of attachment avoidance predicted more frequent sexting behavior.

However, a study by Weisskirch et al. (2017) with 459 participants aged between 18 and 25 years found that individuals with secure attachment were more likely to engage in sexting behavior. In that study, respondents with low levels of attachment avoidance and low levels of attachment anxiety were more likely to send nude photographs, videos or explicit text messages. Conflicting findings such as those reported by Norman (2017),

Weisskirch et al. (2017) and Trub and Starks (2017) suggest that there is still uncertainty regarding the association between attachment and risky sexual behavior.

The empirical studies reviewed in this section are inconsistent as regards connections between risky sexual behavior and insecure attachment whether it is insecure attachment to parents or insecure attachment styles. Insecure attachment has been associated with risky sexual behavior in some studies but not others. In addition, some studies only found significant associations between risky sexual behavior and attachment anxiety or avoidant behavior leading to more uncertainty. This inconsistency of findings calls for further investigations of the influence of attachment styles on risky sexual behavior in adolescents.

2.3 Attachment Styles and Substance Use among Secondary School Students

Attachment styles may be related to substance use in adolescents through their influence on emotion regulation, relationship behavior and coping strategies (Schindler & Broning, 2015). Substance use has been viewed by some researchers as a consequence of difficulties with emotional regulation (Chassin et al., 2013). Adolescents with insecure attachment styles face greater emotional distress and resort to maladaptive coping mechanisms. In this regard, substance use may be seen as an attempt to self-medicate emotional difficulties by adolescents who lack more suitable coping strategies (Durjava, 2018; Estévez et al., 2017). According to Levitt and Leonard (2015) individuals with insecure attachments are more likely to drink alcohol as a means of coping. In a study of married couples, they observed that married people with high levels of attachment

anxiety and avoidance were more likely to drink to cope with their emotions than securely attached individuals.

The mental models of attachment in insecurely attached adolescents contain negative views of the self and adolescents may use substances to reduce the negative feelings caused by this negative view of self (Fairbairn et al., 2018). In one study, Lockhart et al. (2017) examined whether self-worth in African American adolescents was a mediator of the relationship between attachment security and involvement in problem behaviors prospectively. The study found that attachment security in the 13 to 15 year old adolescents predicted their self-worth after one year and high self-worth subsequently predicted less involvement in substance use, violence and possession of weapons in the third year of the study. The researchers concluded that because of their low self-worth, insecurely attached adolescents may not consider their personal wellbeing as important therefore they are more likely to engage in harmful behaviors such as substance use.

Schindler and Broning (2015) reviewed earlier studies that looked into links between attachment patterns and substance use disorders in adolescent and adult samples. They identified ten studies with adolescent samples and 13 studies with adult samples. They found evidence linking insecure attachment patterns and substance use disorders in those studies. Fearful attachment and avoidant attachment styles were strongly linked to substance use disorders although preoccupied and unresolved attachment patterns were also associated with substance use disorders.

In another review, Fairbairn et al. (2018) looked at 34 longitudinal studies that involved more than 50,000 respondents in total and found that substance use and attachment styles were moderately linked ($r = .16$). That review also found that attachment styles prospectively predicted substance use. This means that insecure attachments during childhood predicted greater risk of substance use in adolescence and adulthood. These reviews by Schindler and Broning (2015) and Fairbairn et al. (2018) provided evidence that insecure attachment could be a contributing factor to substance use. However, the studies reviewed were done in Western countries. Few studies have examined whether attachment is associated with substance use in African countries and this study sought to fill this gap by focusing on adolescents from Kenya.

Empirical studies have found that individuals with secure attachment to parents have lower risk of substance use. In one such study, Lai et al. (2019) investigated whether the risk of alcohol abuse in 14 to 17 year old adolescents was related to attachment to their parents, attachment to peers and cognitions concerning alcohol. The Inventory of Parent and Peer Attachment was used to measure the participants' attachment to their parents and to their peers and the Alcohol Use Disorders Identification Test was used to measure alcohol abuse risk. Alcohol abuse risk was not significantly associated with attachment to peers. However, alcohol abuse risk was significantly correlated with the parental trust ($r = -.33, p < .001$) and parental communication ($r = -.31, p < .001$) dimensions of secure attachment and positively correlated with the parental alienation dimension ($r = .19, p < .01$). Attachment to parents was therefore associated with lower risk of alcohol abuse but

this finding should be taken with caution because the sample was not balanced in terms of participants' sex. There were more females ($n = 170$) than males ($n = 36$) in that study.

A study by Cornellà-Font et al. (2018) examined whether the risk of addiction to substances in 13 to 19 year old adolescents was associated with their attachment to their parents. Six hundred and forty two adolescents completed the *Cartes, Models Individuelles de Rélation, short version* (CaMir-R) to measure their attachment to parents. They also completed the six items from the Youth Inventory – 4 relating to substance use to measure their risk of addiction. The risk of addiction was negatively correlated with the 'security, availability and support of attachment figures' dimension of the CaMir-R meaning that adolescents with secure attachment to their parents had less risk of addiction to substances. The risk of addiction was positively correlated with the CaMir-R 'self-sufficiency and parental resentment' dimension which corresponds to avoidant attachment and the 'child trauma' dimension which represents disorganized attachment. That study revealed that secure attachment to parents was protective against substance use in adolescents. However, the study only focused on parental attachment and was done with a sample of adolescents from a Western country. There was need to examine the links between attachment styles and substance use in the Kenyan setting.

Flykt et al. (2021) carried out a study to find out associations between adolescents' psychosocial adjustment and their attachment to parents and peers. Participants in the study were 449 adolescents from Finland aged between 17 and 19 years. Attachment to the respondents' mothers, fathers and peers was measured using the Experiences in Close

Relationships – Relationships Structures scale. They also filled questionnaires assessing alcohol use, tobacco use and illegal drug use. Adolescents who had secure attachment to both parents and their peers had the lowest levels of mental health problems and the lowest levels of substance use. On the other hand, adolescents reporting insecure relationships to both parents and their peers had the highest levels of mental health problems and substance use. Secure attachment to parents and peers was therefore found to predict better mental health and lower risks of substance use.

In a study with a sample of 1,800 Malaysian adolescents aged between 13 and 17 years, Mohammadzadeh et al. (2020) investigated the relationship between attachment to parents and smoking. The adolescents completed the Inventory of Parent and Peer Attachment to determine whether they had secure or insecure attachment to their mothers and fathers and the section of the Youth Risk Behaviors Surveillance Questionnaire with items on smoking. Smoking was significantly associated with insecure attachment to mothers ($\chi^2 = 22.47, p < 0.001$) and fathers ($\chi^2 = 24.86, p < 0.001$). These findings corroborated those reported by Flykt et al. (2021) where secure attachment to parents was associated with lower risk of substance use in adolescents. These studies, however, do not answer the question of whether attachment styles are linked to substance use in adolescents because they considered attachment security in regards to parents and peers specifically. In addition, the samples were drawn from foreign countries that are demographically different from Kenya. To fill these gaps, the current study was done to examine the link between attachment styles and adolescent substance use in Kenya

Empirical studies that have examined the link between attachment styles and substance use have reported findings suggesting that substance use is associated with insecure attachment styles. In one such study investigating attachment styles and adolescent substance use, Cömert and Ögel (2014) administered the Relationship Scale Questionnaire to 1,095 boys and 1,045 girls. The respondents also indicated whether they had used any substances. About one third of the respondents had tried at least one intoxicating substance and this group of adolescents was significantly more likely to have a dismissing ($\chi^2 = 5.370, p = .02$) or preoccupied ($\chi^2 = 14.778, p < .001$) attachment styles. Two hundred and seven respondents had used more than one substance and they were also significantly more likely to have preoccupied ($\chi^2 = 15.016, p < .001$) or dismissing ($\chi^2 = 4.544, P = .033$) attachment styles. In that study, dismissing and preoccupied attachment styles were significantly associated with substance use in adolescents. However, the study was conducted with a sample from a western country that was different from Kenya hence there was need to replicate its findings in Kenyan adolescents.

In a similar study, Nakhoul et al. (2020) investigated whether attachment styles predicted addiction to alcohol, cigarettes, water pipes and the internet in 14 to 17 year old Lebanese adolescents. One thousand, eight hundred and ten adolescents were classified as having secure, fearful, preoccupied and dismissing attachment styles after completing the Relationship Questionnaire. Secure attachment style predicted less alcohol use ($\beta = -3.35$) as well as less dependence on cigarettes ($\beta = -1.57$) and water pipes ($\beta = -2.73$). Fearful attachment style predicted higher alcohol use ($\beta = 1.83$) and dependence on

cigarettes ($\beta = 0.58$). Dismissing attachment style predicted higher alcohol use ($\beta = 1.79$) and dependence on cigarettes ($\beta = 1.77$) and water pipes ($\beta = 4.23$). Preoccupied attachment style predicted dependence on cigarettes ($\beta = 1.43$) and water pipes ($\beta = 3.95$). The study by Nakhoul et al. (2020) examined associations between attachment styles and substance use in adolescents and found that insecure attachment styles were significantly associated with substance use. However, the sample was of Lebanese adolescents who are different from Kenyan adolescents. There was need to replicate the study with Kenyan school going adolescents.

In another study with an adolescent sample, Hayre et al. (2019) investigated the relationships between maltreatment in childhood, attachment and substance use in 12 to 18 years old at risk adolescents. Attachment avoidance and attachment anxiety were measured using a self – administered Adolescent – Parent Attachment Inventory. Attachment avoidance significantly correlated with the frequency of cigarette ($r = .20, p < .001$), alcohol ($r = .21, p < .001$) marijuana ($r = .16, p < .001$) and other drug use ($r = .12, p < .01$). Attachment avoidance also mediated the link between psychological maltreatment and alcohol or cigarette use such that adolescents who had experienced psychological maltreatment as children were more likely to use alcohol or cigarettes if they had avoidant attachment. Attachment anxiety was not significantly associated with substance use in that study. Participants were adolescent with various mental health and behavior problems hence they may not have been representative of a normal adolescent population. The current study was done with representative sample of adolescents to fill this gap.

A study by Asghari et al. (2015) investigated relationships between parenting, attachment styles and substance use among university students aged between 22 and 36 years. Secure, avoidant and ambivalent attachment styles were measured using the Adult Attachment Inventory. In multiple regression analysis, drug abuse was significantly predicted by avoidant attachment ($\beta = .33, p < .001$) and ambivalent attachment styles ($\beta = .27, p < .001$). Secure attachment style was not a predictor of substance use in that study.

In another study with emerging adults, Lindberg and Zeid (2017) combined measures of attachment anxiety and attachment avoidance to create a single measure of insecure attachment in a sample of 480 undergraduate students aged between 17 and 21. The study found that secure attachment to parents significantly predicted secure attachment to respondents' partners and that insecure attachment to parents and partners significantly predicted substance use. The studies by Asghari et al. (2015) and Lindberg and Zeid (2017) contribute to the literature showing that attachment anxiety and attachment avoidance are associated with substance use. These studies were done with young adult respondents so their findings need to be replicated in adolescents.

Anderson et al. (2019) carried out a study to determine the relationship between attachment and alcohol use in adolescents aged 18 to 21 years. They hypothesized that greater alcohol use would be predicted by attachment anxiety and attachment avoidance and that drinking by peers would moderate the relationship between insecure attachment

and alcohol use. One hundred and twenty participants took part in the study. The Experiences in Close Relationships questionnaire was used to measure attachment anxiety and avoidance. Attachment anxiety predicted alcohol consumption in laboratory settings as well as self-reported alcohol use. Attachment avoidance on the other hand did not predict alcohol use. Peer drinking did not moderate the relationship between attachment anxiety and alcohol use meaning that alcohol use among respondents with anxious attachment was not influenced by peer pressure. Thus, attachment anxiety directly predicted alcohol use. The findings of this study may not be generalized due to the small sample size of 120 respondents and the fact that they were college students of legal drinking age in the United States.

In a study that was done in Kenya, Owuor and Karega (2019) investigated the influence of attachment styles on the risk of problematic drug use in university students from Nairobi and Kiambu Counties. Four hundred students filled the Experiences in Close Relationships Scale to measure attachment anxiety and attachment avoidance. The study found that students with secure attachment had significantly lower risk of problematic drug use ($F(1,184) = 48.47; p < 0.001$). The risk of problematic drug use was higher among students with anxious attachment styles ($F(1,184) = 53.46; p < 0.00$) and avoidant attachment styles ($F(1,184) = 47.51; p < 0.00$).

Wojtynkiewicz et al. (2014) examined the patterns of attachment in individuals with alcohol dependence. Fifty three women and 41 men diagnosed with alcohol dependence completed the Mieczyslaw Plopa's Attachment Style Questionnaire which segregated

respondents with secure, ambivalent and avoidant attachment as well as the Nancy Collins and Stephen Read's Adult Attachment Scale which places respondents along the dimensions of attachment anxiety and attachment avoidance. The alcohol dependent respondents were compared to controls with no alcohol dependence. Alcohol dependent respondents had significantly higher scores for ambivalent attachment style (mean = 7.01) than controls (mean = 4.18). Alcohol dependent respondents also had significantly higher scores of avoidant attachment style (mean = 4.90) than controls (mean = 2.44). Alcohol dependent respondent also scored higher on the avoidance dimension (mean = 3.46) than controls (mean = 2.96) and also scored higher on the anxiety dimension (mean = 3.29) than controls (mean = 2.45). The study further underscores the relationship between insecure attachment and substance use but it focused specifically on alcohol dependence in an adult sample hence its findings may not be generalized to normal secondary school students. This study hoped to fill this gap by focusing on a normal population of secondary school students

A study by Farnia et al. (2018) investigated whether attachment styles and perceived social support were related to methamphetamine use. They matched 100 addicts receiving treatment for addiction with 100 conveniently sampled controls. The two groups were matched in terms of age, gender and marital status and had all the participants had no history of mental disorders. Adult Attachment Scale and Multidimensional Scale of perceived social support were administered to both groups. When comparing the two groups, the addicts had significantly lower levels of secure attachment and higher levels of anxious attachment. They also scored lower in perceived social support by family and

other significant people. In that study, anxious attachment was associated with addiction to methamphetamine. However, the finding is not generalizable because the study involved addiction to one drug and respondents were adults. The current study sought to find whether substance use was associated with attachment styles in adolescents.

Individuals with alcohol addiction have been found to have insecure attachment styles. Simsek et al. (2021) enrolled 55 women and 10 men previously diagnosed with alcohol use disorder in a study investigating correlates of insecure attachment styles. The participants' responses to the Adult Attachment Scale revealed that 53.8% of them had avoidant attachment styles, 24.7% had anxious attachment styles and only 21.5% had secure attachment styles. Although only people with alcohol use disorders participated in that study, the results were clear that majority of respondents with alcohol use disorder had insecure attachment styles. These findings echoed those reported in the study by Hazarika and Bhagabati (2018) where attachment styles were compared in men with alcohol dependence and men without alcohol dependence and it emerged that most of the men with alcohol dependence had avoidant or anxious attachment styles.

Even though empirical studies have found associations between insecure attachment styles or weak attachment to parents and substance use, the literature is inconclusive because some researchers have not find any associations between attachment and substance use. In fact, Musetti et al. (2016) have argued that attachment styles may not necessarily influence substance use in adolescents. They argue that since experimenting

with substance use is normative in adolescence; even adolescents with secure attachment may use substances that are considered acceptable in their cultures.

An empirical study by Estévez et al. (2017) examined how attachment and emotional regulation influenced addictive behaviors in 13 to 21 year old youths. It emerged that difficulties with emotional regulation predicted substance related addictive behavior and non-substance related addictive behavior. Quality of attachment to mother, father or peers was not significantly related to alcohol or drug use but significantly predicted gambling disorder, video game addiction and problematic internet use. That study therefore did not find any links between attachment to parents or peers and substance use although weak attachment to parents and peers was associated with other forms of addictive behavior. That study, did not investigate attachment styles however hence the need for more studies into links between attachment styles and substance use in adolescents.

Gidhagen et al. (2018) found that attachment styles did not differentiate different types of substance use. They assessed attachment anxiety and avoidance in 119 outpatients with substance use disorders using a short form of Experiences in Close Relationships questionnaire. At the start of treatment, 69% of the respondents had insecure attachment styles but attachment styles were not significantly different among respondents using alcohol only, drugs only or both alcohol and drugs. Thus, severity of substance use was not influenced by attachment styles although majority of the respondents had insecure attachment styles. Participants in the study were people diagnosed with substance use

disorders so the findings of that study may not be generalized to a general population of adolescents.

Walker and Kreitler (2018) conducted a study to find out whether high alcohol consumption by college students was related to their attachment styles and to ascertain whether students with insecure attachment styles were motivated to consume alcohol in order to cope with unmet social needs. An additional aim of the study was to find out whether students' attachment styles influenced how they perceived their peers' alcohol consumption. One hundred and eighty eight undergraduate students with a mean age of 20.09 years participated in the study. No significant relationship was found between attachment styles and alcohol use. No significant relationship was found between attachment styles and motives for alcohol use either. Therefore, contrary to the researchers' hypothesis, students with insecure attachment styles were no more likely to drink or endorse drinking as a mechanism for coping with social isolation. Students with insecure attachment styles did not perceive their peers' alcohol use any differently than students with secure attachment. The findings of that study should however be taken with caution because majority of the respondents were female (83.8%) and most of the participants were below drinking age in the United States hence they may not have had access to alcohol.

Another study that did not find any association between attachment and substance use was one done by Hutton (2019). The study investigated whether substance use in African American and black Caribbean adult males was associated with their attachment styles.

No significant associations were found between substance use and attachment anxiety or attachment avoidance. That study was based on a small sample of males only (n = 151) recruited online through the Facebook networking website hence it lacked representativeness. The current study was done with a representative sample of adolescents to determine whether substance use was associated with attachment styles in secondary school students in Kenya.

A study by Goldstein et al. (2018) investigated the interactions among attachment, emotional dysregulation, interpersonal difficulties, alcohol use and alcohol use related problems in 18 to 24 year old youth. Two hundred and three respondents who had consumed alcohol in the 30 days leading to the study completed a measure of attachment avoidance and attachment anxiety. Both attachment anxiety and avoidance significantly predicted emotional dysregulation and interpersonal difficulties as well as alcohol related problems but not amount of alcohol used in the 30 day period leading to the study. The study showed that alcohol related problems in youth with high levels of attachment anxiety and attachment avoidance were caused by emotional dysregulation and interpersonal difficulties. Therefore, insecure attachment was not a direct predictor of alcohol use in that study.

Inconclusive findings regarding substance use and attachment were reported in a study by Tuncay et al. (2022). That study examined correlates of substance use in a sample of 280 Turkish men. Attachment Styles in Interpersonal Relations Scale was used to obtain anxious attachment, avoidant attachment and secure attachment scores. Attachment styles

were not significantly associated with smoking at least one cigarette a day. Alcohol users, that is individuals who drank alcohol at least once a week, had higher scores on attachment anxiety but their scores on attachment security and attachment avoidance were not significantly different from scores of non-users. Attachment anxiety and attachment avoidance scores did not differ significantly between participants who had received inpatient treatment for addiction and those who had not but attachment security scores were lower among participants undergoing inpatient treatment for addiction. It should be noted that the study involved male adults with a mean age of 30.43 years who had been involved with the justice system hence the findings could not be generalized to a normal population of adolescents.

The empirical research reviewed in this section is inconclusive as far as the relationship between attachment styles and substance use is concerned. Weak attachments to parents or peers and insecure attachment styles have been associated with substance use in some of the studies. Similar associations were not found in some of the reviewed studies. These inconclusive findings call for further investigation of the links between attachment and substance use behavior. In addition, the studies reviewed were carried out with samples mainly from western countries because there is a scarcity of research in the local setting. The current study hoped to find out whether attachment styles predict substance use among students in Nairobi County and add to the existing literature on the subject.

2.4 Attachment Styles and Aggressive Behavior among Secondary School Students

Ratip (2013) suggests that insecurely attached individuals may have difficulties managing distressing emotions and correctly interpreting unspoken emotional cues from others. For this reason, they are more likely to respond with aggression in situations that do not warrant aggressive responses. According to Brodie et al. (2018) insecurely attached individuals are conflicted between desire to be close to attachment figures and their uncertainty about the responsiveness of the attachment figure. This may cause feelings of anger and frustration that result in aggressive behavior. Individuals with insecure attachment are also more prone to feelings of hostility and hostility often leads to aggression (Critchfield et al., 2008). Researchers have also noted that insecure attachment that results from parental abuse or indifference during childhood might predict psychopathy and aggression in later years (Van den Berg & Oei, 2009).

Velotti et al. (2020) conducted a meta-analysis of empirical studies in which the relationship between attachment and perpetration of intimate partner violence was examined. Fifty two studies with total of 13, 653 respondents were identified. In 16 of those studies, attachment anxiety was found to have a significant effect on generic violence ($r = .28, p = .001$). Attachment anxiety had a significant effect on physical violence in 32 studies ($r = .19, p < .001$), significant effect on psychological violence in 29 studies ($r = .30, p < .001$) and significant effect on sexual violence in nine studies ($r = .35, p < .001$).

The meta-analysis by Velotti et al. (2020) found that attachment avoidance had a significant effect on physical violence in 26 studies ($r = .12, p < .001$), significant effect on psychological violence in 24 studies ($r = .14, p < .001$) and significant effect on sexual violence in nine studies ($r = .20, p < .001$). From the results of the meta-analysis, it can be concluded that insecure attachment was a factor significantly associated with various forms of aggressive behavior within romantic relationships. The meta-analysis was focused on aggression in the narrow context of romantic relationships therefore it did not answer the question of whether attachment styles predict aggressive behavior in general in adolescents. The current study sought to fill this gap by using a sample of adolescents and examining aggressive behavior in general interpersonal relationships.

Empirical studies looking at the links between attachment and aggressive behavior have found that secure attachment to one's parents or peers predicts less involvement in aggressive behavior. In a study with a sample of 12 to 19 year old Dutch adolescents, de Vries et al., (2016) investigated whether attachment to parents was associated with direct or indirect aggression and also looked at possible mediators of the associations between attachment and aggression. Aggression was measured with the Buss-Durkee Hostility Inventory. Direct aggression was a combination of verbal and physical aggression subscales and indirect aggression was a combination of anger, hostility, irritability and suspicion subscales. Attachment to parents was measured using the Inventory of Parents and Peer Attachment. A significant relationship was found between attachment to parents and direct aggression with cognitive distortions mediating that relationship ($\beta = -0.12, p < 0.01$).

de Vries et al. (2016) also found a significant relationship between attachment to parents and indirect aggression and this relationship was partly mediated by cognitive distortions ($\beta = -0.07, p < 0.05$). Thus, adolescents with insecure attachment to their parents had more negative views of themselves and of other people and these cognitive distortions made them more likely to engage in behavior that harmed other people. That study revealed that insecure attachment to one's parents was predictive of aggressive behavior in adolescents. The study did not look at attachment styles however. The current study investigated whether attachment styles predicted aggressive behavior in adolescents.

In one longitudinal study, Malonda et al. (2019) investigated the role of parenting practices and attachment to peers as predictors of aggression and prosocial behaviors in 13 to 19 year old adolescents. Physical and verbal aggression was combined to provide one score for aggressive behavior. Peer attachment was negatively correlated with aggressive behavior at baseline ($r = -.25, p < .001$), after one year ($r = -.14, p < .01$) and after two years of the study ($r = -.18, p < .001$). Thus, weak attachment to peers was a predictor of aggressive behavior in the adolescents in that study. The study also revealed that prosocial behavior mediated the relationship between attachment to peers and aggressive behavior. In other words, adolescents with closer attachment to their peers were more inclined towards behavior that was considerate and beneficial towards others and less inclined towards behavior that is harmful to others. Although the study showed that secure attachment was negatively associated with aggressive behavior, it only

considered attachment to peers and not attachment styles. The current study examined whether attachment styles predicted aggressive behavior in adolescents.

In another study that looked at peer attachment, Liu et al. (2021) investigated whether peer attachment was associated with aggressive behavior and the mechanisms that could mediate that association. One thousand, one hundred and seventy one Chinese secondary school students varying in age from 11 to 19 took part in the study. Peer attachment was measured with the peer attachment scale of the Inventory of Parent and Peer Attachment and aggressive behavior in the six months leading up to the study was measured using the aggression tendencies dimension of the Behavioral Tendency Questionnaire for Adolescent Behavior Problems. Aggressive behavior was significantly correlated with peer attachment ($r = -.17, p < .001$). Mediation analysis showed that the association between peer attachment and aggressive behavior was partly mediated by emotional regulation self-efficacy. The authors concluded that adolescents with weak attachment to their peers may have a distorted belief that they have no ability to regulate their own emotions and resort to aggression when they are experiencing negative emotions.

Murphy et al. (2017) examined the interplay between attachment to parents and peers, gender and bullying behaviors in adolescents in a study with 148 respondents. Attachment to parents and peers was measured using the Inventory of Parent and Peer Attachment. Bullying behavior was negatively associated with strong attachment to parents ($r = -.23, p < .01$) and peers ($r = -.22, p < .05$). Respondents who were more likely to defend victims of bullying were those with stronger attachment to parents ($r = .27, p <$

.01) and peers ($r = .27, p < .01$). That study showed that stronger attachment to parents and peers predicted less involvement in bullying behavior which is consistent with other studies that found inverse relationships between attachment to parents and peers and aggressive behavior.

Mancinelli et al. (2021) carried out a study to determine the interactions between adolescents' attachment to their parents, reactive and proactive aggression and alexithymia. The study involved 453 Italian adolescents aged between 15 and 19 years. The parental attachment scale of the revised version of the Inventory of Parent and Peer Attachment scale was used to measure attachment to parents and aggression was measured using the Reactive Proactive Aggression Questionnaire. Adolescents' attachment to their mothers was negatively correlated with reactive aggression ($r = -.28, p < .01$) as well as proactive aggression ($r = -.31, p < .01$). Adolescents' attachment to their fathers was also negatively correlated with proactive aggression ($r = -.24, p < .01$) and proactive aggression ($r = -.016, p < .01$).

Mancinelli et al. (2021) conducted mediation analysis and found that adolescents' attachment to their mothers directly predicted less involvement in reactive and proactive aggression. Alexithymia partly mediated the prediction of reactive aggression by adolescents' attachment to their mothers. Alexithymia also partially mediated the prediction of reactive and proactive aggression by adolescent's attachment to fathers. The results of that study indicate that weak attachment to one's parents may result in inability to properly process, regulate and communicate emotions thus creating a tendency towards

aggressive behavior. The findings of that study should however be taken with caution since most of the respondents were female (66.4%) hence it was not representative in terms of gender. In addition, the study considered attachment to parents and not respondents' attachment styles which the current study investigated as a predictor of aggressive behavior.

Muhammad and Ayriza (2020) investigated whether secure attachment between adolescents and their mothers was related to adolescents' perpetration of violence in romantic relationships. Four hundred and eight adolescents aged between 18 and 22 years and who were in romantic relationships were the subjects of the study. The subjects' attachment to their mothers was measured using the Inventory Parents and Peer Attachment. A significant association was found between adolescents' attachment to their mothers and perpetration of violence in romantic relationships ($r = -.221, p < .001$). Thus, closer attachment to mothers was associated with fewer tendencies to be aggressive towards romantic partners. That study only looked at aggression against romantic partners within romantic relationships hence it did not fully address the question of whether attachment is linked to aggressive behavior in adolescents. In addition, most of the subjects were 21 or 22 years old (63.7%) hence the sample was not adequately representative of adolescents. The current study was done using a sample that was representative of adolescents and examined aggressive behavior in general interactions rather than in a narrow context of romantic relationships.

Muarifah et al. (2022) examined the role of self-esteem and adolescents' attachment to their mothers in predicting aggressive behavior in a sample of Indonesian adolescents. The sample was comprised of 730 high school students aged between 15 and 19 years. The researchers designed scales to measure adolescents' attachment to their mothers, self-esteem and aggressive behavior. Secure attachment to mothers predicted lower levels of aggressive behavior ($\beta = -0.225$, $p < 0.001$) and higher self-esteem ($\beta = 0.402$, $p < 0.001$). Insecure attachment to mothers predicted more aggressive behavior ($\beta = -0.147$, $p < 0.001$) and lower self-esteem ($\beta = 0.267$, $p < 0.001$). A mediation analysis showed that self-esteem mediated the relationship between adolescents' attachment to their mothers and aggressive behavior. Thus, poor self-esteem in adolescents with insecure attachment to their mothers created a tendency to act aggressively towards other people. The authors of that study also limited themselves to attachment to mothers hence their findings cannot be generalized. The current study considered the link between attachment styles and adolescents' aggressive behavior.

Empirical studies that have approached attachment dimensionally have also shown associations between insecure attachment and aggressive behavior. In one such study, Okeke and Anierobi (2020) investigated whether aggressive behavior was predicted by attachment styles in Nigerian secondary school students. They classified 1,320 students into four attachment styles: secure, disorganized, anxious-avoidant and anxious-resistant. The Buss-Perry aggression questionnaire was used to measure physical and verbal aggression as well as anger and hostility. Regression analysis showed that secure attachment style did not significantly predict aggressive behavior in the students.

However, the insecure attachment styles significantly predicted aggressive behavior. Physical aggression was predicted by disorganized attachment ($\beta = .37, p < .001$), anxious avoidant attachment ($\beta = .35, p < .001$) and anxious resistant attachment ($\beta = .85, p < .001$). Verbal aggression was predicted by disorganized attachment ($\beta = .54, p < .001$), anxious avoidant attachment ($\beta = .21, p < .05$) and anxious resistant attachment ($\beta = .28, p < .05$). Therefore, the study by Okeke and Anierobi (2020) showed that insecure attachment styles predicted aggressive behavior in adolescents. That study was done in Nigeria which is a country different from Kenya hence it was necessary to replicate it in Kenyan adolescents.

In another study, Maalouf et al. (2022) investigated whether attachment styles were associated with trait anger, hostility, verbal aggression and physical aggression in Lebanese adolescents. Participants in the study were 1,810 adolescents aged between 12 and 18 years. The Relationship Questionnaire (RQ) was used to measure the four attachment styles. The Buss Perry Aggression Questionnaire was used to measure the other variables. Multivariate analysis of covariance was carried out controlling for age, gender, crowding at respondent's homes, number of respondents' siblings, smoking and physical activity. The scores for physical aggression were significantly higher in adolescents with fearful ($\beta = 2.601, p < .001$) and dismissing ($\beta = 1.817, p = .001$) attachment styles and lower in those with secure attachment styles ($\beta = - 2.707, p < .001$). Verbal aggression scores were lower in adolescents with secure attachment styles ($\beta = - 2.172, p < .001$) and preoccupied attachment styles ($\beta = - 0.926, p = .04$) but higher in those with fearful attachment styles ($\beta = 1.238, p = .006$). The study therefore revealed

that insecure attachment styles predicted aggressive behavior in Lebanese adolescents. The current study sought to replicate the same findings in a sample of Kenyan adolescents who are demographically different from their Lebanese counterparts.

Brodie et al. (2018) explored the relationships between attachment, hostility and aggression. The revised version of Experiences in Close Relationships questionnaire was used to rate the levels of attachment avoidance and attachment anxiety. The study found that attachment anxiety ($r = .48, p < .001$) and attachment avoidance ($r = .21, p < .001$) were both significantly correlated with hostility and the authors suggested that this hostility might reflect the defective mental models of attachment in insecurely attached respondents. Physical aggression was also significantly correlated with attachment anxiety ($r = .13, p = .029$) and attachment avoidance ($r = .12, p = .043$) but verbal aggression was not correlated with attachment avoidance or anxiety.

A study by Santona et al. (2019) examined the relationship between attachment and aggressive behavior in 14 to 18 year old adolescents. They administered the Attachment Styles Questionnaire and the Aggression Questionnaire to 411 students attending different secondary schools in two Italian cities. Aggression, which was a combination of physical aggression, verbal aggression, anger and hostility, was significantly correlated with attachment anxiety ($r = .26, p < .001$) and avoidance ($r = .20, p < .01$) in males and with attachment anxiety ($r = .37, p < .001$) and avoidance ($r = .20, p < .01$) in females. Thus, insecure attachment was found to be significantly associated with aggressive behavior in that study, corroborating findings reported by Brodie et al. (2018). These

studies were done in western countries that are different from Kenya in demographics so there was need to carry out a similar study with Kenyan adolescents to ascertain whether attachment styles predict aggressive behavior in Kenyan adolescents.

In another study involving adolescents, McDade (2013) explored the relationship between aggressive behavior and attachment in a sample of urban African American adolescents. The sample was made up of 136 adolescents aged between 15 and 17 years. Verbal and physical aggression was combined to form a single measure of aggressive behavior. Attachment avoidance predicted aggression ($\beta = .36, p < .001$) but attachment anxiety did not.

A study by Amani (2016) sought to determine whether college students' mental representations of attachment in their earlier relationship with their parents were related to aggressive behavior. The study involved 75 male and 75 female nursing students aged between 22 and 29 years. Mental representations of attachment were assessed using the Adult Attachment Styles questionnaire and different facets of aggressive behavior were measured using the Ahvaz Aggression Inventory. Secure attachment was negatively correlated with anger ($r = -.33, p < .05$), tendency to insult others ($r = -.42, p < .05$), malice ($r = -.22, p < .05$) and the total score for all facets of aggression ($r = -.43, p < .05$). Avoidant attachment was significantly correlated with anger ($r = .25, p < .05$), obstinacy ($r = .23, p < .05$) and the total score for all facets of aggression ($r = .28, p < .05$). Ambivalent attachment was significantly correlated with anger ($r = .22, p < .05$), obstinacy ($r = .16, p < .05$) and the total score for all facets of aggression ($r = .24, p <$

.05). The study by Amani (2016) therefore revealed an association between aggressive behavior and insecure attachment styles in college students who are older than secondary school students. The current study sought to examine whether attachment styles predicted aggressive behavior in secondary school students who are in their adolescence.

The link between insecure attachment and aggressive behavior remains uncertain because some empirical studies have not found any associations between insecure attachment and aggressive behavior. In one study, Dean (2017) investigated the interplay between attachment styles, familial dysfunction and aggressive behavior in adolescents. Data was obtained from 312 adolescents varying in age from 12 to 21 years. These are adolescents who had been involved with the justice system. The Adolescent Relationships Scale Questionnaire was used to measure fearful, dismissing, preoccupied and secure attachment styles. The study found that none of the attachment styles was a significant predictor of aggressive behavior. However, it should be borne in mind that the sample was from adolescents who had been involved with the justice system and was 68% male. Therefore, the sample may not be representative of the normal adolescent population.

In another study, Ratip (2013) investigated whether attachment styles were related to anger and violent behavior in 72 offenders residing in a high security hospital. The Relationships Scales Questionnaire was used to determine the attachment styles and the State Trait Anger Expression Inventory-2 (STAXI-2) was used to measure anger. The respondents' violent behaviors were also noted. The study found that the majority of the participants had dismissing attachment styles. Individuals with secure attachment styles

were found to be less angry as measured by the Angry Temperament Subscale of the STAXI-2 ($r = -.248, p = .018$) but the total number of violent incidents perpetrated by the participants were not significantly related with their attachment styles. Thus, no links were established between attachment styles and tendency to act violently among respondents. These findings should also be taken with caution since the sample was small and consisted of offenders.

Inconclusive findings on the relationship between attachment and aggressive behavior were reported in the study by Kunchal et al. (2016). In that study, the authors investigated whether there was a relationship between attachment to parents and peers and aggression in adolescents. There were 111 middle adolescents aged between 13 and 15 years and 84 late adolescents aged between 16 and 18 years. Attachment to parents and peers was measured using the Inventory of Parent and Peer Attachment and aggression was measured using the Reactive – Proactive Aggression Questionnaire. Results of the study showed that only peer attachment was significantly and positively associated with proactive ($r = 0.19, p < 0.05$) and reactive ($r = 0.26, p < 0.01$) aggression in middle adolescents. Neither attachment to parents nor attachment to peers was associated with aggression in the late adolescents. Attachment to peers was associated with more aggression in that study contrary to findings in similar studies where closer parental and peer attachments were associated with lower levels of aggressive behavior.

A longitudinal study by Vagos and Carlvalhais (2020) investigated the impact of attachment to peers and parents on adolescents' aggressive and prosocial behaviors.

Participants in the study were 375 adolescents aged between 15 and 19 years. The researchers administered the Inventory of Parent and Peer Attachment to measure attachment to parents and peers and the Peer Experiences Questionnaire – Revised to measure aggressive behavior in terms of overt, relational and reputational aggression. Attachment to mothers was associated with lower overt aggression at the beginning of the study and overt aggression predicted overt, reputational and relational aggression at time 2 (4 months later). Attachment to fathers and attachment to peers were not associated with aggressive behavior in that study.

The studies reviewed in this section provide an inconclusive picture in regards to the links between insecure attachment and aggressive behavior. Weak attachments to parents and peers and insecure attachment styles characterized by attachment anxiety and attachment avoidance have been associated with higher levels of aggressive behavior in several studies. Some studies have however not found any significant associations between attachment and aggressive behavior. These mixed findings necessitate more research on the links between attachment and aggressive behavior. Besides, there is scarcity of research on aggressive behavior and attachment in the Kenyan setting. The researcher hoped that the current study would reveal whether attachment styles predict aggressive behavior among secondary school students in Nairobi County and contribute to the available literature

2.5 Attachment Styles and Suicidal Behavior among Secondary School Students

Even though suicidal behavior in young people has been the subject of much attention in existing research, a literature search by Miniati et al. (2017) found that a relatively small number of studies have systematically looked into attachment security in relation to suicidal behavior. In earlier studies reviewed by Miniati et al. (2017), it was consistently reported that those individuals who had insecure attachment were more likely to have suicidal ideations or to have attempted suicide in comparison to individuals who have secure attachment.

Individuals who have insecure attachment styles may be more vulnerable to suicidal behaviors because they lack supportive social relationships. Individuals with avoidant attachment styles avoid close interpersonal relationships and avoid sharing their feelings with other people so they have less support when they go through distressing situations (Sheftall et al., 2014). Grunebaum et al. (2010) have argued that lack of social support networks among individuals with avoidant attachment styles makes them more vulnerable to thinking about or attempting suicide when they are faced with stressful life events. In contrast, securely attached individuals are confident of the availability of attachment figures and seek contact with them when they experience distress and are able to deal with life stressors without developing suicidal thoughts (Zisk et al., 2017). Insecure attachment styles may also be related to other known risk factors for suicide such as depression, hopelessness and low levels of self-esteem (Fino et al., 2014).

Evidence from previous empirical studies has revealed that individuals with insecure attachment were more prone to suicidal behavior. In a study involving 319 young men and women aged 18 to 35 years, Fino et al. (2014) examined the role of adult attachment and personality on suicidal ideation. Participants with negative mental models of themselves and negative mental models of others, which are characteristics of insecure attachment, were found to have higher levels of hopelessness and more depressive symptom and also had higher levels of suicidal ideation and risk of attempting suicide. The authors of that study opined that respondents with insecure attachment tended to feel more hopeless and depressed when faced with stress, negative emotions or interpersonal difficulties.

Pereira and Cardoso (2017) investigated suicidal ideation in a study involving 366 college students with a average age of 20.86 years. They found that suicidal ideation was higher among lonely students and students with social anxiety and depressive symptoms. Moreover, suicidal ideation was also associated with fears of abandonment, discomfort with intimacy and low levels of interpersonal trust which are characteristics of insecure attachment styles. The findings by Pereira and Cardoso (2017) corroborate those reported by Fino et al. (2014). Although in both studies attachment security was not measured directly, individuals with characteristics of insecure attachment were found to have more suicidal ideation. The current study considered the links between suicidal behavior and attachment styles in secondary school students.

In a study that involved 1,074 Portuguese university students varying in age from 17 to 49 years, Gonçalves et al. (2016) explored the connection between attachment patterns and suicidal ideation. The Adult Attachment Scale was used to measure the students' attachment anxiety and the attachment related constructs of trust in others and comfort with proximity. Regression analysis revealed that high levels of attachment anxiety predicted suicidal ideation whereas high levels of trust in others and comfort with proximity were associated with lower levels of suicidal ideation. That study showed that students who had secure attachment were less likely to have thoughts of committing suicide. The sample in the study was older (mean age = 23.9 years) therefore it was not representative of adolescents. The current study investigated attachment and suicidal behavior in a sample of adolescents.

Insecure attachment to parents has been linked to greater risk of suicidal behavior in earlier empirical studies. For instance, Sheftall et al. (2013) examined associations between suicide attempts and attachment security in 12 to 17 year old adolescents who were receiving care at a psychiatric facility. Respondents with a history of attempting suicide rated their attachments to their mothers and fathers lower than respondents with no history of attempting suicide. That study was done with a psychiatric sample hence its finding may not be generalizable to normal population of adolescents even though it shows that suicide risk is lower in adolescents with stronger attachment to their parents.

A study by Clery et al. (2021) sought to ascertain whether attachment during early childhood predicted self-harm and depression in late adolescence. They examined data

from 7,032 adolescents who were participating in the Avon Longitudinal Study of Parents and Children. Mothers of the adolescents participating in the study provided data relating to attachment with their children when the children were 18, 30 and 42 months old. At 18, adolescents completed computerized Clinical Interview Schedule-Revised (CIS-R) to measure their levels of depression as a binary variable (depressed or not) and self-harm as a binary variable (yes or no). Respondents' sex, socioeconomic status, parental education, parental alcohol use/smoking, parental marital status and number of children under 15 in the household were controlled for in the analysis of the data. The analysis revealed that a one standard deviation increment in insecure attachment resulted in odds of depression at 18 years increasing by 13% (OR = 1.13; 95% CI = 1.00 to 1.27) and odds of self-harming behavior such as suicide at 18 increasing by 14% (OR = 1.14; 95% CI = 1.02 to 1.25). Thus, insecure attachment to parents in childhood could multiply the odds of suicidal behavior in adolescence. The current study was a cross sectional investigation of the link between attachment styles and suicidal behavior of adolescents in Kenya where there is a scarcity of studies on attachment in adolescents.

In another study, Langhinrichsen-Rohling et al. (2017) investigated how attachment to ones' parents and maladaptive self-schemas related to suicidality in a study involving 766 undergraduate students (mean age = 19.9 years). Students with stronger attachment to their parents had significantly lower levels of suicide proneness ($r = -.33, p < .001$) and suicide ideations ($r = -.24, p < .001$) as well as less maladaptive self-schemas ($r = -.13, p < .001$). Further analysis revealed that maladaptive self-schemas were mediating the relationship between parental attachment and suicidal ideation meaning that students with

weak attachment to their parents were more prone to having thoughts of committing suicide because they had distorted perceptions of themselves. That study therefore found an association between suicidal ideation and weak attachment to parents albeit in a sample of college students who are older than high school students.

A study by Guo et al. (2021) explored the associations between Chinese adolescents' attachment to their parents, anhedonia and suicidal ideation. The participants in the study were 8,680 adolescents aged 12 to 19 years. The researchers administered the Inventory of Parental and Peer Attachment to measure the adolescents' parental and peer attachment. They also administered the Positive and Negative Suicidal Ideation Inventory (PANSI) to measure suicidal ideation and the Temporal Experience of Pleasure Scale to measure anhedonia in the participants. Scores on the positive suicidal ideation subscale of the PANSI were significantly correlated with attachment to fathers ($r = -.439, p < .001$), attachment to mothers ($r = -.48, p < .001$) and attachment to peers ($r = -.39, p < .001$). Likewise, scores on the negative suicidal ideation subscale were significantly correlated with attachment to fathers ($r = -.322, p < .001$), attachment to mothers ($r = -.35, p < .001$) and attachment to peers ($r = -.24, p < .001$).

Mediation analysis done by Guo et al. (2021) revealed that participants' attachment to their parents had direct effects on suicidal ideation. In addition, anhedonia and peer attachment were partial mediators of the relationship between participants' attachment to their parents and suicidal ideation. According to the study therefore, participants with weak attachment to their parents were more likely to experience anhedonia and have

weak attachment to their peers and this in turn increased their risk of suicidal ideation. Although respondents were adolescents, they were Chinese and therefore demographically different from Kenyan adolescents. In addition, the study considered parental and peer attachment and not attachment styles. The current study was done in Kenya to find out the influence of attachment styles on adolescents' suicidal behavior.

A study by Waraan et al. (2021) investigated the links between attachment anxiety and attachment avoidance in regards to ones' parents and suicidal thoughts in adolescents diagnosed with depression. A sample of 50 clinically depressed adolescents varying in age from 13 to 17 years took part in the study. Attachment was measured with the revised Experiences in Close Relationships scale. The severity and frequency of suicidal thoughts were measured using the Suicidal Ideation Questionnaire – Junior (SIQ – Jr) scale. Significant correlations were found between suicidal ideation and attachment anxiety towards participants' mothers ($r = .36, p < .05$) and attachment avoidance towards participants' mothers ($r = .36, p < .05$). Significant correlations were found between participants' suicidal ideation and attachment to their fathers. The study also found that attachment anxiety contributed to suicidal ideation over and above the contribution made by depression. The sample in that study was not representative because majority of the respondents (84%) were female and had been diagnosed with depression. The current study recruited equal proportions of male and female respondents from secondary schools.

Suárez-Colorado and Campo-Arias (2019) explored the link between parental attachment and suicide risk among school going adolescents in Colombia. Three hundred and thirty nine adolescents with a mean age of 16.3 years participated in the study. The Colombian version of the Inventory of Parental and Peer Attachment was used to measure parental attachment along the dimensions of trust, communication and alienation. Participants' scores on the three dimensions were dichotomized, that is, high versus low levels of trust, communication and alienation. Participants with low scores on trust and communication had significantly higher odds of having a high suicide risk. Thus, attachment to parents was a significant predictor of suicide risk in that sample of adolescents. That study, however, did not answer the question of whether attachment styles predict suicidal behavior among adolescents since it examined attachment to adolescents' parents only. In addition, it was carried out in a South American country that is demographically different from Kenya. The current study hoped to address these gaps.

In another study that investigated attachment to parents and suicidal behavior in adolescents, Potard et al. (2020) administered the French version of the Inventory of Parental and Peer Attachment to 455 adolescents varying in age from 12 to 18 years. Weaker attachment to parents predicted more frequent thoughts of suicide in the participants. The authors used the scores on parental attachment to derive three attachment styles. They identified participants with avoidant, ambivalent or secure attachment to their parents. Participants with avoidant attachment towards their parents had significantly more thoughts of suicide compared to those with ambivalent or secure attachment to their parents. Adolescents with ambivalent attachment to their parents had

more thoughts of suicide compared to those with secure attachment. Therefore, the relationship between weak parental attachment and suicidal ideation was reinforced when a dimensional approach to attachment was adopted. Majority of the respondents in that study were female (68.8%) hence the sample was not properly representative of adolescents in regards to gender. Moreover, the study only considered attachment to parents and not attachment styles as a broader construct. Therefore, the link between attachment styles and suicidal behavior in adolescents was not satisfactorily addressed. The current study aimed to fill these gaps.

Empirical studies that have investigated the relationship between different dimensions of attachment and suicidal behavior have also demonstrated a link between insecure attachment and suicidal behavior. In a study involving 13 to 18 year old adolescents, Sheftall et al. (2014) investigated whether suicidal behavior was associated with attachment avoidance or attachment anxiety. Forty adolescents with a history of suicide attempts were matched in age, sex and race/ethnicity with a control group of 40 adolescents who had never attempted suicide. Adolescents in the group that had attempted suicide were more likely to have insecure attachment as reflected in higher mean scores on attachment anxiety and attachment avoidance on the Experiences in Close Relationships scale compared to the control group. Although an adolescent sample was used in the study, the sample size was relatively small hence the findings, revealing that adolescents with insecure attachment were more likely to attempt suicide, may not be broadly generalized. The current study involved a larger sample of secondary school students to fill this gap.

In another study with an adolescent sample, Fattou et al. (2022) examined the relationship between attachment styles and suicidal ideation in Lebanese adolescents. Three hundred and ninety five adolescents aged between 14 and 17 years took part in the study. The Relationship Questionnaire (RQ) was used to measure secure, dismissing, fearful and preoccupied attachment styles and the Columbia Suicide Severity Rating Scale (C-SSRS) used to measure suicidal ideation. Scores of suicidal ideation score was higher in adolescents with dismissing attachment styles ($\beta = 0.528, \eta = 0.014$) and lower in adolescents with secure attachment styles ($\beta = - 0.583, \eta = 0.016$). Fearful and preoccupied attachment styles did not predict suicidal behavior in this study. The current study was done with a sample of Kenyan adolescents to determine whether attachment styles influence their suicidal behavior.

In a web based survey of college students, Cuenca (2013) investigated whether attachment insecurity was related to feelings of defeat, entrapment and suicidal ideation. Analysis of the data from 103 students (78.6% female) with mean age of 20.05 years revealed that suicidal ideation was significantly correlated with attachment anxiety ($r = .62, p < .05$) and attachment avoidance ($r = .46, p < .05$). Insecurely attached students were also more likely to feel defeated ($r = .77, p < .05$) and entrapped ($r = .77, p < .05$). Insecure attachment was associated with greater risk of suicidal ideation but this finding could not be generalized to adolescents because the respondents were mostly female and were older on average than adolescents. The current study addressed this gap by using a representative sample of adolescents.

In a study involving 65 adults who had experienced suicidal ideations in the previous 12 months, Green et al. (2021) found that after controlling for the respondents' age and gender, suicidal ideation was significantly linked to attachment anxiety ($r = .22, p < .01$) and attachment avoidance ($r = .36, p < .01$). In regression analysis in which the effect of age, gender and depressive symptoms was controlled, attachment avoidance was predictive of suicidal ideation. The authors surmised that individuals who were uncomfortable with intimacy in relationships and overvalued independence were more vulnerable to thinking about committing suicide when they faced difficult circumstances. That study was done with a small sample of adults so the findings do not generalize well to adolescents.

In another study with an adult sample, Özer et al. (2015) split 62 patients who met criteria for major depressive disorder into equal groups – one with patients who had past suicide attempts and the other with patients with no prior suicide attempts. Sixty volunteers matching the patients in age, education and gender acted as the control group. The study found that the group with a history of suicide attempts was significantly more likely to have fearful attachment characterized by high levels of attachment anxiety and attachment avoidance compared to the group with no history of suicide attempts and the control group.

A study by Falgares et al. (2017) investigated the links between attachment and suicidal behavior in adolescents. They recruited 340 Italian high school students aged between 13 and 20 years and administered the revised Suicidal Behaviors Questionnaire to measure

suicidal behavior. They also measured levels of dependency and self-criticism. They found that attachment anxiety predicted greater dependency ($\beta = 0.39, p < 0.001$) and self-criticism ($\beta = 0.67, p < 0.001$) whereas attachment avoidance predicted lower levels of dependency ($\beta = -0.17, p < 0.01$) and greater levels of self-criticism ($\beta = 0.71, p < 0.001$). In turn, higher levels of self-criticism predicted increased suicidal behavior ($\beta = 0.22, p < 0.01$) but higher levels of dependency predicted fewer suicidal behaviors ($\beta = -0.14, p < 0.05$). The study implied that attachment anxiety and attachment avoidance indirectly predicted suicidal behavior through self-criticism in these high school students. The study shed light on the association between insecure attachment styles and suicidal behavior in a sample of high school students but it was done in a foreign country that is different from Kenya. There was need to replicate its findings among Kenyan secondary school students.

Khosravi and Kasaeiyan (2020) investigated the interplay between attachment styles, neuroticism and suicidal ideation in a study with a sample of 376 medical students. Suicidal ideation measured using Beck Scale for Suicidal Ideation was significantly correlated with avoidant attachment ($r = .440, p < .001$), anxious attachment ($r = .335, p < .001$) and secure attachment ($r = -.547, p < .001$). Moreover, regression analyses revealed that students with secure attachment style were significantly less likely to have suicidal ideations ($\beta = -.418, p < .001$) but those with anxious attachment style ($\beta = .134, p < .001$) and avoidant attachment style ($\beta = .310, p < .001$) were more likely to have suicidal ideations. That study provided clear evidence that insecure attachment styles were

predictors of suicidal behavior in college students. The current study sought to replicate those findings in secondary school students in their adolescence.

Boyda et al. (2018) carried out a secondary data analysis of the National Comorbidity Survey- Replication (NCS-R) data to determine the interactions between parental psychopathology, attachment styles and suicidal behavior over a 12 month period. The data they analyzed in their study was collected from American adults aged 18 years and above. The authors controlled for age, gender, socioeconomic status and substance use in their analysis. Suicidal ideation in the 12 month period was significantly associated with fearful – avoidant attachment ($B = 0.77$, 95% CI = 0.212 – 1.33, OR = 2.2) and anxious – preoccupied attachment ($B = 1.05$, 95% CI = 0.265 – 1.840, OR = 2.9). Having made a suicide plan over the 12 month period was significantly associated with fearful – avoidant attachment ($B = 1.73$, 95% CI = 0.824 – 2.642, OR = 5.7).

Boyda et al. (2018) further carried out mediation analysis which showed that fearful – avoidant attachment mediated the relationship between externalizing disorders in respondents' fathers and respondents having made suicide plans over the 12 month period ($B = 1.689$, 95% CI = 0.178 – 3.200, $p < 0.05$) and anxious – preoccupied attachment mediated the relationship between suicidal ideation over the 12 month period and internalizing disorders in respondents' mothers ($B = 2.988$, 95% CI = 0.335 – 5.215, $p < 0.05$) as well as externalizing disorders in respondents' fathers ($B = 2.050$, 95% CI = 0.082 – 4.017, $p < 0.05$). In other words, respondents whose parents experienced some form of psychopathology were more likely to have suicidal thoughts or make suicidal

plans if they were also having insecure attachment styles. Insecure attachment styles were shown to be significant predictors of suicidal behavior in that study even when other possible predictors were controlled for. The study however did not answer the question of whether insecure attachment styles predict suicidal behavior in adolescents since the data was drawn from adults. The current study aimed at filling that gap by using an adolescent sample.

In a recent study, Stagaki et al. (2022) investigated whether romantic attachment styles and mentalizing mediated the relationship between childhood maltreatment, self-harm and suicidality. Participants in that study were 16 to 65 year old individuals of whom 649 had been diagnosed with various psychological disorders and 258 were healthy controls. Attachment to romantic partners was measured using the revised Experiences in Close Relationships Scale. Direct relationships were found between childhood maltreatment, self-harm and suicidality. In addition, these relationships were partially mediated by insecure attachment to romantic partners and ineffective mentalizing. Attachment to romantic partners accounted for the largest proportion of the indirect effect of childhood maltreatment on self-harm and suicidality.

These results in the study by Stagaki et al. (2022) showed that having insecure attachment to ones' romantic partners increased vulnerability to suicide and other self-harming behaviors in individuals with a history of maltreatment in childhood. That study, though it showed a significant influence of attachment on suicidal behavior did not address how attachment styles may influence suicidal behavior in adolescents. It also

focused narrowly on attachment to romantic partners. The current study filled these gaps by using an adolescent sample and considering attachment styles in general.

Some empirical studies suggest that not all insecure attachment styles increase the risk of suicidal behavior. In one study, Hartley (2018) investigated the relationship between attachment styles and suicide risk in a sample of 135 respondents aged between 17 and 44 years. Intentions to commit suicide, suicidal thoughts, suicide attempts and non-suicidal self-injury were the suicide risk variables considered in that study. A multivariate analysis of variance was performed to determine whether attachment styles measured using the Experiences in Close Relationships questionnaire were significantly associated with the suicide risk variables. Respondents with fearful –avoidant attachment styles had higher scores on suicide attempts, intentions to commit suicide and non-suicidal self-injury compared to respondents with dismissive avoidant and secure attachment styles. However, respondents with dismissive-avoidant attachment styles did not differ significantly from those with secure attachment styles on the suicide risk variables with the exception of suicidal thoughts which were more frequent in the individuals with dismissive-avoidant attachment styles.

Hartley (2018) concluded that respondents with dismissive avoidant attachment styles were able to cope with stressful situations just as effectively as those respondents with secure attachment styles. Thus, the study showed that fearful attachment style was predictive of suicide risk but not dismissive attachment style in that sample. Hartley (2018) did not include respondents' anxious attachment in the analysis therefore that

study did not show how anxious attachment was associated with suicide risk. In addition, that study was based on a small sample of adults.

In another study, Önen et al. (2017) investigated whether attachment styles, anxiety, traumatic experiences and depression levels were different between individuals who had attempted suicide and controls who had not made any suicide attempts. Seventy six participants aged between 18 and 73 years who had received medical treatment after attempting suicide with drugs were recruited in the study. Eighty four individuals who had never attempted suicide were also recruited as controls. Secure, fearful, preoccupied and dismissing attachment styles were measured using the Relationship Scales Questionnaire. Mann-Whitney U Test was used to analyze the data and the results showed that anxiety, traumatic experiences and depression were higher in the group with prior suicide attempts compared to the control group. Only fearful attachment style was significantly higher among the suicide attempters ($F = .678, p < .001$) but there was no difference in secure ($F = .102, p = .490$), dismissing ($F = 0.010, p = .981$) and preoccupied ($F = .006, p = .076$) attachment styles between the two groups.

The study by Önen et al. (2017) found that only fearful attachment style was significantly associated with suicidal behavior, corroborating the findings by Hartley (2018). However, that finding may not be conclusive because the samples used in the study were relatively small and mostly female (77.6% in the suicide group and 76.2% in the control group). There was need therefore for a study to ascertain whether suicidal behavior is associated with attachment styles in a study with a representative sample of adolescents.

A study by Yaseen et al. (2016) investigated whether suicidality and a history of suicide were associated with feelings of entrapment, anxiety, anhedonia and fearful attachment in a study involving 135 adults. The respondents had been hospitalized for acute suicide risk. In that study, only fearful attachment style was measured with the fearful subscale of the Relationship Scales Questionnaire (RSQ; Griffin and Bartholomew, 1994). Suicidal ideation was significantly correlated with anhedonia, anxiety and feelings of entrapment but not with fearful attachment (*Spearman* $r = .09$, $p = .32$). Thus, fearful anxiety was not associated with suicidal ideation in that study contradicting the findings by Hartley (2018) and Önen et al (2017). It should be noted that respondents were adults with high risk of suicide.

The foregoing review of existing literature identified studies in which suicidal behavior was associated with insecure attachment to parents or peers as well as insecure attachment styles characterized by high levels of attachment anxiety and attachment avoidance. However, some studies did not associate all the insecure attachment styles suicidal behavior. In fact, dismissive avoidant attachment style and secure attachment styles were found to be equally protective against suicidal behavior in one study (Hartley, 2018). The available research involved respondents mostly from western countries due to scarcity of studies on attachment in adolescents and suicidal behavior locally. The current study was done to find out the association between attachment styles and suicidal behavior in Kenyan adolescents and thereby add to the existing literature.

2.6 Summary of Reviewed Literature and Gap Identification

The reviewed literature shows that deviant behavior among adolescents and young people has received much attention from researchers all over the world. The reviewed literature also provides evidence that secure attachment has a significant influence on these behaviors. Specifically, people who have secure attachment are less likely to involve themselves in deviant behaviors compared to those with insecure attachment. These findings, however, are not conclusive. Some of the reviewed studies have produced contradicting findings that show no links between attachment styles and behavior. These inconclusive findings necessitate more studies to investigate the associations between attachment styles and behavior particularly in secondary school students.

The reviewed literature demonstrates a paucity of research on adolescent attachment in Africa and in Kenya. Most of the studies have been done in Western countries which are different from countries like Kenya so the findings may not be generalized to Kenyan secondary school students with confidence. Wambua et al. (2018) call for more studies to be done in Kenya. Limited studies in Africa (Barber, 2017; Okello et al., 2014 & Rawatlal et al., 2015) and in Kenya (Abubakar et al., 2013; Majimbo, 2017; Wambua et al., 2018) have established that attachment in adolescents significantly predicts adjustment in various domains. This study sought to contribute to this literature by focusing on secondary school students from Nairobi County.

Generalizability of the reviewed studies is also affected by the fact that many of the authors carried out their studies using adult samples or clinical samples that differ

significantly from the local secondary school population. It is therefore not certain how well findings reported in those studies can be applied to secondary school students in Nairobi County. The researcher hoped to fill this gap by recruiting a representative sample of secondary school students in Nairobi County.

2.7 Theoretical Framework: Attachment Theory (John Bowlby 1969, 1973, 1980)

According to Bowlby (1969) attachment bonds form between children and their caregivers to enable children maintain proximity with their caregivers thereby ensuring their survival. The responsiveness of the caregiver determines the quality of attachment that forms (Ainsworth et al., 1978). Children whose caregivers are responsive, caring, sensitive to their needs, provide comfort and encourage independent exploration form secure attachment to their caregivers. However, children whose caregivers are uncaring, unresponsive, insensitive to their needs, unavailable to comfort the child or unreliably responsive will develop insecure attachment to their caregivers. Children form mental models of attachment relationships influenced by their attachment to caregivers which Bowlby (1973) called “internal working models” (IWM). Children form “self-model” which represents perceptions of themselves and “other model” which represent perception of attachment figures.

Secure or insecure attachment formed in childhood persists across the lifespan because the mental representations of attachment remain relatively stable over time (Fairbairn et al., 2018; Fino et al., 2014; Kerns & Brumariu, 2014) but may be modified to some extent as children grow older by factors such as parenting styles, parental conflicts or divorce, parental psychopathology, domestic violence and abuse (Allen et al., 2018).

Mothers and other caregivers are usually the primary attachment figures in children's lives but over time, they expand their relationships and other family members, friends and romantic partners can become secondary attachment figures (Dubois-comtois et al., 2013). Relationships with these secondary attachment figures are shaped by the mental models of attachments formed in relationships with primary caregivers. Later relationships formed by adolescents are consistent with their mental models of the self and others and those mental models shape their expectations, coping strategies and behaviors in those relationships.

The current study adopted the four dimensional model of attachment styles developed by Bartholomew and Horowitz (1991) and Mikulincer and Shaver (2012). These attachment styles are determined by the mental models of attachment. Individuals who have secure attachment styles develop positive self-image and view themselves as worthy of love and care from significant people in their lives. They also have positive image of others and view significant others as trustworthy and available to provide care and comfort. They are not anxious about availability of attachment figures nor avoid intimacy with them. Insecure attachment styles are characterized by attachment anxiety as well as attachment avoidance. People who have preoccupied attachment styles hold a negative self-image and a positive image of others. Such people feel unlovable and seek validation and self-esteem through acceptance and approval by other people. They have high levels of attachment anxiety characterized by worry about possible rejection or abandonment, concerns over availability and accessibility of attachment figures and excessive reassurance seeking.

Those with dismissing attachment styles have positive image of themselves but have a negative image of others. They do not need others for validation so they are not anxious for acceptance or approval. Their view of attachment figures as being untrustworthy and unreliable makes them dislike close relationships hence they have a high level of attachment avoidance. Attachment avoidance is characterized by discomfort with close relationships, fear of physical or emotional intimacy, desire to remain independent and suppression of emotional experiences and emotional expression within close relationships. Lastly, individuals with fearful attachment styles have negative self-image and negative image of others. They feel unlovable and at the same time view others as untrustworthy, rejecting and unreliable. They desire closeness with attachment figures hoping that acceptance will validate their self-worth but they distrust the attachment figure and expect rejection. Hence, they have high levels of attachment anxiety and also attachment avoidance.

The current study was underpinned by the attachment theory. Although many developmental changes occur in adolescence, students' core attachment styles are essentially stable (Shumaker et al., 2009) and so ingrained that attachment becomes more of a state of mind that influences their behaviors, thinking and emotion regulation strategies than a characteristic of students' relationships with caregivers (Allen, 2008). Students' attachment styles influence their behavior within interpersonal relationships and their overall psychological adjustment. Going by the extant research on attachment in adolescence, students with secure attachment styles are likely to be better adjusted and

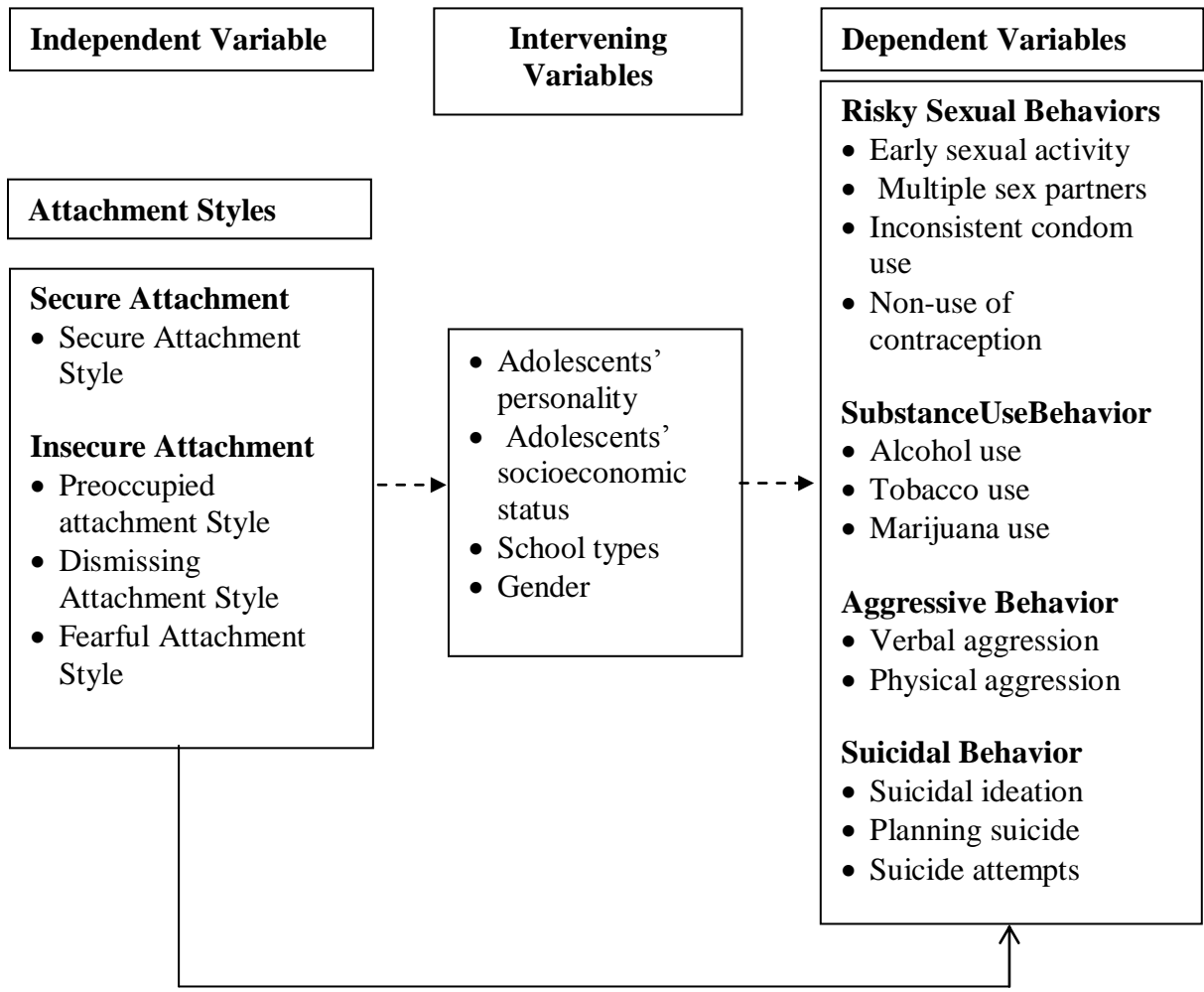
are less likely to be prone to risk taking behavior such as engaging in risky sexual activities and using substances. They are also less likely to act aggressively towards each other and to have suicidal behaviors. On the other hand, students with insecure attachment styles are less well-adjusted and more likely to engage in the selected deviant behaviors.

2.8 Conceptual Framework

The study was guided by the conceptual framework that is shown in Figure 1. This conceptual framework shows the hypothesized relationships among the study variables. Students' attachment styles constitute the independent variable in the study. Secure attachment style is marked by low levels of attachment anxiety and avoidance. Students who have insecure attachment can have one of three attachment styles depending on the levels of attachment anxiety and attachment avoidance they manifest. Students with dismissing attachment styles have high levels of attachment avoidance and low levels of attachment anxiety. Students with preoccupied attachment styles have high levels of attachment anxiety but have low levels of attachment avoidance whereas students with fearful attachment have high levels of attachment anxiety as well as attachment avoidance.

The four selected behaviors: risky sexual behavior, substance use, aggressive behavior and suicidal behavior constitute the dependent variables in the study. Attachment style, which is the independent variable in the study, is expected to influence student's involvement in the four selected problem behaviors. According to the attachment theory,

attachment styles influence students' psychological adjustment, how they regulate their emotions and their interpersonal relationships which may then increase or lower their risk of engaging in the selected behaviors.



Key:
 —→ Expected effects of independent variable on the dependent variables
 - - → Interactions between independent variables, intervening variables and the dependent variables

Figure 1: The conceptual framework showing the relationship between attachment styles and selected behaviors

Students with secure attachment style are better adjusted, have better emotion regulation ability and form close, rewarding relationships with attachment figures. From these relationships they derive comfort and security and are less likely to engage in the selected behaviors. On the other hand, students with insecure attachment styles as shown in Figure 1 have poorer adjustment, are more likely to have difficulty regulating their emotions and do not form intimate relationships with attachment figures. For these reasons, they may resort to risky sexual behavior, use substances, act aggressively towards others or demonstrate suicidal behaviors. In addition to the independent and dependent variables, Figure 1 shows that a number of intervening variables may also affect the selected behaviors among students. They are students' personality, socioeconomic status, type of schools they attend and their gender.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the research design that the study was based on; the target population for the study, sample size and the sampling procedure that was used to obtain the sample; the design, validity, reliability and piloting of the research instruments; data collection procedures and data analysis procedures.

3.1 Research Design

A correlational research design was adopted in the current study. A correlational design is suitable when the researcher intends to assess the relationships among two or more variables (Ary et al., 2014) and where data on the variables is collected at one point in time from the same subjects (Tuckman & Harper, 2012). Gay et al. (2012) emphasize that the purpose of a correlational study is to gather data and use the data to find out if there is a relationship between two or more quantifiable variables and the degree of that relationship. The correlational design was adopted in this study since the researcher was investigating the relationship between the attachment styles of secondary school students and their involvement in the selected behaviors. Data was collected at one point in time from the same respondents and the aim was to determine the relationship between students' attachment styles and their involvement in the selected behaviors and the strength of that relationship. This is unlike a survey study where the emphasis is on describing a population in terms of values, opinions, beliefs or attitudes held (Creswell,

2012). This design was also suitable because the researcher did not control or manipulate any of the variables in the study (Creswell, 2012).

3.2 Study Variables

In this study, the independent variable was students' attachment styles which were categorized into dismissing attachment, secure attachment, preoccupied attachment and fearful attachment. The dependent variables were risky sexual behavior, substance use, aggressive behavior and suicidal behavior.

3.3 Location of the Study

The current study was conducted in Nairobi County. Nairobi County is the largest metropolis in Kenya with approximately four million residents. This population is ethnically diverse because Nairobi County attracts skilled and unskilled workers from all over the country. Nairobi County is home to affluent, middle class and poor residents living in informal settlements. This ethnic and socioeconomic diversity is expected to result in different attitudes towards parenting. Parenting may be influenced by ethnic norms as well as economic pressures and the ensuing relationships between parents and their children might influence the children's attachment styles.

Moreover, high rates of unemployment, overcrowding, lack of suitable recreation facilities in low income parts of the city, disorganized urban neighborhoods and weak social control networks increase the risk of deviant behaviors such as risky sexual behavior, substance use and suicide (Memia et al., 2022; wa Teresia, 2021). Among

Kenyan youth, the highest rate of delinquent behaviors is found in Nairobi County (Kariuki-Githinji, 2020). Recent data shows that since 2019, Nairobi County has had the highest rate of pregnancies among 15 to 19 year old girls compared to all other counties (Kebaso, 2021) suggesting that adolescents in the county are prone to unsafe sex. A countrywide survey by Kamenderi et al. (2021) found that Nairobi region was leading in the prevalence of alcohol use and disorders related to alcohol and tobacco use among individuals aged 15 and above. Nairobi region was third in tobacco and marijuana use but was experiencing the fastest growth in consumption of tobacco and marijuana. As Cheloti and Gathumbi (2016) explain, students from day schools in Nairobi County freely intermingle with drug peddlers who are common in urban settings.

Ombasa (2021) compared rates of victimization from physical, verbal and sexual aggression in secondary school students reported by previous studies and Nairobi County at 54.4% was higher than the neighboring Kajiado County (45.6%) and Kiambu County (52.1%). As the largest city in Kenya, Nairobi is also at the forefront of technology and entertainment. Handheld devices are ubiquitous and access to the internet is easy and affordable. Adolescents spend a lot of time on the internet and social media sites and less time interacting with parents, many of whom are busy making a living, therefore there is less opportunity to bond with parents. At the same time, people in the entertainment industry which is vibrant in Nairobi County model behaviors such as alcohol and substance use and liberal sexual attitudes which adolescents may imitate.

3.4 Target Population

There are 79 public secondary schools in Nairobi County with an enrolment of 46,868 students of whom 10,451 are in Form Three according to data from the County Director of Education's office. Form Three students were ideal for the study because they were on average older than Form One and Form Two students and have been in school longer. Thus, they have had opportunity to manifest the behaviors that are associated with secondary school students such as substance use, experimentation with sex and aggressive behavior. These behaviors, together with suicidal ideation tend to increase from early to mid-adolescence where majority of Form Three students are. Form Three students were also ideal because they were not preparing for national examinations so they were more readily available to take part in the study.

3.5 Sample Size and Sampling Procedure

A sample is a small section of the population that represents the whole of the population and should reflect all aspects of the target population (Neuman, 2007). The researcher used purposive sampling, stratified sampling and simple random sampling procedures to pick the sample. Purposive sampling was used to select Nairobi County as the study location. All Form Three students enrolled in public secondary schools in the county were eligible to participate in the study. There are nine sub-counties in Nairobi County.

Three of these sub-counties, accounting for 33% of the sub-counties, were randomly selected so as to represent the entire county. There were 28 schools in these sub-counties.

The researcher determined that nine schools were adequate to represent all the schools in the three sub-counties using the formula by Nassiuma (2000):

$$n = \frac{NC^2}{C^2 + (N-1)e^2} = \frac{28 \times (0.2)^2}{(0.2)^2 + (28-1)(0.05)^2} = 9$$

Where;

n = required sample of schools

N = the number of schools in the sub-counties

C = coefficient of variation

e = margin of error

Schools were stratified into three strata: boys' only schools, girls' only schools and mixed schools. This stratification was done in order to ensure that the sample would be representative of students in terms of students' sex and types of school. Three schools were randomly selected from each stratum to make a total of nine schools.

The sample size for the students was calculated using the formula given by Yamane (1967) cited in Israel (1992) as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = the desired sample size

N = total number of students in Form Three

e = the margin of error at .05

The formula gives a sample size of 385 students. The students who constituted the sample were selected using a random sampling procedure. Forty three Form Three students were chosen from each of the nine schools. The researcher utilized a table of random numbers for sampling following the recommendations of Chakrabarty (2016). Each eligible student was assigned a number. A randomly selected point in a table of

random numbers was used as the beginning point and then the researcher progressed across the table selecting numbers until the required sample size was reached. Students whose assigned numbers corresponded to the numbers picked from the table of random numbers were asked to participate in the study.

3.6 Research Instrument

A self-administered closed ended questionnaire (Appendix II) was used to collect data on students' demographic details, attachment styles, risky sexual behavior, substance use behavior, aggressive behavior and suicidal behavior. The questionnaire was divided into five sections. Section A of the questionnaire collected information regarding students' age, sex, marital status of parents and living arrangements at home. Section B of the questionnaire had items adapted from the Attachment Styles Questionnaire (ASQ, Van Oudenhoven et al., 2003) which measure the four attachment styles considered in the study (secure, preoccupied, dismissing and fearful attachment styles). Secure and preoccupied attachment styles were measured with seven items each and dismissing and fearful attachment styles were measured with five items each. The ASQ had 24 items in total each with five options: 'Strongly Disagree', 'Disagree', 'Not Sure', 'Agree' and 'Strongly Agree'. The items were rated from 1 = 'strongly disagree' to 5 = 'strongly agree'.

Section D of the questionnaire had 14 items adapted from the physical aggression and verbal aggression subscales of the Buss Perry Aggression Questionnaire (BPAQ, Buss & Perry, 1992) to measure students' aggressive behavior. The items were rated from 1 =

'extremely untrue of me' to 5 = 'extremely true of me'. The 11 items in Section C of the questionnaire were used to measure suicidal behavior in students. Section E of the questionnaire had 10 items to measure substance use behavior. Section F of the questionnaire had 11 items to measure students' risky sexual behavior. The items in section C, E and F were rated from 1 = 'Not at all' to 5 = 'Six or More times'. Responses for items 5 and 6 of risky sexual behavior scale were different. Item 5 required students to indicate how old they were the first time they engaged in sex if they had and responses were rated from 1 = 'not at all' to 5 = '18 and above'. Item 6 required them to indicate whether they have had more than one sex partner if they have ever engaged in sex and responses to this item were rated from 1 = 'none' to 5 = '4 and above'. All respondents were requested to respond to all the items in the questionnaire.

3.7 Pilot Study

A pilot study was undertaken before the questionnaires were administered to the students. The aim of the pilot study was to ascertain the validity and reliability of the items in the questionnaire and to determine whether there were any issues relating to the questionnaires that needed to be addressed such as the clarity of the items (Mugenda & Mugenda, 2003). Orodho (2012) recommends that the sample used for piloting research instruments should be equivalent to 10% of the total sample in the particular study. Following this recommendation, 20 male and 20 female students were randomly selected from one of the schools. This school was not among the schools from which data was collected. The respondents filled the questionnaires in the researcher's presence so that any difficulty filing the questionnaires could be noted together with the amount of time

needed to fill them. Data in the filed questionnaires was analyzed so as to establish the reliability and validity of the instrument. The information obtained through piloting the instrument was used to improve the items in the questionnaire. Several items that were vague were rephrased to make them clearer. These changes were made before the instrument was administered to the respondents of the study.

3.7.1 Validity of the Study Instruments

The validity of a data collection tool is the extent to which it is able to measure what it is intended to measure. Before administering the questionnaire to students, the researcher ascertained face, content and construct validity of the questionnaire. These are non-statistical methods that are used to confirm the validity of a research instrument (Orodho, 2012). To ensure face validity of the questionnaire, the researcher appraised the structure of the questionnaire in terms of formatting, uniformity in style, clarity and readability of the items and practicality of the questionnaire for the intended purpose. To ensure content validity of the questionnaire, the researcher sought input from the university supervisors who are experts in the field. The supervisors confirmed that the questionnaire items were suitable for measuring the variables of interest in the study. Students' attachment styles and risky behaviors were the psychological constructs in the current study. To ensure construct validity, the researcher included as many items addressing different facets of the constructs as was practically possible. The university supervisors also provided expert guidance in regard to the selection of scales to measure each construct that was part of the study. Random sampling process was used to pick respondents so that to ensure external validity. The randomly selected sample helped to ensure that the findings made in the

study could be generalized to other populations that have similar characteristics to the population in the study.

3.7.2 Reliability of the Study Instruments

Reliability of a data collection instrument is the extent to which the items in the instrument are able to produce consistent results when administered repeatedly if the underlying construct does not change (Mugenda & Mugenda, 2003). A research instrument should have an acceptable reliability coefficient in order to be used for data collection (Tavokol & Dennick, 2011). Pretesting of the questionnaire was done during the pilot study in order to ascertain its reliability and this was done by calculating Cronbach Alpha Coefficients (α) for each subscale using SPSS software. The Cronbach's Alpha quantifies the internal consistency of an instrument or how closely related the items that measure a particular construct are and is the most widely used measure of internal consistency in quantitative research. Cronbach's Alpha is computed by taking into account the number of items in a scale and the average inter-correlations among those items and is expressed as follows:

$$\alpha = \frac{N (\bar{c})}{\bar{v} + (N - 1)\bar{c}}$$

Where:

N = total number of items.

\bar{c} = the average covariance between items

\bar{v} = average variance

The reliability of the ASQ has been reported in previous studies. Zeinali et al. (2011) reported reliability coefficient of .87 for the questionnaire and Ganth and Kadiravan(2017) reported reliability coefficients of .73, .80, .78 and .65 for the secure, fearful, preoccupied and dismissing scales of the ASQ respectively. Reliability coefficients for the BPAQ reported by Demirtas-Madran (2012) were .78 for the physical aggression scale and .48 for the verbal aggression scale while coefficients reported by Zimonyi et al. (2021) were .85 for the physical and .64 for the verbal aggression scales respectively. Items used to measure aggressive behavior were adapted from the physical and verbal aggression scales of the BPAQ. These reliability coefficients were reported in studies with samples that were different from the sample in this study hence there was need to calculate reliability coefficients for the sample in the current study. This was done during the piloting phase and the results are presented in Table 1.

Table 1: Reliability Coefficients for Subscales of the Attachment Styles Questionnaire

Subscale	Chronbach's Alpha	No of Items
Secure attachment style	.74	7
Preoccupied attachment style	.89	7
Dismissing attachment style	.88	5
Fearful attachment style	.87	5
Overall questionnaire reliability	.85	24

Reliability coefficients of .70 are considered adequate for a research instrument (Mugenda & Mugenda, 2003; Tavakol & Dennick, 2011). The reliability coefficients for the attachment styles questionnaire as shown in Table 1 are all greater than .70 therefore

each scale was deemed reliable. Moreover, the overall reliability for the entire questionnaire was .85 which was also well above the recommended .70. The reliability coefficients for the questionnaire measuring the independent variables (selected behaviors) are shown in Table 2

Table 2: Reliability Coefficients for Subscales measuring Selected Behaviors

Subscale	Chronbach's Alpha	No of Items
Risky sexual behavior	.76	11
Substance use	.82	10
Aggressive behavior	.83	14
Suicidal behavior	.79	11
Overall questionnaire reliability	.80	53

As shown in Table 2, the reliability coefficient for each subscale was greater than the recommended .70 and the overall reliability for the measures of students' problem behaviors was .80 which was also acceptable.

3.8 Data Collection Techniques

The researcher visited the schools to request school head teachers to allow data collection from their respective schools. The researcher explained the aim of the study and sought the most suitable time to collect data. The questionnaires were administered at times previously agreed upon with the school administrations in order to avoid disrupting normal school activities. Students selected to participate in the study filled out the questionnaires after the researcher briefly explained to them the purpose of the study. Students' participation in the study was entirely voluntary and the researcher assured

them of complete confidentiality of the data. The researcher was available to assist the students wherever they had questions.

3.9 Data Analysis Procedures

After the questionnaires were filled by the respondents, the researcher scored and coded the questionnaires in preparation for analysis of the data. The data was analyzed using a computer with the help of the Statistical Package for Social Sciences (SPSS, version 22) software. The data was keyed into the SPSS program and then it was screened for outliers and any errors that could have been made in the process of keying it in. The researcher then subjected the data to both descriptive and inferential statistics. Descriptive statistics are used to organize and summarize data so that it is easier to comprehend (Coladarci et al., 2011). Means, frequencies and percentages were the descriptive statistics used to describe and summarize the data in respect to students' biographical details (sex, age, school type, parents' marital status and type of home), attachment styles and the selected deviant behaviors. This data was presented in figures.

The null hypotheses were tested at the .05 level of significance as follows:

Ho₁: There is no statistically significant relationship between students' attachment styles and risky sexual behavior among secondary school students in Nairobi County, Kenya. Statistical test for this hypothesis was multiple regression analysis

Ho₂: There is no statistically significant relationship between students' attachment styles and substance use behavior among secondary school students in Nairobi County, Kenya. Statistical test for this hypothesis was multiple regression analysis

Ho₃: There is no statistically significant relationship between students' attachment styles and aggressive behaviors among secondary school students in Nairobi County, Kenya. Statistical test for this hypothesis was multiple regression analysis

Ho₄: There is no statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in Nairobi County, Kenya. Statistical test for this hypothesis was multiple regression analysis

3.10 Logistical and Ethical Considerations

In terms of ethical considerations, the researcher first acquired a letter of authorization from the graduate school of Maasai Mara University which was presented to the National Council for Science, Technology and Innovation (NACOSTI) to get a research permit. The researcher then visited the County Director of Education for authorization and to get an introductory letter to take to the schools. During the data collection, the researcher described to the students the purpose of the study and requested them to participate voluntarily. Only students who gave their informed consent took part in the study and it was made clear to them that they could opt out if they wished to. Anonymity and confidentiality of the participants was assured by asking them not to indicate their names or any personal details that could identify them. They were asked not to show their responses to anyone and completed questionnaires were immediately placed in an envelope and sealed to ensure that no unauthorized person viewed them.

Logistical considerations entailed the researcher visiting the sampled schools in advance to familiarize himself with the schools and the school principals. During these visits, the

researcher introduced himself, explained the purpose of the study to the principals and agreed with them on suitable dates and times when data could be collected. On the days that data was collected, the researcher requested teachers to assist in administration of the questionnaires after familiarizing them with the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents results of the current study which investigated whether attachment styles are predictors of selected behaviors in students in secondary schools in Nairobi County, Kenya.

The chapter begins with a presentation of general and demographic information which includes the response rate and demographic characteristics of the participants. After this, there is a presentation, interpretation and discussion of the results. The results are presented, interpreted and discussed in line with the objectives and the hypotheses that guided the study. The objectives and hypotheses that guided the study were as follows:

- i. To determine the extent to which attachment styles predict risky sexual behavior among secondary school students in Nairobi County, Kenya. H_{01} : There is no statistically significant relationship between students' attachment styles and risky sexual behavior among secondary school students in Nairobi County, Kenya – tested using multiple regression analysis
- ii. To establish the extent to which attachment styles predict substance use behavior among secondary school students in Nairobi County, Kenya. H_{02} : There is no statistically significant relationship between students' attachment styles and substance use behavior among secondary school students in Nairobi County, Kenya – tested using multiple regression analysis
- iii. To find out the extent to which attachment styles predict aggressive behavior among secondary school students in Nairobi County, Kenya. H_{03} : There is no statistically

significant relationship between students' attachment styles and aggressive behavior among secondary school students in Nairobi County, Kenya – tested using multiple regression analysis

- iv. To determine the extent to which attachment styles predict suicidal behavior among secondary school students in Nairobi County, Kenya. Ho₄: There is no statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in Nairobi County, Kenya – tested using multiple regression analysis

4.1 General and Demographic Information

The following sections present the general and demographic information of the study respondents. The response rate to the study questionnaires is discussed first followed by analyses of respondents' demographic characteristics.

4.1.1 Response Rate

Response rate in a study is the proportion of questionnaires returned properly filled and useful in the study (Mugenda & Mugenda, 2003). The target sample for the study was 385 Form Three students and nine guidance and counseling teachers. The researcher distributed 385 student questionnaires and nine questionnaires to guidance and counseling teachers. All questionnaires distributed to students were returned. Some students' questionnaires were rejected when the researcher noted that students responded to the scales in a random manner or returned blank questionnaires. In the end, 367 of the students' questionnaires were deemed useful hence the response rate was 95.3%. In social

science research, response rates of over 50% are acceptable and a response rate exceeding 80% is excellent (Mugenda & Mugenda, 2003; Fincham, 2008; Cooper & Schindler, 2015). Therefore, a response rate of 95.3% achieved in this study was more than adequate. The nine questionnaires distributed to guidance and counseling teachers were all returned completed making it a 100% response rate.

4.1.2 Demographic Characteristics of Respondents

This section presents a summary of respondents' demographic characteristics. Demographic variables analyzed include students' age and sex; students' attachment styles; type of homes students live in and students' deviant behaviors. The distribution of students according to age and sex is shown in figure 2

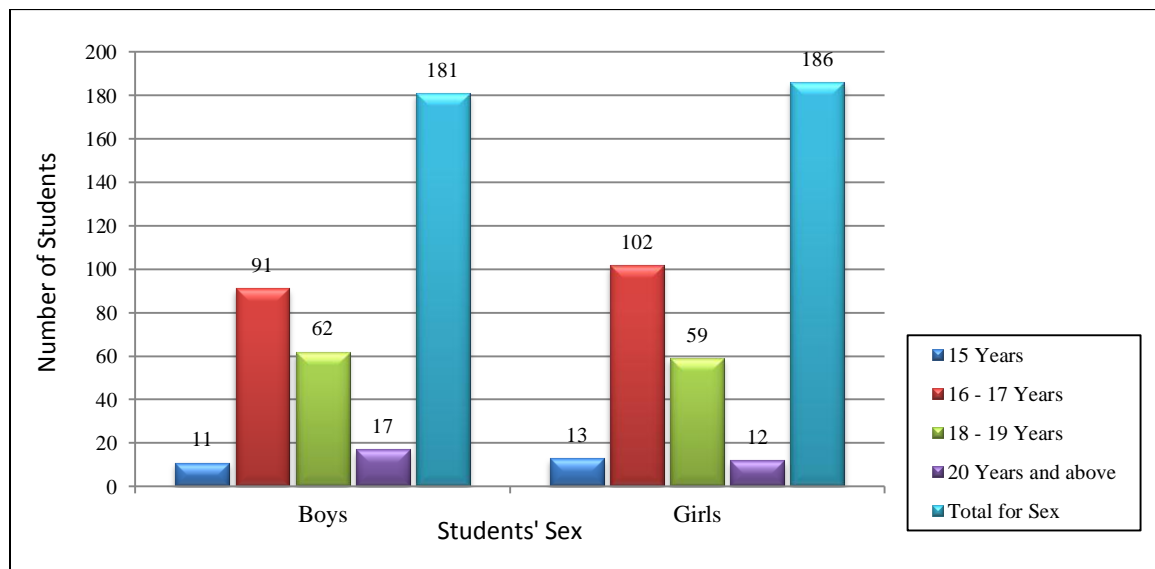


Figure 2: Distribution of students according to age and sex

As shown in Figure 2, there were total of 181 boys and 186 girls comprising 49.3% and 50.7% of the sample respectively which means that both sexes were equally represented

in the study. This ensured that the sample was representative of secondary schools students in terms of students' sex. In regards to students' age, the youngest respondents were 15 years old (6% of boys and 7% of girls). Most of the respondents were aged between 16 to 17 years (50.3% of boys and 54.8% of girls). Therefore, majority of the students were within the age that is typical of secondary school students in Kenyan schools. Moreover, 34.3% of boys and 32.6% of girls were aged 18 – 19 years. The students are in their mid to late adolescent years during which the occurrence of deviant behavior peaks (Babore, et al., 2016; Eltink et al., 2018; Hasan & Husain, 2016; Monahan et al., 2015) which made them ideal for the purpose of the current study. Figure 3 presents the results of analysis of students' sex and the category of the schools they were enrolled in.

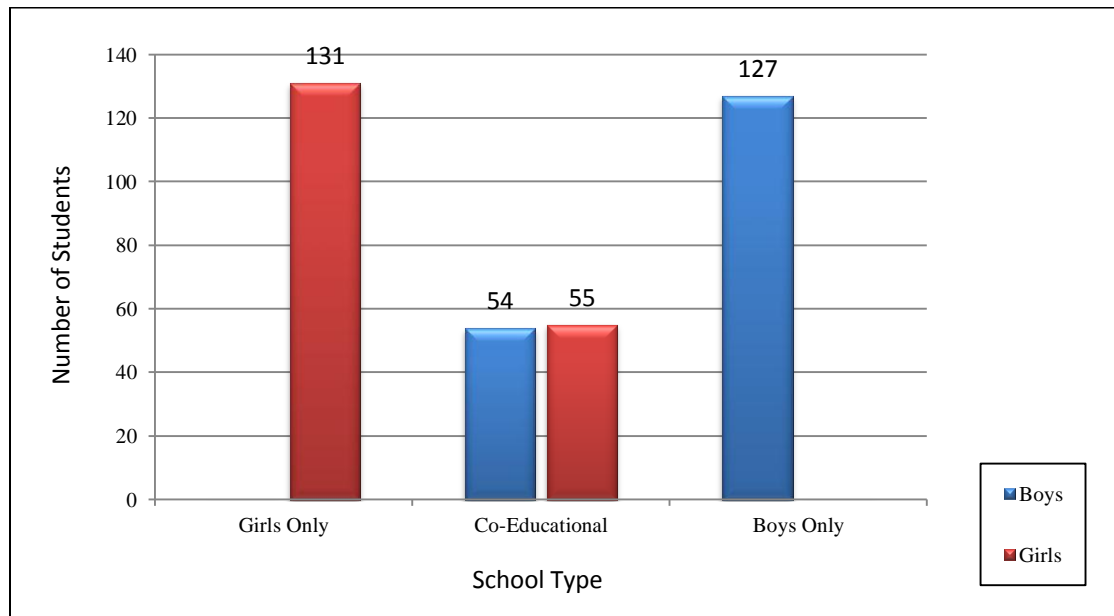


Figure 3: distribution of Students according to sex and school type

As Figure 3 shows, 131 students were from girls' only schools, 127 boys were from boys only schools while students from coeducational schools included 54 boys and 55 girls.

Each type of school was fairly represented in the student sample. The distribution of students by sex and parents' marital status is shown in Figure 4.

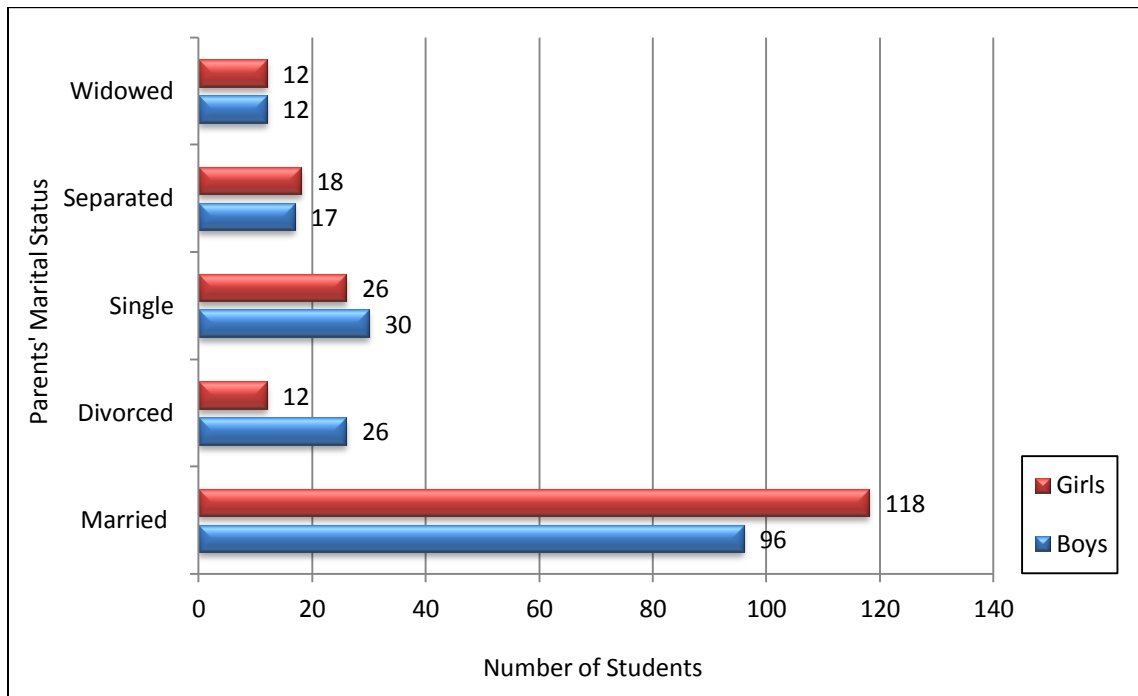


Figure 4: Distribution of Students by Parents' Marital Status and Sex

As shown in Figure 4, majority of the students (53.0% of boys and 63.4% of girls) had parents who were married to each other. The rest of the students had parents who were divorced, single, separated or widowed. The researcher analyzed the type of home that students lived in in terms of whether they lived with two parents, one parent, guardian or relative or lived alone. The results of this analysis are presented in Figure 5

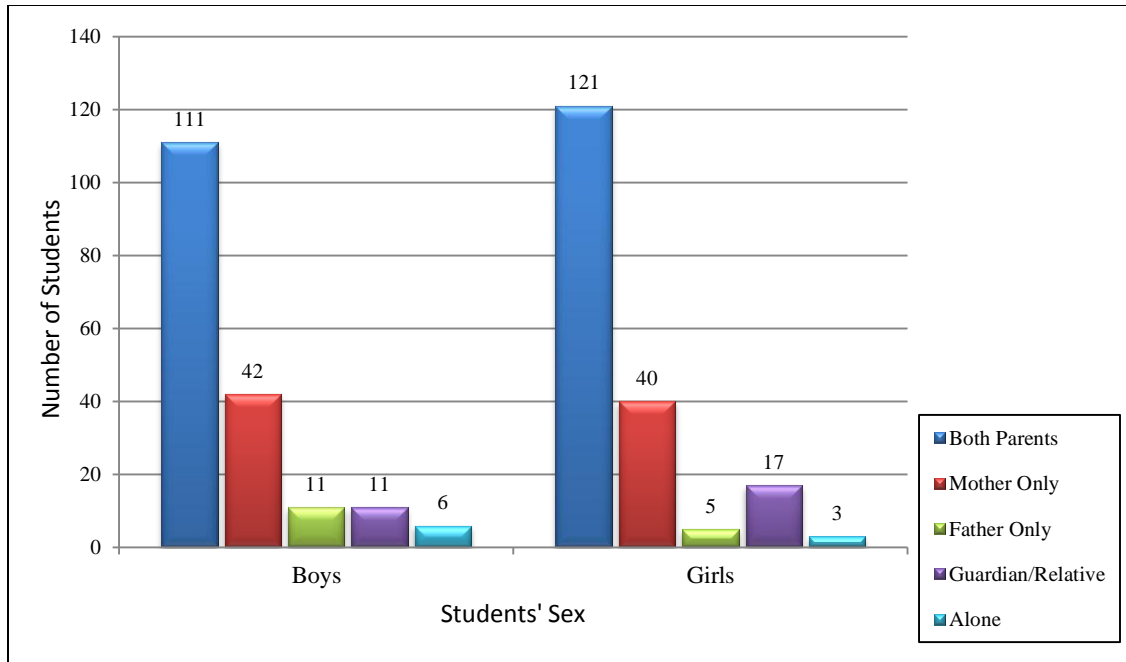


Figure 5: Distribution of Students by Sex and type of home

Figure 5 shows the distribution of students according to sex and type of home. As Figure 5 shows, majority of the students lived with both parents (61.3% of boys and 65.0% of girls). Among boys, 23.2% lived with mothers and 6.0% lived with fathers only. Among girls, 21.5% lived with mothers and 2.6% lived with fathers. Most of the students in this study lived with both parents and most of those who did not lived with one parent or guardian. Only six boys and three girls lived alone. Figure 6 shows the means of the four attachment styles analyzed according to students' sex.

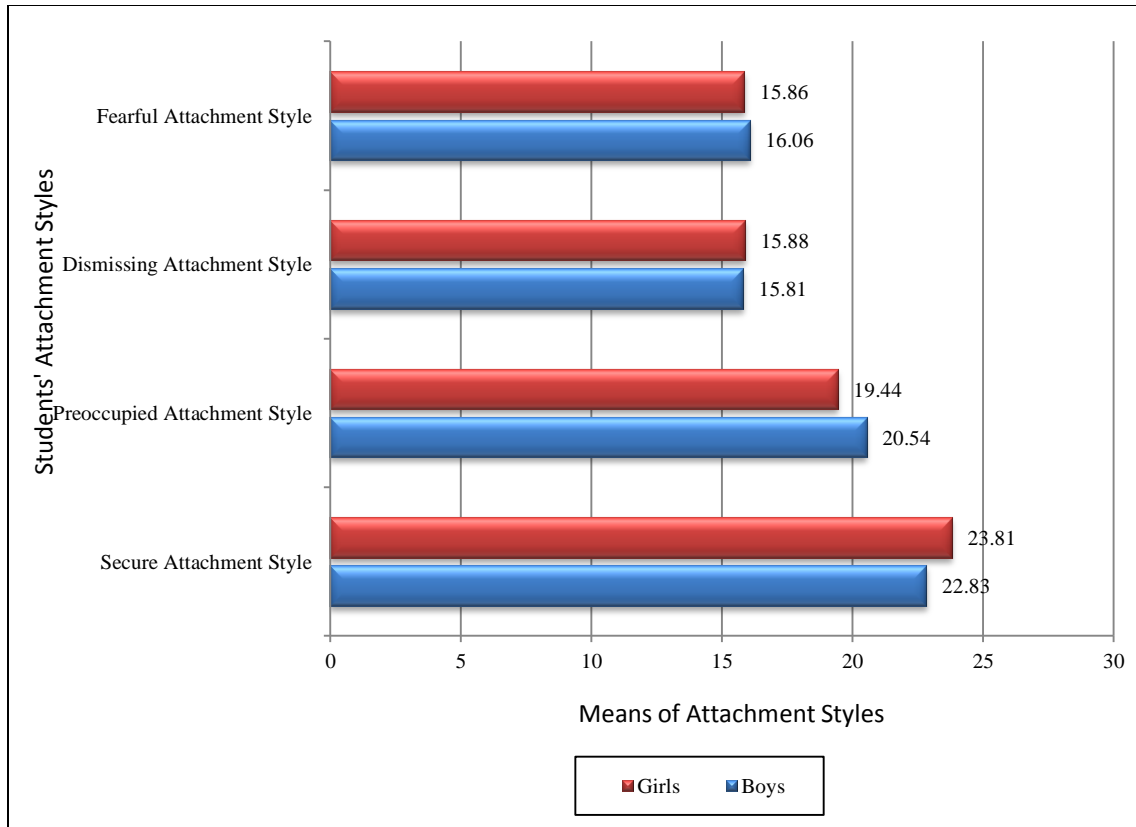


Figure 6: Means of Students' Attachment Styles by Sex

Figure 6 shows the mean of each attachment style separately for boys and girls. According to Figure 6, girls scored higher on average for the secure attachment style (23.81) compared to boys (22.83). Girls scored lower on average for the preoccupied attachment style compared to boys (19.44 vs 20.54). Girls also had a lower mean for fearful attachment style (15.86 vs 16.06). Girls scored higher than boys on average for dismissing attachment style (15.88 vs 15.81). These differences in attachment styles between boys and girls support earlier studies that found gender differences in attachment such as the study by Vu et al. (2022) who measured attachment in a sample of Belgian and Vietnamese adolescents and found that in both groups, girls had significantly higher mean for secure attachment and boys had significantly higher mean for attachment

avoidance but attachment anxiety scores did not differ significantly between boys and girls in both groups. A study by Barry et al. (2015) found that attachment avoidance was higher in men than women and another study by Ciocca et al. (2020) found that men and women did not differ in attachment security but men scored significantly higher in attachment avoidance and women scored higher in attachment anxiety. A review by Del Giudice (2016) found that sex differences in attachment did not appear in infants and young children but became apparent from middle childhood onwards. The researcher analyzed students' attachment styles according to the type of homes students lived in. this analysis is presented in Figure 7

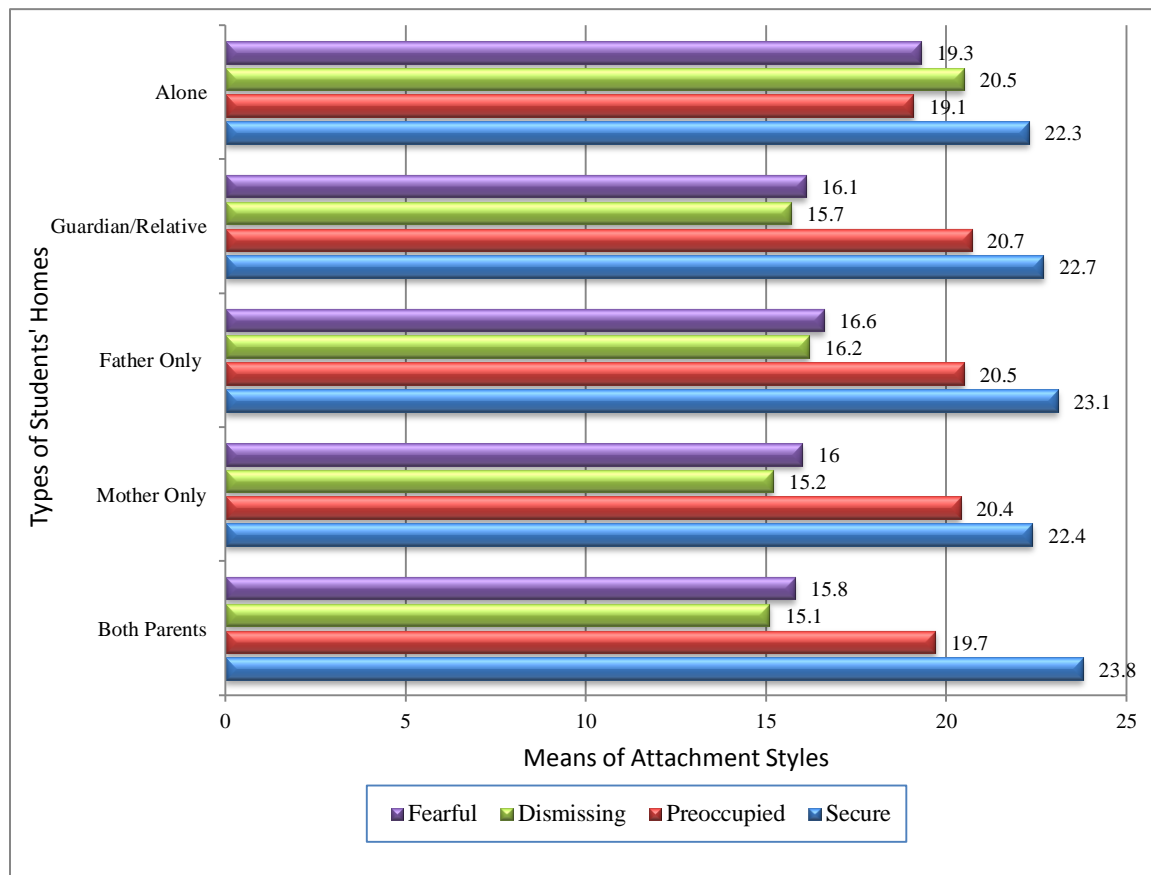


Figure 7: Means of Attachment Styles by Type of Students' Homes

Figure 7 presents the mean for each attachment style according to the type of homes students lived in. It is apparent that the scores of the four attachment styles differed according to the homes students lived in. Students living with both parents had the highest mean for secure attachment compared to students living with one parent, guardian or relative or those students living by themselves. The means for preoccupied and dismissing attachment styles were lower among students living with both parents when compared with students living with one parent, guardian or relative. In the case of dismissing attachment style, the mean was lower among students living with both parents compared to students living with one parent, guardian or relative or alone. Finally, with fearful attachment styles, students living with both of their parents had lower scores compared to the other groups.

These observations support findings by authors such as Castleton (2019) who have found that individuals who grew up in families with two parents tended to have secure attachment styles in contrast to those who grew up in blended families or single parent families. Nwagboso (2018) found that most of the adolescent girls in her study who came from two parent families had secure attachment styles whereas most of those from single parent families had insecure attachment styles and Garneau et al. (2013) found that undergraduate students from divorced families had significantly higher levels of attachment anxiety and attachment avoidance. In contrast to the current study, a study by Inthorn (2015) found that parent child attachment was stronger in single parent families compared to families with two parents.

The analysis of the means of students' deviant behavior according to sex is presented in

Figure 8

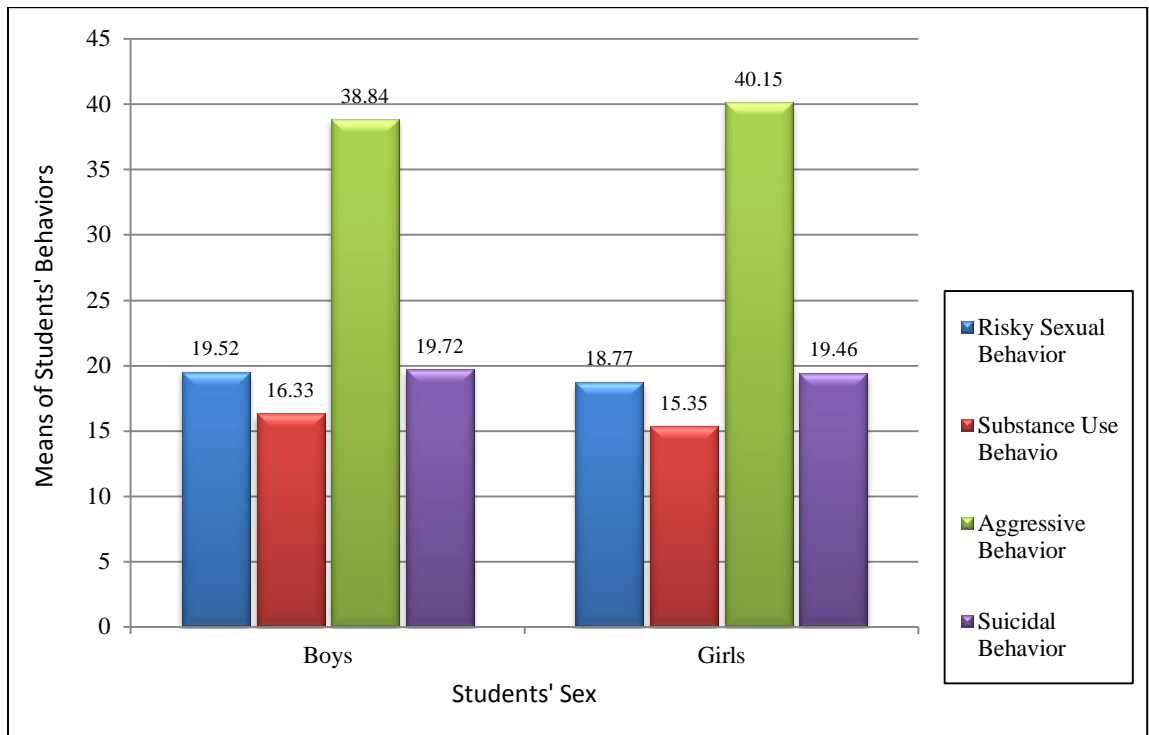


Figure 8: Means of Students' Behaviors by Sex

Figure 8 shows the mean of each deviant behavior for male and female secondary school students in Nairobi County. Boys had higher mean for risky sexual behavior than girls (19.52 vs 18.77) which suggests a greater prevalence of risky sexual behavior in boys. This finding is in line with research findings on adolescent sexual behavior which have found that adolescent boys have greater tendency to indulge in sexual behaviors that are risky. In a study of adolescent sexual behavior in western Kenya, Magadi et al. (2021) found that boys were more likely to have engaged in sex and to have had sex in the week or month preceding their study compared to girls. Recent studies have found that premarital sex, sexual initiation at a younger age and sex with multiple partners are more common in male than female adolescents (Ali et al., 2021; Noll et al., 2020; Shongwe et

al., 2021; Sun et al., 2018; Woolley & Macinko, 2019). The mean score for substance use was higher among boys than girls (16.33 vs 15.35) suggesting a higher prevalence of substance use by boys in secondary schools in Nairobi County. This is in line with earlier studies that have reported more substance use in adolescent boys compared to their female counterparts (Amare & Getinet, 2018; Fernández-Artamendi et al., 2021; Kagwa et al., 2022; Karataş et al., 2017; Kiambi, 2018; Musyoka et al., 2020). Girls scored higher on average on aggressive behavior compared to boys (40.15 vs 38.84). This seems to contradict the often reported finding that adolescent boys engage in more aggressive behavior than adolescent girls (Finigan-Carr et al., 2016; Nivette et al., 2018; Rozzaqyah et al., 2020). The average score for suicidal behavior was slightly higher among boys than girls (19.72 vs 19.46). This is contrary to results of previous studies that have found higher rates of suicidal ideations as well as suicide attempts in adolescent girls (Ibrahim et al., 2017; Miranda-Mendizabal et al., 2019; Wu et al., 2022). Estrada et al., (2019) found that suicidal thoughts were more prevalent in adolescent girls but boys and girls made equal number of suicide attempts.

4.2 Hypothesis Testing

The following sections present results of the testing of null hypotheses that were formulated and tested in the study followed by discussion of the findings.

4.2.1 Attachment Styles and Risky Sexual Behavior among Secondary School Students

The first objective of the current study was to investigate whether attachment styles predict risky sexual behavior among secondary school students in Nairobi County. In line with this objective, the following null hypothesis was formulated:

H_{01} : There is no statistically significant relationship between students' attachment styles and risky sexual behavior among secondary school students in Nairobi County

The students filled a five-point likert type scale that had eleven items that provided a score for risky sexual behavior. Pearson product moment correlation was carried out to determine any significant linear associations between the attachment styles and risky sexual behavior at the .05 level of significance. The bivariate correlations between scores on the attachment styles and scores on risky sexual behavior are shown in Table 3

Table 3: Bivariate Correlations between Attachment Styles and Risky Sexual Behavior

Attachment style	Risky Sexual behavior
Secure attachment	-.192***
Preoccupied attachment	.194***
Dismissing attachment	.145 **
Fearful attachment	.023

Note: *** $p < .001$ ** $p < .01$

As indicated in Table 3, the correlation coefficient for secure attachment and risky sexual behavior was negative and statistically significant ($r = -.192, p < .001$). This negative correlation implies that a student who had a secure attachment style was significantly less prone to risky sexual behavior. As for insecure attachment styles, the correlations were

statistically significant for preoccupied attachment scores ($r = .194, p < .001$) and dismissing attachment scores ($r = .145, p = .004$) but not fearful attachment score ($r = .023, p = .339$). The conclusion made as a result of this finding was that risky sexual behaviors were more likely among students who had preoccupied or dismissing attachment styles. Multiple regression analysis was carried out to establish the extent to which the attachment styles were predictors of students' risky sexual behaviors and to test the null hypothesis. ANOVA was used to ascertain whether the obtained regression model was statistically significant at the .05 level of significance and its results are presented in Table 4.

Table 4: ANOVA for Risky Sexual Behavior

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1441.278	4	360.320	7.427	.000
Residual	16349.453	337	48.515		
Total	17790.731	341			

Dependent Variable: Risky Sexual Behavior

Predictors: (Constant) Dismissing Attachment, Fearful Attachment, Preoccupied Attachment, Secure Attachment

As presented in Table 4, a statistically significant regression model was obtained ($F = 7.427, p < .001$) thus the four attachment styles combined together could significantly predict secondary school students' risky sexual behavior. Having made this finding, the null hypothesis stating that there is no statistically significant relationship between attachment styles and risky sexual behavior among secondary school students in Nairobi County was rejected. The alternative hypothesis that there is a statistically significant relationship between attachment styles and risky sexual behavior among secondary

school students in Nairobi County was accepted. Table 5 shows the summary of the regression model predicting risky sexual behavior.

Table 5: Model Summary for Risky Sexual Behavior

R	R Square	Adjusted R Square	Std. Error of the Estimate
.285	.081	.070	6.96525

Predictors: (Constant), Dismissing Attachment, Fearful Attachment, Preoccupied Attachment, Secure Attachment
 Dependent Variable: Risky Sexual Behavior

As Table 5 shows, attachment styles accounted for 8.1% of the total variance in risky sexual behavior among secondary school students ($R^2 = .081$). Other factors that were not included in the study may explain 91.8% of the variance in students' risky sexual behavior. Although attachment styles explained a modest 8.1% of the variance, the role of attachment styles was nevertheless statistically significant. The regression coefficients showing the predictive weights of the attachment styles are summarized in Table 6.

Table 6: Regression Coefficients for Risky Sexual Behavior

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	21.186	2.255		9.396	.000
Secure Attachment	-.247	.071	-.182	-3.480	.001
Preoccupied Attachment	.168	.056	.176	3.000	.003
Dismissing Attachment	.128	.080	.094	1.603	.110
Fearful Attachment	-.101	.077	-.076	-1.318	.188

Dependent Variable: Risky Sexual Behavior

As Table 6 shows, the regression coefficient for secure attachment style was negative and also statistically significant ($\beta = -.182, p = .001$). This implies that when the influence of the four attachment styles are considered jointly, the more secure attachment a student had, the less likely they were to involve themselves in risky sexual behavior. The regression coefficients for preoccupied and dismissing attachment styles were positive but only significant for preoccupied attachment style ($\beta = .176, p = .003$). This finding indicates that the more preoccupied attachment a student had, the greater their involvement in risky sexual behavior. In other words, the higher a student's attachment anxiety, the more they were prone to involving themselves in risky sexual behaviors.

In regards to dismissing attachment style, a statistically significant correlation between dismissing attachment and risky sexual behavior was observed but the regression coefficient did not reach statistical significance ($\beta = .094, p > .05$). The implication is that a student with high attachment avoidance, hence having a dismissing attachment style, was also more likely to be involved in risky sexual behavior but attachment anxiety had a greater influence on risky sexual behavior compared to attachment avoidance. Lastly, for fearful attachment, a small and non-significant regression coefficient was obtained. In addition, the correlation coefficient for fearful attachment and risky sexual behavior was also not statistically significant. This finding implies that fearful attachment, which is characterized by a disorganized attachment related behavior, was not predictive of students' risky sexual behaviors.

The first aim of this study was to determine the extent to which students' risky sexual behavior was influenced by their attachment styles. The results presented above show that attachment styles significantly predicted risky sexual behavior and, according to the regression model, the four attachment styles together accounted for 8.1% of the variance in students' risky sexual behavior. More secure attachment predicted less involvement in risky sexual behavior ($\beta = -.182$). Students with secure attachment styles have less attachment anxiety and avoidance in comparison to those who have insecure attachment styles. Therefore, this finding could be taken as an indication that the lower the levels of students' attachment anxiety and avoidance, the less likely they were to involve themselves in sexual behaviors that are risky.

The inverse relationship observed between secure attachment style and tendency to engage in risky sexual behavior in the current study concurs with findings in the study by Potard et al., (2017) where young adolescents having secure attachment styles were unlikely to start involving themselves in sexual activities at an early age compared to those with ambivalent attachment styles. The finding made in the current study also agrees with the findings reported in the study by Matson et al., (2014) who examined the sexual behavior of adolescent girls over a period of 18 months and found that girls with insecure attachment had greater risk of being in sexual relationships with multiple partners, engaged in sex while intoxicated, had more sex partners and had double the risk of contracting an STI when compared with girls who had secure attachment.

The protective effect of secure attachment style against risky sexual behavior revealed by this study was in line with the tenets of the attachment theory. According to the attachment theory, individuals with a secure attachment style had caregivers who were responsive, available and caring. Therefore, in their mental models of attachment relationships, they hold a positive self-image and also view attachment figures as trustworthy and available (Bowlby, 1969). Such people feel worthy of attachment figures' attention and are not worried about abandonment or rejection (Mikulincer & Shaver, 2012). Since students who have secure attachment styles view their self-image positively and are not desperate for acceptance or approval, they are unlikely to consent to participate in sexual activities in order to make their opposite sex partners happy, avoid being rejected or fit in with peers (Olmstead, 2020). Merino et al. (2018) have suggested that frequent sexual activity in adolescents with insecure attachment may be because of their inability to develop healthy relationships with others. Such adolescents may derive physical satisfaction from sexual activities but they still feel emotionally isolated. Merino et al. (2018) further propose that adolescents with insecure attachment may use sex as a means of coping with difficult family or environmental situations.

Preoccupied attachment style predicted risky sexual behavior ($\beta = .176$) in secondary school students. This finding concurs with results from a study by Paulk and Zayac (2013) who found that attachment anxiety was a predictor of risky sexual behavior among American adolescents and the study done by Lemelin et al. (2014) and Potard et al. (2017) which revealed a similar relationship between risky sexual behavior and attachment anxiety in Canadian adolescents. The findings in the current study are also

supported by findings in the study by French et al. (2020) involving 371 undergraduate students in the United States which revealed that students who were anxiously attached were more likely to take part in unprotected sex.

According to the attachment theory, individuals who have preoccupied attachment styles are prone to feeling as if they are undeserving of attachment figures' love and attention hence they are desperate to avoid being rejected by attachment figures (Mikulincer & Shaver, 2012). Being sensitive to rejection and eager to please, students with preoccupied attachment styles can readily give in to sexual demands to prove their love for their partners and avoid losing their partners' love (Olmstead, 2020). A study by Brewer and Forrest-Redfern (2020) revealed that individuals who are anxiously attached were more likely to comply with their partners' requests for sexual activities they did not want. Among students with preoccupied attachment styles, compliance may make them more vulnerable to risky sexual behavior.

Individuals with preoccupied attachment styles tend to be desperate for the love and attention they did not receive from unresponsive and neglectful caregivers. Cook et al., (2016) propose that adolescents who have anxious attachment may begin participating in sex at an early age because they are able to satisfy some of their unmet attachment needs through sexual relationships. Students with preoccupied attachment styles may also find a sense of emotional security and escape from loneliness by engaging in sexual relationships (Tracy et al., 2003). Individuals with anxious attachment need constant approval and acceptance from other people to boost their self-worth. Students with this

attachment style may interpret sexual interest in them as a sign of approval and affirmation of their self-worth and as a result accept to participate in sexual activities some of which may not be safe (Antonacci, 2014). Individuals with anxious attachment have a tendency to equate sex and love (Attaky et al., 2022). Students with preoccupied attachment styles may believe that having sex with their partners signals love for their partners. Such students are more likely to become sexually active from an early age and agree to partners' requests for unsafe sex as a way to demonstrate love for their partners.

Dismissing attachment style was not a significant predictor of risky sexual behavior according to the results of the regression analysis but it showed a significant correlation with risky sexual behavior in bivariate correlation analysis. This finding can be taken as an indication that a weak association existed between attachment avoidance and risky sexual behavior in students. Looked at from an attachment perspective, people who have avoidant attachment usually have a positive image of themselves and have little trust of their attachment figures because they had a relationship with a hostile and rejecting caregiver (Mikulincer & Shaver, 2012). They therefore tend to be emotionally independent and do not value close interpersonal relationships or desire to be liked by other people. Students with dismissing attachment styles are therefore less likely to involve themselves in sex with the intention of pleasing their partners or earning their approval.

The weak link between attachment avoidance and risky sexual behavior revealed by the current study may be because students with dismissing attachment styles take part in

sexual activities less frequently than students with preoccupied attachment styles. This is because individuals with avoidant attachment assign less value to interpersonal intimacy, have fewer friends or romantic partners, find close relationships uncomfortable and are generally less inclined to get into sexual relationships (Mikulincer & Shaver, 2016). They may not form close relationships with members of the opposite sex because they have difficulty trusting other people and fear that they will be disappointed if they trust other people too much (Mikulincer & Shaver, 2007). Students with dismissing attachment styles may therefore have fewer opportunities to engage in any sexual activities including those are considered to be risky.

Students with dismissing attachment styles may approach sex differently from those with preoccupied attachment styles. While students who have anxious attachment can engage in sex in order to earn their partners' approval or satisfy unmet attachment needs, students with dismissing attachment styles prefer casual sex without long term commitment or intimacy, have sex with people they do not have established relationships with, or engage in sex with a particular purpose such as losing their virginity in order to fit in with their peers (Cadely Saint-Eloi et al., 2020). Students with dismissing attachment styles may not be inclined towards emotional intimacy or long term commitment to one opposite sex partner hence they have a tendency to have sexual relations with strangers who they do not intend to have long term relationships with (Thibodeau et al., 2017).

Students with dismissing attachment styles may have more open attitudes towards casual sex because casual sex is not emotionally involving. In one study by Sprecher (2013), the relationship between college students' attachment and their attitudes towards sex was examined. The study found that students with avoidant attachment were more accepting of casual sex and had more liberal sexual attitudes. In the current study, secondary school students who have dismissing attachment styles are therefore more likely to engage in casual sex because of their open attitude towards sex.

Fearful attachment style was not a significant predictor of risky sexual behavior according to the results of this study. This finding contradicts that made in the study by Dumas-Koylass (2013) where risky and impulsive sexual behaviors were associated with fearful and dismissing attachment styles in a sample of 18 to 49 year old adults. This finding also contradicts that of Kid and Shahar (2008) where fearful attachment was found to be associated with transactional sex in exchange for money by homeless youth. It is worth noting that the mentioned studies involved respondents remarkably different from secondary school students.

The finding regarding risky sexual behavior and fearful attachment made in this study disagrees with the finding in a study by Zapf et al. (2018) which investigated links between sex addiction and attachment in a sample of 56 male sex addicts. That study found that 44% of the respondents had fearful attachment styles, 28% had preoccupied attachment styles, 20% had dismissing attachment styles and only 8% had secure attachment styles. That study found that majority of respondents had fearful attachment

styles. The current study however did not find significant association between fearful attachment and risky sexual behavior.

Students who have fearful attachment styles manifest high levels of attachment anxiety and attachment avoidance. They may want closeness with other people but at the same time shy away from close relationships because they fear getting disappointed or hurt within relationships. The aspect of avoidance of intimacy may account for students with a fearful attachment style not being involved in risky sexual behavior. Such students may not have entered into any romantic relationships with the opposite sex and so may not have involved themselves in sexual activities. Cooper et al. (2006) cited in Gause (2017) have suggested that attachment avoidance may have a protective effect against risky sexual behavior.

The findings of this study contradicted those reported by Yarkovsky and Timmons-Fritz (2013) who carried out a study involving 18 – 25 year old college students and found no association between their attachment styles and the age at which they first had oral or vaginal sex. This study also contradicted Callahan (2011) who found that attachment to parents and attachment to peers did not predict involvement in risky sexual behavior in college students in their late adolescent years. Despite a few conflicting findings such as those mentioned, the findings of this study show that the attachment theory presents a useful theoretical lens that might help in understanding risky sexual behavior in adolescents. These findings also make it clear that the influence of attachment styles on

risky sexual behavior is not limited to the western world where most of the previous studies were done.

The findings of this study prove empirically that having a secure attachment style protects secondary school students from engaging in risky sexual behavior whereas attachment anxiety and attachment avoidance make them more vulnerable to risky sexual behavior. It is recommended that students with insecure attachment styles should receive more attention when behavior change programs are being undertaken to discourage risky sexual behavior. Parents and caregivers should be enlightened on the significance of secure attachment in their children.

4.2.2 Attachment Styles and Substance Use Behavior among Secondary School Students

The second objective of the study was to investigate whether attachment styles predict substance use behavior among secondary school students in Nairobi County. In line with this second objective, the following null hypothesis was formulated:

Ho₂: There is no statistically significant relationship between students' attachment styles and substance use behavior among secondary school students in Nairobi County

The students filled a five-point likert scale with 11 items which provided scores for substance use. Pearson product moment correlation was used to determine whether there were significant linear relationships between substance use and attachment styles at the

.05 level of significance. The bivariate correlations between substance use and attachment styles are presented in Table 7.

Table 7: Bivariate Correlations between Attachment Styles and Substance use Behavior

Attachment styles	Substance Use Behavior
Secure Attachment	-.125*
Preoccupied Attachment	.119 *
Dismissing Attachment	.176**
Fearful Attachment	-.008

Note: * $P < .05$ ** $P < .01$

As presented in Table 7, the correlation coefficient for secure attachment and substance use was statistically significant and negative ($r = -.125$, $p = .010$). This indicates that more secure students' attachment is associated with lesser chances of them using substances. The correlation coefficient for preoccupied attachment and substance use was positive and significant ($r = .119$, $p = .013$) as was the in the case of dismissing attachment and substance use ($r = .176$, $p = .001$). The implication of these findings is that students were more likely to use substances if they had preoccupied or dismissing attachment styles. Lastly, the correlation coefficient for fearful attachment and substance use was small, negative and statistically non-significant ($r = -.008$, $p = .44$). Based on this correlation coefficient, fearful attachment was found not to be significantly related to substance use among secondary school students.

Multiple regression analysis was carried out in order to establish the extent to which attachment styles were predictors of secondary school students' substance use and to put the null hypothesis to the test. ANOVA was used to assess whether the obtained

regression model was statistically significant at the .05 level of significance. The results of the ANOVA are presented in Table 8.

Table 8: ANOVA for Substance Use Behavior

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1179.577	4	294.894	4.954	.001
Residual	20058.467	337	59.521		
Total	21238.044	341			

Dependent Variable: Substance Use Behavior

Predictors: (Constant), Dismissing Attachment, Fearful Attachment, Preoccupied Attachment, Secure Attachment

According to Table 8, the regression model showing how attachment styles predicted substance use was statistically significant ($F = 4.954$, $p = .001$) therefore it was concluded that the attachment styles were predictors of secondary school students' substance use behavior. Having made this finding, it was necessary to reject the null hypothesis that stated: there is no statistically significant relationship between students' attachment styles and students' substance use behavior among secondary school students in Nairobi County and accept the alternative hypothesis that there is a statistically significant relationship between students' attachment styles and students' substance use behavior among secondary school students in Nairobi County. The summary of the regression model is presented in Table 9.

Table 9: Model Summary for Substance Use Behavior

R	R Square	Adjusted R Square	Std. Error of the Estimate
.236	.056	.044	7.71496

Predictors: (Constant), Dismissing Attachment, Fearful Attachment, Preoccupied Attachment, Secure Attachment
 Dependent Variable: Substance Use Behavior

According to Table 9, attachment styles accounted for 5.6% of the variance in students' substance use behavior ($R^2 = .056$). Other factors not included in the study may account for the 94.4% of the variance. Attachment styles explained a relatively modest 5.6% of the variance in substance use but its influence was statistically significant. The regression coefficients for the regression model are presented in Table 10.

Table 10: Regression Coefficients for Substance Use Behavior

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.560	2.498		6.630	.000
Secure Attachment	-.173	.079	-.117	-2.205	.028
Preoccupied Attachment	.083	.062	.080	1.342	.180
Dismissing Attachment	.258	.088	.174	2.925	.004
Fearful Attachment	-.145	.085	-.100	-1.709	.088

Dependent Variable: Substance Use Behavior

As shown in Table 10, the regression coefficient for secure attachment was statistically significant and negative ($\beta = -.117, p = .028$). This means that the more secure students' attachment styles were, the less likely they were to use substances. Thus, secure attachment predicted lower levels of substance use behavior. Looking at the insecure attachment styles, Table 10 shows that the regression coefficient for dismissing

attachment was positive and statistically significant ($\beta = .174, p = .004$). Since dismissing attachment is characterized by attachment avoidance, this finding can be taken to mean that the higher students' attachment avoidance was, the more their involvement in substance use.

In regards to preoccupied attachment style, the regression coefficient was positive but not statistically significant ($\beta = .080, p = .180$). The bivariate correlation between preoccupied attachment and substance use was statistically significant. In this context, it can be concluded that preoccupied attachment was associated with students' substance use although to a lesser extent compared to dismissing attachment style. In other words, attachment anxiety, which underpins preoccupied attachment style, predicted students' substance use but to a lesser degree than attachment avoidance. Finally, the correlation coefficient for fearful attachment was negative but not statistically significant ($\beta = -.100, p = .088$). This might be construed to mean that students with fearful attachment style were less likely to use substances but this may have been due to chance since the correlation coefficient was not significant at the .05 level of significance.

The second objective of the current study was to investigate whether attachment styles predict secondary school students' substance use behavior in Nairobi County. The findings of the study as presented above indicate that attachment styles significantly predicted students' substance use behavior accounting for 5.6% of the variance in substance use behavior. It is possible to conclude based on the findings of this study that

attachment styles is only one of several factors that influence secondary school students' substance use in Nairobi County.

In this study, secure attachment style significantly predicted students' substance use ($\beta = -.117$). The more secure students' attachment styles were, the less likely they were to use substances. This finding is in line with findings reported in past studies in which secure attachment was associated with less substance use in adolescents (Lockhart et al., 2017; Schindler & Broning, 2015). The inverse relationship between secure attachment and substance use found by this study is in agreement with the results of a review by Fairbairn et al. (2018) of 34 studies where on aggregate, secure attachment patterns were associated with significantly less substance use.

Another review by Iglesias et al. (2014) found that having a secure attachment style or secure attachment to parents had a protective effect against substance use in adolescence. The relationship between attachment security and use of substances was robust despite the different approaches in measuring substance use and attachment in the studies reviewed by Iglesias et al. (2014). The association between secure attachment and substance use observed in this study concurs with the conclusions made in that review. The association between lower risk of substance use and secure attachment found by this study supports findings in the study by Momeñe et al. (2021) where predictors of substance use were examined in 1,533 high school students. That study found that secure attachment and supportive family environment were predictive of lower risk of substance use whereas adolescents' resentment towards parents and self-sufficiency were predictive

of higher risk of substance use. There is also agreement between the finding made in this study and those reported by Pooravari et al. (2014) where youths who had secure attachment styles were not as likely to smoke cigarettes, drink alcohol or use other drugs when compared with youths with insecure attachment.

Students' substance use was significantly predicted by dismissing attachment style ($\beta = .174$). This means that the higher a student's attachment avoidance, the more likely they were to use substances. Preoccupied attachment did not significantly predict substance use according to the regression model but it had a significant correlation with substance use in bivariate correlation analysis. This may be interpreted to mean that there was a weak association between attachment anxiety and substance use. The conclusion drawn from these findings is that students' substance use was associated with attachment avoidance and with attachment anxiety to a lesser extent. Similar links between attachment anxiety and avoidance and substance use were found in adolescent samples (Cömert & Ögel 2014; Nakhoul et al., 2020) and young adults (Borhani, 2013; Wojtynkiewicz et al., 2014; Asghari et al, 2015; Goldstein et al, 2018) in earlier studies.

The findings of a study done in Kenya to determine the connections between attachment and substance use by Owuor and Karega (2019) found that university students with anxious or avoidant attachment had a higher risk of problematic drug use. Although that study investigated substance use in university students, its findings are consistent with the findings of the current study. It is possible to conclude that attachment anxiety as well as attachment avoidance predicts substance use in adolescents and also in young adults.

Dismissing attachment style had the strongest influence on students' substance use. In other words, substance use was more likely in students who had high levels of attachment avoidance. According to the attachment theory, individuals form mental models of attachment relationships based on their relationships with caregivers and the mental models influence their behaviors in interpersonal relationships and other spheres of life (Bowlby, 1969). People with avoidant attachment have a positive self-image but have a negative view of attachment figures (Mikulincer & Shaver, 2012). They prefer emotional independence and have little desire for intimacy with other people. From this perspective, when students with dismissing attachment styles experience negative emotions, they may opt to cope with those emotions by using alcohol and other substances rather than approaching someone to seek help because they want to safeguard their emotional independence (Levitt & Leonard, 2015).

In contrast, individuals with secure attachment are more open to seeking help from other people when they go through emotional difficulties (Hazarika & Bhagabati 2018). Students who have secure attachment styles are therefore less likely to resort to using substances to cope with emotional pain because they are able to share their problems with attachment figures. Moreover, people who have secure attachment styles communicate more effectively, form more intimate relationships and have higher self-confidence (Farnia et al., 2018). Therefore, students who have secure attachment styles are less likely to use substances to cope with problems that they may face from time to time.

Individuals with attachment avoidance learnt to distrust attachment figures because of their unsatisfying relationships with caregivers and expect to be treated with hostility and rejection if they attempt to share their problems with another person (Hayre et al., 2019). Students with this attachment style may therefore drink alcohol or use other drugs to cope with their problems. A study by Krpalek et al. (2017) confirmed the notion that people with insecure attachment use substances to cope with problems. That study revealed that people who had lost their jobs and had higher levels of attachment anxiety or attachment avoidance had a tendency to smoke or use other drugs to cope with their unemployment compared to those with secure attachment styles. Le (2017) opines that people who have insecure attachment styles failed to learn how to effectively regulate their emotions in relationships with unresponsive caregivers. In adolescence and adulthood, such individuals can resort to alcohol and other substances as an “external regulator of affect” (p. 46).

Individuals with avoidant attachment may use substances to fill the void created by lack of quality attachment relationships (Schindler, 2019). Student with dismissing attachment styles may use substances to cope with loneliness and substitute for missing attachment relationships. Schindler (2019) also propose that individuals with insecure attachment styles may use substances to cope with trauma they have experienced in their lives. These traumas may have also caused the insecure attachment patterns exhibited by those individuals.

Preoccupied attachment style was associated with substance use but the association was weaker than the one between substance use and dismissing attachment. Individuals with preoccupied attachment styles may have different motivations for using substances than students with dismissing attachment styles. Individuals who have preoccupied attachment styles manifest a lot of attachment anxiety. As children, their caregivers were unreliable and unresponsive therefore, in their mental models of attachment relationships; they view themselves as being unworthy of attachment figures love and attention (Mikulincer and Shaver, 2012). Students with this attachment style may crave the attention and acceptance of their peers who play the role of secondary attachment figures. If their peers are using substances, they can also use substances in order to maintain their friendships with those peers. Such students may think of drinking, smoking or using other drugs as activities that cement their relationships with peers.

People who have high levels of attachment anxiety tend to feel negative emotions arising out of their worry over possible abandonment (Mikulincer & Shaver, 2012). Hazarika and Bhagabati (2018) propose that such individuals can use alcohol and other substances in an attempt to self-medicate to reduce these negative emotions. Students with insecure attachment styles may be using substances to numb emotional pain they are going through.

In this study, fearful attachment style was not a predictor of substance use. This finding contradicted an earlier study by Nakhoul et al. (2020) where fearful attachment as well as preoccupied and dismissing attachment significantly predicted drinking and smoking of

water pipes and cigarettes in Lebanese adolescents. This finding in the current study was unexpected since students with fearful attachment style have both attachment anxiety and avoidance. They desire to be close to attachment figures but also fear getting close to attachment figures because they expect to be rejected (Mikulincer & Shaver, 2012). It is possible that the behavior of students with fearful attachment style differs from behavior of students who have preoccupied or dismissing attachment styles and this may account for the absence of an association between fearful attachment and substance use.

However, the findings in this study contradicted those reported in some earlier studies where no significant associations were reported between substance use and insecure attachment. For instance, a study by Walker and Kreidler (2018) found that attachment styles were not associated with alcohol use or motives for alcohol use among college students. Goldstein et al. (2018) also investigated alcohol use and found that attachment was not related to the amount of alcohol consumed by 18 to 24 year old youths.

In another study that reported findings contradicting the findings made in the current study, Hutton (2019) found that substance use was associated with neither attachment anxiety nor attachment avoidance in African American and black Caribbean adult males. Likewise, the study by Estévez et al. (2017) found that attachments to parents and peers had no relationship with drug or alcohol use but were significantly related to video game addiction, gambling and problematic internet use. Musetti et al. (2016) opined that it is normal for adolescents to experiment with alcohol and other substances and that even

adolescents with secure attachment styles can experiment with substances that are available in their environment.

This study empirically demonstrated that a secure attachment style is protective against substance use and that substance use is predicted by attachment avoidance and attachment anxiety to a smaller extent in secondary school students. This finding supports findings from an array of earlier studies (Asghari et al, 2015; Borhani, 2013; Cömert & Ögel 2014; Goldstein et al, 2018; Nakhoul et al, 2020; Wojtynkiewicz et al, 2014). Therefore, the attachment theory, through the lens of mental models of attachment relationships, provides a useful model that may help explain adolescent substance use. It is recommended that students with insecure attachment styles receive more attention in programs for preventing substance use in secondary school and also parents and other caregivers be enlightened about the important role secure attachment plays in protecting adolescence from substance use.

4.2.3 Attachment Styles and Aggressive Behavior among Secondary School Students

The third objective of the study was to establish whether attachment styles predict aggressive behavior among secondary school students in Nairobi County. Under this objective, the following null hypothesis was formulated:

H₀₃: There is no statistically significant relationship between students' attachment styles and students' aggressive behaviors among secondary school students in Nairobi County

Students filled a five-point likert type scale consisting of 14 items to provide a score for aggressive behavior. Pearson product moment correlation was carried out to test for any statistically significant linear relationships between attachment styles and aggressive behavior at the .05 level of significance. The bivariate correlations between aggressive behavior scores and scores on the four attachment styles are shown in Table 11:

Table 11: Bivariate Correlations between Attachment Styles and Aggressive Behavior

Attachment Styles	Aggressive Behavior
Secure Attachment	-.129*
Preoccupied Attachment	.202***
Dismissing Attachment	.226***
Fearful Attachment	.150*

Note: * $P < .05$ ** $P < .01$ *** $P < .001$

As shown in Table 11, the correlation coefficient for secure attachment style and aggressive behavior was negative and statistically significant ($r = -.129, p = .009$). This finding shows that secure attachment was associated with less aggressive behavior among students. In the case of preoccupied attachment, the correlation coefficient was positive and statistically significant ($r = .202, p < .001$). This implies a link between preoccupied attachment and aggressive behavior in that students with preoccupied attachment styles engaged in more aggressive behavior. In regards to dismissing attachment style, the correlation coefficient was positive and statistically significant ($r = .226, p < .001$). This shows that aggressive behavior was associated with dismissing attachment such that students with dismissing attachment styles were significantly more likely to engage in aggressive behavior. Finally, the correlation coefficient for fearful attachment and aggressive behavior, although small, was positive and statistically significant ($r = .150, p$

= .003). Similar to preoccupied and dismissing attachment styles, fearful attachment style was also associated with aggressive behavior among students.

Multiple regression analysis was conducted to test the null hypothesis and to determine the extent to which attachment styles predicted aggressive behavior. ANOVA was used to determine whether the regression model was statistically significant and the results are shown in Table 12.

Table 12: ANOVA for Aggressive Behavior

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3680.298	4	920.074	7.405	.000
Residual	41373.099	333	124.244		
Total	45053.397	337			

Dependent Variable: Aggressive Behavior

Predictors: (Constant), Fearful Attachment, Secure Attachment, Preoccupied Attachment, Dismissing Attachment

As Table 12, shows, the regression model was statistically significant ($F = 7.405$, $p < .001$). This shows that attachment styles significantly predicted aggressive behavior among secondary school students in Nairobi County. The null hypothesis that: There is no statistically significant relationship between students' attachment styles and students' aggressive behaviors among secondary school students in Nairobi County was rejected and the alternative hypothesis that there was statistically significant relationship between students' attachment styles and students' aggressive behavior among secondary school students in Nairobi County was accepted. Table 13 shows the model summary for the regression model predicting students' aggressive behavior

Table 13: Model Summary for Aggressive Behavior

R	R Square	Adjusted R Square	Std. Error of the Estimate
.286 ^a	.082	.071	11.14646

Predictors: (Constant), Fearful Attachment, Secure Attachment, Preoccupied Attachment, Dismissing Attachment
 Dependent Variable: Aggressive Behavior

As Table 13 shows, the four attachment styles explained 8.2% of the variance in aggressive behavior ($R^2 = 0.082$). Other factors that were not part of this study may explain the other 91.8% of the variance in students' aggressive behavior. The regression coefficients for the regression model predicting aggressive behavior are presented in Table 14.

Table 14: Regression Coefficients for Aggressive Behavior

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	35.141	3.630			9.682	.000
Secure Attachment	-.252	.114	-.116		-2.202	.028
Preoccupied Attachment	.179	.090	.117		1.982	.048
Dismissing Attachment	.340	.128	.157		2.650	.008
Fearful Attachment	.112	.124	.052		.902	.368

Dependent Variable: Aggressive Behavior

According to Table 14, the regression coefficient for secure attachment was negative and statistically significant ($\beta = -.116$, $p = .028$). This implies that the more secure students'

attachment styles were, the less aggressive they were. Turning to the insecure attachment styles, the regression coefficient for preoccupied attachment was positive and significant even though the p value was close to .05 ($\beta = .117, p = .048$). In regards to dismissing attachment style, the regression coefficient was positive and statistically significant ($\beta = .157, p = .008$). These findings imply that the higher students' attachment avoidance (dismissing attachment style) and attachment anxiety (preoccupied attachment style) were, the more they were likely to engage in aggressive behavior. Lastly, the regression coefficient for fearful attachment was small, positive but not statistically significant ($\beta = .052, p = .368$). Fearful attachment was significantly correlated with aggressive behavior in bivariate correlation analysis but was not significant predictor in the regression model. It is possible to conclude that there was a weak association between fearful attachment and aggressive behavior based on these findings.

The third objective of this study was to investigate whether attachment styles were predictors of aggressive behavior among secondary school students in Nairobi County. The findings presented above indicate that attachment styles significantly predicted aggressive behavior. According to the regression model, the four attachment styles together accounted for 8.2% of the variance in students' aggressive behavior which means that aggressive behavior is also influenced by other factors that were not considered in the current study.

In the current study, secure attachment style predicted less engaging in aggressive behavior ($\beta = -.116$). The implication of the finding is that the more secure students'

attachment styles were, the lesser their propensity to act with aggression towards others. This finding concurs with findings from previous studies that reported an inverse relationship between secure attachment and aggressive behavior (de Vries et al., 2016; Malonda et al., 2019). Okeke and Anierobi (2020) conducted a study similar to the current study where they explored the links between aggressive behavior and attachment styles of Nigerian secondary school students. Their study revealed that individuals having secure attachment styles were less likely to act aggressively towards others as opposed to having anxious-ambivalent or anxious-avoidant attachment styles.

The association between aggressive behavior and secure attachment style revealed by this study also supports findings in an earlier study by Nikiforou et al. (2013) where links between attachment and bullying in 5th and 6th grade Cypriot adolescents was examined. That study revealed that an adolescent having secure attachments to his or her parents and peers was significantly less likely to bully his or her schoolmates. Similarly, a study by Li et al. (2015) with a sample of 11 to 14 year old adolescents from China found that adolescents who reported having more secure attachments to their parents portrayed significantly less aggressiveness towards their colleagues.

A person who has a secure attachment style has low levels of attachment anxiety and attachment avoidance (Mikulincer & Shaver, 2012). His or her mental representations of attachment relationships are characterized by a positive self-image and a positive image of attachment figures (Bartholomew and Horowitz, 1991) and these influence their behavior towards other people (Mikulincer and Shaver, 2007). Students with secure

attachment styles may be less aggressive towards each other because they have better emotional and social adjustment, they are more socially competent, have greater empathy and tend to be more pro-social. These are characteristics associated with more positive interpersonal relationships and less hostile or aggressive behavior (Capuano, 2011; Farnicka & Grzegorzewska, 2015; Innamorati et al., 2018; Schoeps et al., 2020; Shi et al., 2020). In one study, Sutiyo (2018) examined the interactions between attachment security and adolescents' preferred approaches to handling interpersonal conflict. The study found that adolescents with secure attachment were more accommodating, communicated more openly and took the needs of others into consideration whenever they faced conflict with other people. Consequently, adolescents with secure attachment were less prone to physically or verbally lashing out at people when they had conflicts

A review by Hood et al. (2017) of empirical studies that examined bullying and attachment revealed that study participants who had secure attachment were not as likely to bully other people. The review found that self-esteem and empathy mediated the link between attachment and bullying in that individuals with secure attachment had higher levels of self-esteem and empathy which made them less likely to act aggressively towards other people.

Preoccupied attachment style ($\beta = .117$) and dismissing attachment style ($\beta = .157$) predicted aggressive behavior in the current study. This finding concurs with findings reported in earlier studies in which attachment anxiety and avoidance were associated with aggressive behavior (de Vries et al., 2016; Li et al., 2015; Malonda et al., 2019;

Nikiforou et al., 2013; Okeke & Anierobi, 2020; Pei, 2011). The link between insecure attachment styles and aggression found in the current study echo the one reported by Sajjadi et al. (2019). That study was done with a sample of 15 to 18 year old school students and multiple regression analyses revealed that insecure attachment predicted aggression ($b = 0.18, p < .001$). Aggression was also predicted by early trauma ($b = 0.26, p < .001$) but the link between aggression and early trauma was mediated by insecure attachment ($b = 0.16; p < 0.001$).

Students with insecure attachment styles may be more aggressive towards other people because of the way they perceive themselves and the way they perceive others. Their perception of self and perception of others is based on their mental models of attachment relationships (Bowlby, 1969). People with preoccupied attachment style have a negative self-image, low self-esteem and generally view themselves as unlovable and unworthy of other people's love and attention. Students with this attachment style may act aggressively towards other people because of these negative feelings about themselves (de Vries et al., 2016).

Miga et al., (2010) assert that people with insecure attachment have difficulty regulating their emotions especially then they find themselves in situations that evoke emotions such as interpersonal conflicts. The study by Liu (2021) found that perceived ability to regulate one's emotions mediated the relationship between attachment to peers and aggressive behavior.

Students with insecure attachment styles may resort to physical violence or verbal abuse because they are unable to regulate their emotions in situations that involve conflict with other people.

Individuals with preoccupied attachment styles are often conflicted about the availability and trustworthiness of attachment figures. A student with this attachment style may experience frustration and anger because of this conflict and lash out at the attachment figures (Critchfield et al., 2008; Brodie et al., 2018). In addition, aggressive behavior by individuals with preoccupied attachment style may be interpreted as a hyperactivating strategy intended to gain the attention of attachment figures who are deemed to be unresponsive (Farnicka & Grzegorzewska, 2015). Aggressive behavior by students with preoccupied attachment style may therefore be seen as attempts to gain attention when other means of getting attention fail.

Excessive attachment avoidance characterizes individuals with dismissing attachment styles. Such individuals tend to have negative perceptions of attachment figures in their working models of attachment relationships (Bartholomew and Horowitz, 1991) and have little interest in close relationships (Mikulincer & Shaver, 2012). In the study by De Santis et al., (2019) involving 14 to 20 year old Italian adolescents, it emerged that attachment avoidance was significantly linked to externalizing symptoms including aggressive behavior. The authors opined that avoidant adolescents may act aggressively towards others in order to distance themselves from other people because they are not comfortable in close interpersonal relationships. Students with this attachment style may

be more aggressive because they do not value other people's friendship or close relationships and have nothing to lose if they offend others by acting aggressively.

Fearful attachment style did not predict aggressive behavior according to the results of the regression analysis but it had a significant correlation with aggressive behavior. It is possible to conclude that there was a weak association between fearful attachment and aggressive behavior. This finding is not consistent with the finding reported in the study by Tussey et al., (2018) where Italian adults with fearful attachment styles were found to act more aggressively than those who had preoccupied or dismissing attachment styles. That study involved an adult sample with a mean age of 47.62 years hence its findings may not be compared with those of the current study with confidence.

According to Mikulincer and Shaver (2012), people who have fearful attachment styles manifest attachment anxiety and attachment avoidance at high levels. In their working models of attachment relationships, they view attachment figures negatively and also have a negative self-image. Tussey et al., (2018) opine that the negative mental models of the self and others result in feelings of discomfort with close proximity in these individuals with fearful attachment styles. They may want approval but fear rejection at the same time. Such individuals can resort to verbal or physical aggression as a means of distancing themselves from other people and preventing the possibility of rejection.

According to Bonneville (2016) individuals with a fearful attachment style experience emotional highs and lows due to conflicts between their desire for intimacy and their fear

of getting too close to other people. The ongoing tussle between conflicting emotions, for example when they feel too much closeness when they desire some distance or they feel too much distance when they desire closeness to other people, leaves them feeling frustrated. This frustration and the accompanying emotional turbulence in students with a fearful attachment style may lead them to reactively lash out with insults, curses and other hurtful words at friends and other peers.

The overall picture that can be deduced from the findings of this study is that a secure attachment style predicts lower tendency towards aggressive behavior whereas having an insecure attachment style predicts greater tendency to engage in aggressive behavior. This finding supports findings reported in earlier studies that were reviewed in the current study. The findings of this study however contradict findings reported in some studies that did not find any links between insecure attachment and aggressive behavior. For instance, the study by Dean (2017) did not find relationship between attachment styles and aggressive behavior in 12 to 21 year old respondents. In an earlier study, Ratip (2013) also reported that attachment styles were not linked to anger or violence in a study with 72 offenders residing in a hospital facility. It should be noted that the respondents in the studies by Dean (2017) and Ratip (2013) were individuals who had been involved with the justice system hence were not representative of the normal adolescent population.

The findings of the current study contradict to some degree findings reported in a study with a sample more comparable to the current study. The study by Kunchal et al., (2016)

involving respondents aged 13 to 18 years old was done to investigate whether various forms of aggressive behavior were connected to attachment to peers or parents. Aggressive behavior was not associated with attachment to respondents' parents but stronger attachment to peers was associated with reactive and proactive aggression. The findings of that study seemed to suggest that aggressive behavior was associated with secure attachment contrary to what was found in the current study. That finding that stronger attachment to peers predicted aggressive behavior also contradicts findings reported in the studies by Malonda et al., (2019) and Liu et al., (2021) in which attachment to peers was associated with less aggressive behavior.

The findings made in this study establish empirically that attachment styles are associated with aggressive behavior among students in secondary schools in Nairobi County. Insecure attachment styles predicted aggressive behavior and secure attachment styles were protective against aggressive behavior. Students' attachment styles should be considered in interventions to combat aggressive behavior among secondary school students.

4.2.4 Attachment Styles and Suicidal Behavior among Secondary School Students

The fourth objective of the current study was to determine whether attachment styles predict suicidal behaviors among secondary school students in Nairobi County. Under this objective, the following null hypothesis was formulated:

Ho₄: There is no statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in Nairobi County

Students filled a five-point likert type scale consisting of 11 items that provided a score for suicidal behavior. Pearson product correlation was conducted to test for any significant linear relationships between the suicidal behavior and the four attachment styles at the .05 level of significance. The bivariate correlations between the suicidal behavior scores and scores on the four attachment styles are shown in Table 15.

Table 15: Bivariate Correlations between Suicidal Behavior and Attachment Styles

Attachment Styles	Suicidal Behavior
Secure Attachment	.040
Preoccupied Attachment	.533***
Dismissing Attachment	.312***
Fearful Attachment	.210***

Note: *** $P < .001$

As Table 15 shows, the correlation coefficient for secure attachment with suicidal behavior was quite small, positive and was not statistically significant ($r = .040$, $p = .231$). This implies that there was a very slight correlation between secure attachment and suicidal behavior but this may be attributed to chance. In the case of preoccupied attachment, the correlation coefficient was positive and statistically significant ($r = .533$, $p < .001$) indicating a strong association between preoccupied attachment and suicidal behavior whereby students with preoccupied attachment styles had higher levels of suicidal behavior. The correlation coefficient for dismissing attachment was positive and significant ($r = .312$, $p < .001$) as was in the case of fearful attachment ($r = .210$, $p < .001$) implying that dismissing and fearful attachment styles were also related to higher levels of suicidal behavior. Taken together, it is possible to conclude that the insecure

attachment styles were each significantly correlated with suicidal behavior but secure attachment style was not.

Multiple regression analysis was done in order to find out the extent to which the four attachment styles were able to predict suicidal behavior in students and to test the null hypothesis. ANOVA was used to determine whether the regression model was statistically significant at the .05 level of significance and the results are presented in Table 16.

Table 16: ANOVA for Suicidal Behavior

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	6102.286	4	1525.571	36.125	.000
Residual	14231.802	337	42.231		
Total	20334.088	341			

Dependent Variable: Suicidal Behavior

Predictors: (Constant), Fearful Attachment, Secure Attachment, Preoccupied Attachment, Dismissing Attachment

As shown in Table 16, the regression model was statistically significant ($F = 36.125, p < .000$). This indicates that the four attachment styles together significantly predict secondary school students' suicidal behavior. The null hypothesis which stated that: there is no statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in Nairobi County was rejected and the alternative hypothesis that there is a statistically significant relationship between students' attachment styles and suicidal behavior among secondary school students in

Nairobi County was accepted. Table 17 shows the summary of the regression model predicting suicidal behavior

Table 17: Model Summary for Suicidal Behavior

R	R Square	Adjusted R Square	Std. Error of the Estimate
.548	.300	.292	6.49853

Predictors: (Constant), Fearful Attachment, Secure Attachment, Preoccupied Attachment, Dismissing Attachment

Dependent Variable: Suicidal Behavior

As shown in Table 17, 30% of the variance in students' suicidal behavior was explained by the attachment styles ($R^2 = .300$). This is a substantial amount of variance. Other factors not considered in this study may explain the other 70% of the variance in suicidal behavior.

The regression coefficients presented in Table 18 show the predictive weights of the four attachment styles

Table 18: Regression Coefficients for Suicidal Behavior

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.705	2.104		2.236	.026
Secure Attachment	.095	.066	.065	1.430	.154
Preoccupied Attachment	.499	.052	.487	9.523	.000
Dismissing Attachment	.177	.074	.122	2.387	.018
Fearful Attachment	.001	.072	.001	.014	.989

Dependent Variable: Suicidal Behavior

As shown in Table 18, the regression coefficient for secure attachment was not statistically significant although it was positive ($\beta = .065, p = .154$). The small size of the coefficient in addition to it not being significant suggests that even though some students with secure attachment may have suicidal behaviors, this relationship weak and is attributable to chance.

In regards to the insecure attachment styles, preoccupied attachment style had a positive and statistically significant regression coefficient ($\beta = .487, p < .001$). A similar finding was made for dismissing attachment style where the regression coefficient was also positive and significant ($\beta = .122, p = .018$). The findings indicate that students who had anxious or avoidant attachment were more likely they were to portray suicidal behaviors. In regards to fearful attachment style, the regression coefficient was not statistically significant and very small ($\beta = .001, p = .989$). However, fearful attachment was significantly correlated with suicidal behavior in bivariate correlation analysis. Given these findings, it may be concluded that the fearful attachment style was only weakly associated with suicidal behavior relative to preoccupied and dismissing attachment styles.

The final goal of the current study sought to determine whether attachment styles were predictors of secondary school students' suicidal behavior in Nairobi County. The findings presented above show that attachment styles significantly predicted suicidal behavior and accounted for 30% of the variance in suicidal behavior. Secure attachment style did not predict suicidal behavior according to the results of the regression analysis

neither was it significantly correlated with suicidal behavior in bivariate correlation analysis. Based on these findings, it is possible to conclude that secure attachment in secondary school students was not associated with suicidal behavior. A study by Cantón-Cortés et al. (2020) examined the links between attachment and suicidal ideation in 18 to 24 year old college students and found that suicidal ideation was related to attachment anxiety but not to attachment security or attachment avoidance. In that study, secure attachment and suicidal behavior were not significantly related, a finding similar to the one made in the current study.

The absence of any significant link between secure attachment and suicidal behavior in adolescents revealed by this study was unexpected and inconsistent with findings reported in earlier studies. This finding was contradictory to the finding made in the study by Sheftall et al. (2013) where it was found that 12 to 17 year old adolescents who had made suicide attempts before rated their attachment to mothers and fathers as less secure compared to adolescents with no previous suicide attempts. Attachment to parents was associated with less suicidal behavior among 12 to 19 year old Chinese adolescents in the study by Guo et al. (2021) and among college students in the study by Langhinrichsen-Rohling et al. (2017) and these findings were inconsistent with finding made by this study in regards to secure attachment. Furthermore, the finding in this study was contrary to the results of a review of earlier studies done by Miniati et al. (2017) which found that secure attachment to parents as well as secure attachment styles was protective against suicidal behavior in adolescents and in adults.

Secure attachment style was not protective against suicidal behavior among secondary school students contrary to expectations founded on the tenets of the attachment theory. According to this theory, the mental models of attachment relationships formed during interactions with caregivers influence how people view themselves and how they view attachment figures as well as their behavior in various domains (Bowlby, 1969). It would be expected that students whose attachment styles were secure would have positive self-image which would make them less prone to self-harming behavior such as suicide. Moreover, students with secure attachment style would feel more confident approaching other people with their problems thereby getting help and eliminating the negative emotions that create vulnerability to suicidal thoughts and eventual suicidal attempts (Zisk et al., 2017).

Some researchers have found that not all attachment styles are associated with higher suicide risk. For example, the study by Önen et al. (2017) investigated whether there were differences in attachment styles between a group of respondents who had ever made suicide attempts and a group of respondents who had never made suicide attempts before. The group of respondents with previous suicide attempts scored higher only in fearful attachment. Both groups had similar levels of secure, dismissing and preoccupied attachment styles. The study by Hartley (2018) of 17 to 44 year old respondents found that with dismissing attachment were able to cope with stressors as well as respondents with secure attachment. These findings suggest that the factors influencing the link between suicidal behavior and attachment are different from one population to another. It

is therefore possible to conclude that the effect of secure attachment on students' suicidal behavior could have been affected by aspects that were not considered in the study.

Preoccupied ($\beta = .487$) and dismissing ($\beta = .122$) attachment styles predicted suicidal behavior in the current study. This finding supported findings reported in earlier studies where significant associations between suicidal behavior and both dimensions of insecure attachment were found in adolescents (Sheftall et al., 2014; Falgares et al., 2017) and in adults (Cuenca, 2013; Fino et al 2014; Khosravi & Kasaeiyan, 2020; Rohani & Esmaeili, 2020). It is possible to conclude that insecure attachment is a factor that increases the risk of suicidal behavior not only in adolescents but also in adults regardless of cultural differences.

The association between insecure attachment and suicidal behavior revealed by this study concur with the findings from a review conducted by Woo et al. (2020). That review looked at 22 previous studies that had investigated the links between self-injurious behavior such as suicide attempts and non-suicidal self-injury and attachment in children and adolescents. Twenty one of those papers reported significant associations between self-injurious behavior and attachment anxiety and attachment avoidance or weak attachment to parents and peers. The findings of that review mirrored those of Wrath and Adams (2018) who reviewed 17 articles that examined the links between attachment and self-injurious behavior in adults and found that results in 16 of the articles showed significant associations between self-injurious behavior and insecure attachment in adults.

Studies by Fino et al. (2014) and Pereira and Cardoso (2017) revealed that individuals with insecure attachment were prone to loneliness, social anxiety, depression and feelings of hopelessness which are known predictors of suicidal behavior. According to Zortea et al. (2020) insecure attachment coupled with events taking place in the life of a student and other factors in the student's environment may create vulnerability to suicidal thoughts and eventually suicide attempts. A study by Hope (2009) revealed that college students who reported more attachment anxiety and attachment avoidance reported having fewer reasons for living and having fewer reasons for living significantly predicted suicidal behavior.

The finding that preoccupied and dismissing attachment styles predicted suicidal behavior in students may also be because other known predictors of suicide such as emotion focused coping, emotion dysregulation, feelings of burdensomeness and thwarted belonging are more prevalent in individuals with insecure attachment (Fino et al., 2014; Kacmarski, 2016; Rohani & Esmaeili, 2020). In one study, Cerutti et al. (2018) investigated the interplay among attachment to parents and peers, emotion regulation, suicidal ideation and non-suicidal self-harm in a study involving 709 Italian adolescents aged between 10 and 15 years. Attachment to parents was significantly correlated with suicidal ideation ($r = -.331, p < .001$) and non-suicidal self-harm ($r = -.276, p < .001$). Mediation analysis revealed that inability to regulate one's emotions mediated the relationship between weak attachment to parents and both non-suicidal self-harm and suicidal ideation. In other words, weak attachment to parents increased the respondents'

risk of non-suicidal self-harm and suicidal ideation by diminishing their abilities to regulate their own emotions.

The relationship between suicidal behavior and preoccupied and dismissing attachment styles revealed by this study were expected in light of the attachment theory. Individuals with dismissing attachment styles avoid close personal relationships because they experienced rejection by their caregivers and learnt to be emotionally independent (Mikulincer & Shaver, 2012). Those students who have dismissing attachment styles have few or no intimate friendships that can provide social support when they face stressful situations. In addition, because they want to protect their emotional independence, they are reluctant to talk to anyone about their problems. Therefore, they never share their problems and may end up becoming suicidal due to lack of emotional support (Green et al., 2021; Zisk et al., 2017).

According to Hope and Smith-Adcock (2011) individuals with dismissing attachment styles may prefer to deal with their own problems because they do not feel comfortable sharing their feelings. If they cannot solve their problems, they may end up feeling worthless and feel that ending their lives is the only viable solution. In addition, students with this attachment style may not open up and share their thoughts about suicide with anyone else because they have few trusted confidants. Consequently, as Hope and Smith-Adcock suggest, such students are more likely to engage in suicide related behaviors because they do not engage in suicide related communication. Individuals with avoidant attachment tend to perceive other people negatively because of their mental models of

attachment relationships while at the same time striving to be competent or perfect in all things they do (Fattouh et al., 2022). Failure to attain the high standards students with dismissing attachment styles set for themselves may result in feelings of unworthiness that may eventually lead to thoughts of committing suicide.

High levels of attachment anxiety are found in individuals with preoccupied attachment styles. They fear rejection and they tend to worry about the availability of attachment figures. A threat to commit suicide or a suicide attempt may be viewed as a hyperactivation of the attachment system (Mikulincer & Shaver, 2016). In other words, when students with this attachment style are distressed, they signal their distress to attachment figures that may not pay attention to them, by making a suicide threat or attempt. Individuals with preoccupied attachment style feel validated when they are accepted by significant others and are constantly afraid of abandonment (Bartholomew & Horowitz, 1991). Students with this attachment style may engage in self-destructive behavior such as self-mutilation and suicide when their friends or opposite sex partners threaten to end a relationship.

Suicidal behavior was not predicted by fearful attachment style although it was significantly correlated with suicidal behavior. It is possible to conclude that a weak association existed between students' suicidal behavior and fearful attachment. This finding concurs with that of the study by Özer et al. (2015) where fearful attachment was observed in patients receiving treatment for depression who had a history of suicide attempts as well as findings reported by Kid and Shahar (2008) who found that suicidal

ideation in homeless youth was associated with preoccupied and fearful attachment. It should be noted that the samples in the two mentioned studies differed significantly from the sample in the current study but the similarity in findings demonstrates that the relationship between attachment insecurity and suicide applies in different populations from different cultures. Pereira and Cardoso (2017) note that individuals with fears of abandonment, discomfort with intimacy and distrust of attachment figures, which characterize students with fearful attachment style, are more predisposed towards suicidal behavior.

The current study has empirically shown that secure attachment style was not protective against suicidal behavior but insecure attachment styles predicted suicidal behavior to varying extents. Although the finding regarding secure attachment was unexpected, overall, the study demonstrates that secondary school student's suicidal behavior can be understood from the attachment perspective. It is recommended that guidance and counseling teachers focus more attention on students with insecure attachment styles who have a higher risk of suicidal behavior. Students' parents or caregivers should be enlightened on the value of nurturing secure relationships with their adolescent children since insecure attachment styles increase the risk of suicidal behavior.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary, conclusions and recommendations of the study. The summary of the study findings is presented first followed by conclusions made from those findings. Lastly, recommendations concerning policy and recommendations for further research are presented.

5.1 Summary of the Study Findings

The summary of the main findings of the study were as follows;

- (i) Multiple regression analysis at the .05 level of significance showed that attachment styles significantly predicted risky sexual behaviors among secondary school students in Nairobi County. Secure attachment style predicted lower levels of risky sexual behavior while preoccupied attachment style predicted higher level of risky sexual behavior.
- (ii) Multiple regression analysis at the .05 level of significance showed that attachment styles significantly predicted substance use behavior among secondary school students in Nairobi County. Secure attachment style predicted lower levels of substance use while dismissing attachment style predicted higher levels of substance use.
- (iii) Multiple regression analysis at the .05 level of significance showed that attachment styles significantly predicted aggressive behavior among secondary school students

in Nairobi County. Secure attachment predicted lower levels of aggressive behavior while preoccupied and dismissing attachment styles predicted higher levels of aggressive behavior.

- (iv) Multiple regression analysis at the .05 level of significance showed that attachment styles significantly predicted suicidal behavior among secondary school students in Nairobi County. Preoccupied and dismissing attachment styles predicted higher risk of suicidal behavior

5.2 Conclusions

The study investigated whether attachment styles predict risky sexual behavior, substance use, aggressive behavior and suicidal behavior among students in secondary schools in Nairobi County. Based on the findings of this study, the researcher was able to make several conclusions in line with the aim of the study.

The first objective of the current study was to determine the extent to which attachment styles predict risky sexual behavior among secondary school students in Nairobi County. A statistically significant relationship was found between students' involvement in risky sexual behavior and their attachment styles. Specifically, the more secure students' attachment styles were, the less likely they were to be engaging themselves in risky sexual behaviors. Students who have secure attachment styles have positive self-image and are not anxious for approval by attachment figures. The study concluded that such students are less likely to agree to take part in risky sexual activities with the intention of pleasing their partners, gaining approval of or avoiding abandonment by their partners.

Students with preoccupied attachment styles were more likely to take part in risky sexual behavior out of fear that they may lose their partners' love or approval and as a way of maintaining relationships. Such students may validate their self-worth through approval of their partners. Students with dismissing attachment styles may take part in casual sex or have multiple sex partners because they do not value long term relationships and do not need approval by other people in order to validate their self-worth. Such students may also abstain from sexual activities because they stay out of intimate relationships that would provide opportunities for sexual activities.

The second objective of this study was to establish the extent to which attachment styles predict substance use behavior among secondary school students in Nairobi County. The study revealed a statistically significant relationship between substance use behavior and students' attachment styles. Higher levels of secure attachment were associated with lower levels of substance use among students. Students who have secure attachment styles have positive self-image and perceive attachment figures as dependable. The study concluded that such students were less likely to use substances to regulate their emotions because they could turn to their attachment figures if they were stressed. Neither would they accept to use alcohol or other substances to gain approval by peers because they found validation from within themselves. Students who have secure attachment styles may not use substances because, unlike their counterparts with dismissing attachment styles, they do not need substances as substitutes for relationships they do not have. Students with dismissing attachment styles avoid close interpersonal relationships and

they may use alcohol and other substances to compensate for the lack of close ties with other people.

The third objective of the study was to find out the extent to which attachment styles predict aggressive behavior among secondary school students in Nairobi County. A significant relationship was found between attachment styles and aggressive behavior. Students who have secure attachment styles were significantly less likely to act aggressively. The study concluded that students with secure attachment styles are less likely to take actions that harm others because they are able to form healthy interpersonal relationships with other people. Unlike students with dismissing attachment styles who place little value in close relationships, students with secure attachment styles may not use aggression to distance themselves from other people. Students with dismissing attachment styles may act aggressively towards other people so as to distance themselves and avoid interpersonal closeness which they find uncomfortable as a result of their attachment avoidance. Students with preoccupied attachment styles may act with aggression towards other people in order to gain attention. Such students may use aggression to activate the attachment system and garner the attention of attachment figures because they perceive attachment figures to be unresponsive. Students with secure attachment styles on the other hand have no concerns over responsiveness of attachment figures and so they are not likely to act aggressively to get attention.

The fourth objective of the study was to determine the extent to which attachment styles predict suicidal behavior among secondary school students in Nairobi County. The study

found a significant association between students' attachment styles and suicidal behavior. Students with preoccupied and dismissing attachment styles were at increased risk of suicidal behaviors. The study concluded that attachment anxiety and attachment avoidance predisposed students to suicidality but secure attachment was not protective against suicidality. Students with preoccupied and dismissing attachment styles may be more prone to suicide since they do not have healthy attachment relationships that could provide a safe haven when they are distressed. Those with dismissing attachment styles have few close relationships hence they may not have dependable support systems and think of suicide as a way out of their problems.

The conceptual framework of the study was formulated in line with the tenets of the attachment theory. Bowlby centered his work on infants but other researchers developed the theory and extended it to adolescence and adulthood. The findings of the study supported the established view in the attachment theory that secure attachment leads to better overall adjustment and lower risk of problem behavior whereas insecure attachment leads to difficulties with adjustment and problems in various domains including deviance and suicidal behaviors. In this regard, the researcher concluded that secure attachment continued to exert a positive influence on individuals beyond childhood and that students' attachment styles are a factor that should be addressed in guidance and counseling.

Researchers working on adolescent attachment have suggested that as adolescents grow older, they develop attachments with secondary attachment figures which closely mirror

earlier attachment relationships with primary attachment figures. This study considered attachment styles in this context and found that students' attachment styles were a credible predictor of their adjustment and behavior. The researcher concluded that while attachment to parents is still important for students' wellbeing, secondary attachment relationships with other people in the students' lives such as relatives, friends and teachers are also important for students' wellbeing and adjustment.

5.3 Policy Recommendations

1. This study found that secure attachment style predicted lower levels of risky sexual behavior whereas preoccupied or dismissing attachment styles were associated with higher levels of risky sexual behavior. The study therefore recommends that in programs designed to curb risky sexual behavior, guidance and counseling teachers and other stakeholders should pay more attention to students who have insecure attachment styles as they are more vulnerable to risky sexual behavior.
2. The study revealed that secure attachment style predicted less substance use behavior whereas dismissing and preoccupied attachment styles predicted higher levels of substance use. The study recommends that efforts aiming at preventing substance use among students should focus more on the students with insecure attachment styles. Guidance and counseling teachers and school administrators should encourage students to form secure attachment bonds amongst themselves and with their parents or caregivers since secure attachment was protective against substance use.

3. This study showed that aggressive behavior was higher among students with preoccupied and dismissing attachment styles and lower in students with secure attachment styles. The study therefore recommends that parents and caregivers should be educated on the need for secure attachment in their children. In the school context, guidance and counseling teachers should encourage formation of close bonds among students since peers act as secondary attachment figures

4. This study also revealed that preoccupied and dismissing attachment styles predicted suicidal behavior among secondary school students. The study therefore recommends that guidance and counseling teachers take students' attachment styles into account when they are dealing with instances of suicidal behavior. Parents and other caregivers should be encouraged to form close bonds with their children to discourage insecure attachment which this study found to be associated with suicidal behavior.

5.4 Recommendations for Further Research

In light of the findings in the current study, the researcher realized need for further research and recommends:

1. Studies in regards to other variables that may be affected by students' attachment styles such as self-esteem and academic achievement can be conducted to extend the attachment theory to more domains of adolescent adjustment.

2. Studies similar to the current study can be done with diverse populations such as primary school children, college students and special populations such as youths in correctional institutions. The findings will enrich the literature on attachment styles and guide policy formulation in regards to tackling deviant behavior.

3. Studies to find out whether students' attachment styles differ according to demographic variables such as personality, gender and socioeconomic status and to determine whether such variables influence the relationship between attachment styles and deviant behaviors.
4. This study was conducted in Nairobi County. Studies similar to the current study may be carried out in other parts of Kenya to determine whether the results would be replicated in rural areas and also to ensure generalizability across urban and rural students

REFERENCES

- Abubakar, A., Alonso-arbiol, I., de Vijver, F. J. R. Van, Murugami, M., Mazrui, L., & Arasa, J. (2013). Attachment and psychological well-being among adolescents with and without disabilities in Kenya : The mediating role of identity formation. *Journal of Adolescence*, 36(5), 849–857. <https://doi.org/10.1016/j.adolescence.2013.05.006>
- AFIDEP (2020) *Teen pregnancy in Kenya: Verifying the data and the facts*. African Institute for Development Policy.
- Ahrens, K. R., Ciechanowski, P., & Katon, W. (2012). Associations between adult attachment style and health risk behaviors in an adult female primary care population. *J Psychosom Res*, 72(5). <https://doi.org/10.1016/j.jpsychores.2012.02.002>.Associations
- Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum.
- Allen, J.P (2008) The attachment system in adolescence. In: J. Cassidy & P.R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications(2nd ed)*. p. 419-435. Guilford
- Allen, J. P., Grande, L., Tan, J., & Loeb, E. (2018). Parent and peer predictors of attachment security from adolescence to adulthood. *Child Dev*, 89(4), 1120–1132. <https://doi.org/10.1111/cdev.12840>.Parent
- Ali, M. M., Merdad, L., & Bellizzi, S. (2021). Socioeconomic variations in risky sexual behavior among adolescents in 14 sub-Saharan Africa countries who report ever having had sex. *International Journal for Equity in Health*, 20(1). <https://doi.org/10.1186/s12939-020-01352-8>
- Amani, R. (2016). Mother-infant attachment styles as a predictor of aggression. *Journal of Midwifery and ReproductiveHealth*,4(1), 506–512. <https://doi.org/10.22038/jmrh.2016.6076>
- Amare, T., & Getinet, W. (2019). Alcohol use and associated factors among high school, college and university students in Ethiopia, systematic review, and meta-analysis, 2018. *Journal of Mental Health*, 29(4), 455–463. <https://doi.org/10.1080/09638237.2019.1677871>
- Anderson, L. E., Connor, J. P., Voisey, J., Young, R. McD., & Gullo, M. J. (2019). The unique role of attachment dimensions and peer drinking in adolescent alcohol use. *Personality and Individual Differences*, 149, 118–122. <https://doi.org/10.1016/j.paid.2019.05.048>

- Andreassen, C. S., Pallesen, S., Griffiths, M. D., Torsheim, T., & Sinha, R. (2018). The development and validation of the bergen–yale sex addiction scale with a large national sample. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00144>
- Antonacci, D. (2014). *Attaching meaning to sex: attachment styles and possible mediators of safe sex behavior*. (Unpublished Thesis) University of Mississippi, Oxford, Mississippi.
- Arruda, E. P. T., Brito, L. G. O., Prandini, T. R., Lerri, M. R., dos Reis, R. M., Barcelos, T. M. R., & Lara, L. A. S. (2020). Sexual practices during adolescence. *Rev Bras Ginecol Obstet*, 42(11), 731–738.
- Ary, D., Jacobs, L.C., Sorensen, C.K. & Walker, D.A. (2014) *Introduction to Research in Education* (9th ed). Wardsworth
- Asghari, F., Sadeghi, A., Sadati, S. M. R., Entezari, M., & Saadat, S. (2015). The relationship between attachment styles and parenting styles with tendency to drug abuse among university students. *Indian Journal of Fundamental and Applied Life Sciences ISSN:*, 5(s2), 144–149.
- Attaky, A., Kok, G., & Dewitte, M. (2021). Attachment orientation moderates the sexual and relational implications of sexual desire discrepancies. *Journal of Sex & Marital Therapy*, 1–20. <https://doi.org/10.1080/0092623x.2021.1991537>
- Babore, A., Trumello, C., Candelori, C., Paciello, M., & Cerniglia, L. (2016). Depressive symptoms , self-esteem and perceived parent – child relationship in early adolescence. *Front. Psychol*, 7(982), 1–7. <https://doi.org/10.3389/fpsyg.2016.00982>
- Barbaro, N., Holub, A. M., & Shackelford, T. K. (2018). Associations of attachment anxiety and avoidance with male- and female-perpetrated sexual coercion in romantic relationships. *Violence and Victims*, 33(6), 1176–1192. <https://doi.org/10.1891/0886-6708.33.6.1176>
- Barber, M. (2017). *The relationship between attachment and offending within a South African context*. (Master's Thesis) University of Cape Town, Cape Town.
- Barry, J., Seager, M., & Brown, B. (2015). Gender differences in the association between attachment style and adulthood relationship satisfaction. *New Male Studies: An International Journal*. 4(3), 63 – 74.
- Bartholomew, K., & Horowitz, L. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61, 226–244.
- Bitta, M. A., Bakolis, I., Kariuki, S. M., Nyutu, G., Mochama, G., Thornicroft, G., & Newton, C. R. J. C. (2018). Suicide in a rural area of coastal Kenya. *BMC*

Psychiatry, 18(267).

- Bonneville, A. (2016). *Intimate partner aggression and relationship satisfaction across attachment styles*. (Masters' Thesis) Saint Paul University, Ottawa Ontario.
- Borhani, Y. (2013). substance abuse and insecure attachment styles : A relational study. *LUX: A Journal of Transdisciplinary Writing and Research from Claremont Graduate University*, 2(1), Article 4
- Boyd, D., Feeters, D. M., Dhingra, K., Galbraith, N., & Hinton, D. (2018). Parental psychopathology, adult attachment and risk of 12-month suicidal behaviours. *Psychiatry Research*, 260, 272–278. <https://doi.org/10.1016/j.psychres.2017.11.084>
- Brassard, A., Houde, F., Caouette, C., Lussier, Y., & de Pierrepont, C. (2016). *Validation of a new questionnaire assessing adult over- sexualization among emerging adults*. Manuscript submitted for publication.
- Brassard, A., Perron-Laplante, J., Lachapelle, É., de Pierrepont, C., & Péloquin, K. (2018). Oversexualization among emerging adults: Preliminary associations with romantic attachment and intimacy. *The Canadian Journal of Human Sexuality*, 1–12. <https://doi.org/10.3138/cjhs.2017-0031>
- Brewer, G., & Forrest-Redfern, A. (2020). Attachment anxiety, rape myth acceptance, and sexual compliance. *Journal of Interpersonal Violence*, 088626052094852. <https://doi.org/10.1177/0886260520948526>
- Bowlby, J. (1969). *Attachment and loss: Vol. 1 Attachment*. Basic books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. Basic Books.
- Bowlby, J. (1982). *Attachment and loss: Vol. 2. Attachment*. Basic Books.
- Brodie, Z., Goodall, K., Darling, S., & Mcvittie, C. (2018). Attachment insecurity and dispositional aggression: The mediating role of maladaptive anger regulation. *Journal of Social and Personal Relationships*, 1–22. <https://doi.org/10.1177/0265407518772937>
- Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63, 452-459.
- Cadely- Saint Eloi, H. S., Finnegan, V., Spears, E. C., & Kerpelman, J. L. (2020). Adolescents and sexual risk-taking : the interplay of constraining relationship beliefs , healthy sex attitudes , and romantic attachment insecurity. *Journal of Adolescence*, 84, 136–148. <https://doi.org/10.1016/j.adolescence.2020.08.010>

- Callahan, J. L. (2011). The effects of parent and peer attachment on risky behavior in first-year college Students. (Unpublished Senior Thesis) Trinity College, Hartford CT
- Cannizzaro, E., Lavanco, G., Castelli, V., Cirrincione, L., Majo, D., Martines, F., ... Plescia, F. (2022). Alcohol and nicotine use among adolescents: An observational study in a Sicilian cohort of high school students. *International Journal of Environmental Research and Public Health*, 19(6152). <https://doi.org/10.3390/ijerph19106152>
- Cantón-Cortés, D., Cortés, M. R., & Cantón, J. (2020). Child sexual abuse and suicidal ideation: the differential role of attachment and emotional security in the family system. *Int J Environ Res Public Health*, 17(3163). <https://doi.org/doi:10.3390/ijerph17093163>
- Capuano, A. (2011). *Examining empathy, cognitive distortions, and social and physical aggression in delinquent and non-delinquent adolescents*. (Doctoral dissertation) Bowling Green State University, Bowling Green, OH
- Castleton, J.G. (2019). *Marital outcomes and attachment in children of divorce versus children of intact families*. (Doctoral Dissertation) Walden University, Minneapolis, MN.
- Cerutti, R., Zuffianò, A., & Spensieri, V. (2018). The role of difficulty in identifying and describing feelings in non-suicidal self-injury behavior (NSSI): Associations with perceived attachment quality, stressful life events, and suicidal ideation. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00318>
- Chakrabarty, D. (2016). One More Table of Random Two-Digit Numbers. *International Journal of Advanced Research in Science, Engineering and Technology*, 3(3), 1667–1678.
- Chassin, L., Sher, K. J., Hussong, A., & Curran, P. (2013). The developmental psychopathology of alcohol use and alcohol disorders: research achievements and future directions. *Development and Psychopathology*, 25(2), 1567–84. <http://doi.org/10.1017/S0954579413000771>.
- Cheloti, S. K., & Gathumbi, A. M. (2016). Curbing drug and substance abuse in secondary schools in Kenya: The disconnect in school community intervention strategies. *Elixir Educational Technology*, 95(2016), 40881–40888.
- Chen, Y., Lei, X., Yi, J., & Yao, S. (2017). Increasing high-risk sexual behavior among adolescents in 10 cities of china. *Ann Psychiatry Ment Health*, 5(3).
- Chow, C. M., Hart, E., Ellis, L., & Tan, C. C. (2017). Interdependence of attachment styles and relationship quality in parent- adolescent dyads Interdependence of

- attachment styles and relationship quality in parent-adolescent dyads. *Journal of Adolescence*, 61(October), 77–86. <https://doi.org/10.1016/j.adolescence.2017.09.009>
- Ciocca, G., Zauri, S., Limoncin, E., Mollaioli, D., D'Antuono, L., Carosa, E., Nimbi, F. M., Simonelli, C., Balercia, G., Reisman, Y., & Jannini, E. A. (2020). Attachment style, sexual orientation, and biological sex in their relationships with gender role. *Sexual Medicine*, 8(1), 76–83. <https://doi.org/10.1016/j.esxm.2019.09.001>
- Coladarci, T., Cobb, C.D., Minium, E.W. & Clarke, R.B (2011) *Fundamentals of statistical reasoning in education* (3rd ed). John Willey & Sons
- Clery, P., Rowe, A., Munafò, M., & Mahedy, L. (2021). Is attachment style in early childhood associated with mental health difficulties in late adolescence? *BJPsych Open*, 7(S1), S15–S15. <https://doi.org/10.1192/bjo.2021.98>
- Cömert, I. T., & Ögel, K. (2014). Attachment styles of adolescent substance users. *The Turkish Journal on Addictions*, 1(1), 26–40. <https://doi.org/10.15805/addicta.2014.1.1.001>
- Cook, S. H., Watkins, D. C., Calebs, B., & Wilson, P. A. (2016). Attachment orientation and sexual risk behaviour among young Black gay and bisexual men. *Psychol Sex*, 7(3), 177–196. <https://doi.org/10.1080/19419899.2016.1168312>.
- Cooper, D. R., & Schindler, P. S. (2015). *Business research methods*. (8th ed.). Tata McGraw Hill.
- Cooper, M. L., Pioli, M., Levitt, A., Talley, A. E., Micheas, L., & Collins, N. L. (2006). Attachment styles, sex motives, and sexual behavior. *Dynamics of romantic love: Attachment, caregiving, and sex*, 243-274.
- Cornellà-Font, M. G., Viñas-Poch, F., Juárez-López, J. R., Martín-Perpiñá, M. de las M., & Malo-Cerrato, S. (2019). Temperament and attachment as predictive factors for the risk of addiction to substances in adolescents. *Revista de Psicopatología Y Psicología Clínica*, 23(3), 179. <https://doi.org/10.5944/rppc.vol.23.num.3.2018.21423>
- Creswell, J.W. (2012) *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (4th ed). Pearson
- Critchfield, K., Levy, K., Clarkin, J., & Kernberg, O. (2008). The relational context of aggression in borderline personality disorder: Using adult attachment style to predict forms of hostility. *Journal of Clinical Psychology*, 64,67–82. doi:10.1002/jclp.20434
- Cuenca, J. (2013). *Self-harm in relation to attachment theory and the cry of pain model : attachment insecurities and feelings of entrapment as vulnerability factors*. (PhD thesis) University of Nottingham, Nottingham.

- De Santis, S., Falgares, G., & Kopala-Sibley, D. C. (2019). The relationship between attachment styles and internalizing/externalizing problems: The mediating role of self-criticism. *Current Psychology*. <https://doi.org/10.1007/s12144-019-00174-4>
- Dean, R. J. (2017). *The effect of attachment on the association between familial dysfunction and recidivism and aggression in a sample of adolescent offenders: Testing a moderated- mediation effect*. (Master's Thesis) Carleton University, Ottawa, ON.
- Del Giudice, M. (2016). Sex differences in romantic attachment: A facet-level analysis. *Personality and Individual Differences*, 88, 125–128. <https://doi.org/10.1016/j.paid.2015.09.004>
- Demirtas-Madran, H. A. (2012). The reliability and validity of the Buss-Perry aggression questionnaire (BAQ) – Turkish version. *Turkish Journal of Psychiatry*, 24(2), 124–129
- Deol, G., Flamholz, M., Cassidy, J., Fitter, M., & Straske, D. (2014). *The role of attachment style on adolescent risky sexual behavior*. [Poster presentation] University of Maryland, College Park, MD.
- de Vries, S. L. A., Hovee, M., Stams, G. J. J. M., & Asscher, J. J. (2016). Adolescent-parent attachment and externalizing behavior: the mediating role of individual and social factors. *J Abnorm Child Psychol*, 44, 283–294. <https://doi.org/10.1007/s10802-015-9999-5>
- DiClemente, R. J., Santelli, J. S., & Crosby, R. A. (2009). *Adolescent Health: understanding and preventing risk behaviors*. (1st ed.). Jossey-Bass.
- Dubois-comtois, K., Cyr, C., Pascuzzo, K., Lessard, M., & Poulin, C. (2013). Attachment theory in clinical work with adolescents. *J Child Adolesc Behav*, 1(3). <https://doi.org/10.4172/jcalb.1000111>
- Dumas-koylass, D. (2013). An examination of the relationship between attachment styles and sexual behaviors. (Master's Thesis) University of the West Indies, Kingston Jamaica.
- Durjava, L. (2018). Relationship between recalled parental bonding , adult attachment patterns and severity of heroin addiction. *MOJ Addict Med Ther*, 5(4), 170–176. <https://doi.org/10.15406/mojamt.2018.05.00114>
- Efrati, Y., & Gola, M. (2018). Understanding and predicting profiles of compulsive sexual behavior among adolescents. *Journal of Behavioral Addictions*, 7(4), 1004–1014. <https://doi.org/10.1556/2006.7.2018.100>

- Eltink, E. M. A., Hoeve, J. Ten, De Jongh, T., Van der Helm, G. H. P., Wissink, I. B., & Stams, G. J. J. M. (2018). stability and change of adolescents ' aggressive behavior in residential youth care. *Child & Youth Care Forum*, 47(2), 199–217. <https://doi.org/10.1007/s10566-017-9425-y>
- Estévez, A. N. A., Jáuregui, P., Sánchez-marcos, I., López-gonzález, H., & Griffiths, M. D. (2017). Attachment and emotion regulation in substance addictions and behavioral addictions. *Journal of Behavioral Addictions*, 6(4), 534–544. <https://doi.org/10.1556/2006.6.2017.086>
- Estrada, C. A. M., Nonaka, D., Gregorio, E. R., Leynes, C. R., del Castillo, R. T., Hernandez, P. M. R., Hayakawa, T., & Kobayashi, J. (2019). Suicidal ideation, suicidal behaviors, and attitudes towards suicide of adolescents enrolled in the Alternative Learning System in Manila, Philippines—a mixed methods study. *Tropical Medicine and Health*, 47. <https://doi.org/10.1186/s41182-019-0149-6>
- Fairbairn, C. E., Briley, D. A., Kang, D., Fraley, R. C., Hankin, B. L., & Ariss, T. (2018). A meta-analysis of longitudinal associations between substance use and interpersonal attachment security. *Psychol Bull*, 144(5), 532–555. <https://doi.org/10.1037/bul0000141.A>
- Fairley, S. (2016). *Associations between adolescent perceptions of parental interactions and adolescent sexual behaviors*. (Doctoral Dissertation) Walden University, Minneapolis, MN.
- Falgares, G., Marchetti, D., De Santis, S., Carrozzino, D., Kopala-Sibley, D. C., Fulcher, M., & Verrocchio, M. C. (2017). Attachment styles and suicide-related behaviors in adolescence: the mediating role of self-criticism and dependency. *Front. Psychiatry*, 8(36). <https://doi.org/10.3389/fpsyt.2017.00036>
- Farnia, V., Alikhani, M., Jalali, A., Golshani, S., Salemi, S., Hookari, S., Moradi, M., & Juibari, T. A. (2018). The role of attachment styles and perceived social support in prediction of methamphetamine abuse. *Journal of Substance Use*, 23(4), 377–383. <https://doi.org/10.1080/14659891.2018.1436598>
- Farnicka, M., & Grzegorzewska, I. (2015). Patterns of aggressive behaviour and victimization in adolescents. *The Open Psychology Journal*, 8, 23–31.
- Fattouh, N., Haddad, C., Salameh, P., Sacre, H., Hallit, R., Soufia, M., Hallit, S., & Obeid, S. (2022). A National Study of the Association of Attachment Styles With Depression, Social Anxiety, and Suicidal Ideation Among Lebanese Adolescents. *The Primary Care Companion for CNS Disorders*, 24(3). <https://doi.org/10.4088/pcc.21m03027>
- Fernández-artamendi, S., Martínez-loredo, V., & López-núñez, C. (2021). Sex

- differences in comorbidity between substance use and mental health in adolescents : Two sides of the same coin. *Psicothema*, 33(1), 36–43. <https://doi.org/10.7334/psicothema2020.297>
- Fincham, J. E. (2008). Response rates and responsiveness for surveys , standards , and the journal. *American Journal of Pharmaceutical Education*, 72(2).
- Finigan-Carr, N. M., Gielen, A., Haynie, D. L., & Cheng, T. L. (2016). Youth violence: How gender matters in aggression among urban early adolescents. *Journal of Interpersonal Violence*, 31(19), 3257–3281. <https://doi.org/10.1177/0886260515584348>
- Fino, E., Iliceto, P., Sabatello, U., Petrucci, F., & Candilera, G. (2014). Self / other perception mediates between personality and suicidal ideation in young adults. *Eur. J. Psychiat*, 28(2), 104–113.
- Flykt, M., Vänskä, M., Punamäki, R.-L., Heikkilä, L., Tiiainen, A., Poikkeus, P., & Lindblom, J. (2021). Adolescent attachment profiles are associated with mental health and risk-taking behavior. *Frontiers in Psychology*, 12, 761864. <https://doi.org/10.3389/fpsyg.2021.761864>
- French, J. E., Whitley, K. A., Altgelt, E. E., & Meltzer, A. L. (2020). Attachment anxiety in young adulthood is associated with childhood unpredictability and predicts intentions to engage in unprotected sex. *Personality and Individual Differences*, 159, 109858. <https://doi.org/10.1016/j.paid.2020.109858>
- Ganth, D. B., & Kadiravan, S. (2017). Psychosocial determinants of romantic inclination among Indian youth. *Interpersona: An International Journal on Personal Relationships*, 11(1), 22–39. <https://doi.org/10.5964/ijpr.v11i1.213>
- Garneau, C., Olmstead, S. B., Pasley, K., & Fincham, F. D. (2013). The role of family structure and attachment in college student hookups. *Archives of Sexual Behavior*, 42(8), 1473–1486. <https://doi.org/10.1007/s10508-013-0118-9>
- Gause, N. (2017). *Examining the association between attachment and sexual hiv-risk behaviors among african american young women*. (Master's Thesis) University of Cincinnati, Cincinnati, OH
- Gay, L.R., Mills, G. E. & Airasian, P. (2012) *Educational research: competencies for analysis and applications* (10th ed). Boston, MA: Pearson
- Gidhagen, Y., Holmqvist, R., & Philips, B. (2018). Attachment style among outpatients with substance use disorders in psychological treatment Attachment style among outpatients with substance use disorders in psychological treatment. *Psychology and Psychotherapy: Theory, Research and Practice*. <https://doi.org/10.1111/papt.12172>

- Gitonga, M. L. (2013). *Perceived parenting behavior and its relationship to levels of self-esteem among the adolescents in secondary schools in Nairobi County*. (Unpublished Masters Thesis) University of Nairobi, Nairobi
- Gitonga, M., Muriungi, S., Ongaro, K., & Omondi, M. (2017). Prevalence of conduct disorder among adolescents in secondary schools: a case of kamukunji and olympic mixed sub-county secondary schools in Nairobi County, Kenya. *African Journal of Clinical Psychology, 1*, 85–101.
- Godinez, E. (2018). Does Insecure Parental Attachment Influence Teenage Unprotected Sex? *The Measure: An Undergraduate Research Journal, 2*, 35–44.
- Gola, M., & Potenza, M. N. (2018). Promoting educational, classification, treatment, and policy initiatives. Commentary on: Compulsive sexual behaviour disorder in the ICD-11 (Kraus et al., 2018). *Journal of Behavioral Addictions, 7*(2), 208–210. <https://doi.org/10.1556/2006.7.2018.51>
- Goldstein, A. L., Haller, S., Mackinnon, S. P., & Stewart, S. H. (2018). Attachment anxiety and avoidance , emotion dysregulation , interpersonal difficulties and alcohol problems in emerging adulthood. *Addiction Research & Theory*. <https://doi.org/10.1080/16066359.2018.1464151>
- Gonçalves, A., Duarte, J., Sequeira, C., Cabral, L., & Freitas, P. (2016). Attachment patterns and suicidal behaviours on higher education students. *Atención Primaria, 48*(1), 157–162.
- Green, J., Berry, K., Danquah, A., & Pratt, D. (2021). Attachment security and suicide ideation and behaviour : the mediating role of reflective functioning. *Int. J. Environ. Res. Public Health, 18*(3090). <https://doi.org/10.3390/ijerph18063090>
- Groh, A.A., Roisman, G.G., Booth-LaForce, C., Fraley, R.R., Owen, M.M., Cox, M.M., & Burchinal, M.R. (2014). Stability of attachment security from infancy to late adolescence. *Monogr. Soc. Res. Child. Dev, 79*, 51–66.
- Grunebaum, M. F., Galfalvy, H. C., Mortenson, L. Y., Burke, A. K., Oquendo, M. A., & Mann, J. J. (2010). Attachment and social adjustment: relationships to suicide attempt and major depressive episode in a prospective study. *J Affect Disord, 123*(1–3), 123–130. <https://doi.org/10.1016/j.jad.2009.09.010>. Attachment
- Guo, Y., Ji, Y., Huang, Y., Jin, M., Lin, Y., Chen, Y., Zhang, L., Zhu, C., Yu, F., & Wang, K. (2021). The relationship between suicidal ideation and parental attachment among adolescents: The mediator of anhedonia and peer attachment. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.727088>
- Hackathorn, J. M., & Malm, E. (2022). The experience of sex guilt: The roles of parenting, adult attachment, and sociosexuality. *Sexuality & Culture*.

<https://doi.org/10.1007/s12119-021-09887-w>

- Hartley, E. L. (2018). *Traits and triggers: Individual differences in neuroticism and adult attachment style influence susceptibility to interpersonal risk factors for suicidal ideation and behaviors*. (PhD Thesis) University of Western Australia. Perth, WA
- Hasan, A., & Husain, A. (2016). behavioural problems of adolescents. *International Journal of Social Sciences*, 4(2), 238–244.
- Hayre, R. S., Goulter, N., & Moretti, M. M. (2019). Addictive behaviors maltreatment , attachment , and substance use in adolescence : direct and indirect pathways. *Addictive Behaviors*, 90, 196–203. <https://doi.org/10.1016/j.addbeh.2018.10.049>
- Hazarika, M., & Bhagabati, D. (2018). Father and son attachment styles in alcoholic and non-alcoholic families. *Open Journal of Psychiatry & Allied Sciences*, 9(1), 15. <https://doi.org/10.5958/2394-2061.2018.00003.4>
- Henriksen, M., Skrove, M., Hoftun, G. B., Sund, E. R., Lydersen, S., Tseng, W.-L., & Sukhodolsky, D. G. (2020). Developmental Course and Risk Factors of Physical Aggression in Late Adolescence. *Child Psychiatry & Human Development*, 52(4), 628–639. <https://doi.org/10.1007/s10578-020-01049-7>
- Hood, J. N., Jacobson, R. P., & Jacobson, K. J. L. (2017). The impact of self-esteem and empathy on the relationship between workplace bullying and attachment style. *Review of Integrative Business and Economics Research*, 6(4), 104–118
- Hope, K. J. (2009). *A reason to live: the protective influence of close friendships on college students*. (PhD Thesis) University of Florida, Gainesville. FL
- Hope, K. J., & Smith-adcock, S. (2011). An attachment model for assessing suicidal risk. *Journal of Counseling Research and Practice*, 2(1), 55–63.
- Hutton, S. (2019). *Substance use and romantic attachment among African American and black Caribbean adult males*. (Doctoral Dissertation) Walden University, Minneapolis, MN.
- Ibrahim, N., Amit, N., Che Din, N., & Ong, H. C. (2017). Gender differences and psychological factors associated with suicidal ideation among youth in Malaysia. *Psychology Research and Behavior Management, Volume 10*, 129–135. <https://doi.org/10.2147/prbm.s125176>
- Idele, P., Gillespie, A., Porth, T., Suzuki, C., Mahy, M., Kasedde, S., & Luo, C. (2014). Epidemiology of HIV and AIDS among adolescents. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 66, S144–S153. <https://doi.org/10.1097/qai.0000000000000176>

- Iglesias, E. B., Fernández del Río, E., Calafat, A., & Fernández-Hermida, J. R. (2014). Attachment and substance use in adolescence: A review of conceptual and methodological aspects. *Adicciones*, *26*(1), 77–86.
- Innamorati, M., Parolin, L., Tagini, A., Santona, A., Bosco, A., Carli, P. De, ... Sarracino, D. (2018). Attachment , Social value orientation , sensation seeking , and bullying in early adolescence. *Front Psychol*, *9*(239). <https://doi.org/10.3389/fpsyg.2018.00239>
- Inthorn, S. (2015). *Parent-child attachment in single parent families*. (Masters' Thesis) Leiden University, Leiden.
- Ipolyi, D., Csányi, E., Láng, A., & Meskó, N. (2021). Attachment avoidance moderates the relationship among acceptance of sugar relationships, motivation, and self-esteem. *Frontiers in Psychology*, *12*. <https://doi.org/10.3389/fpsyg.2021.711199>
- Israel, G. D. (1992). Determining sample size. *Florida Cooperative Extension Service*, (November), 1–5.
- Itegi, F. M. (2017). Bullying and its Effects : experiences in kenyan public secondary schools. *International Journal of Education and Research*, *5*(3), 23–36.
- Kacmarski, J. A. (2016). Attachment styles and the interpersonal psychological theory of suicide: An examination of interrelationships (PhD Dissertation) University of Northern Colorado, Greeley CO.
- Kagendo, N. (2017). *Single mothers and parenting in Kenya: The case of Zimmerman, Nairobi County*. (Unpublished Med Thesis) University of Nairobi, Kenya.
- Kaggwa, M. M., Abaatyo, J., Alol, E., Muwanguzi, M., Najjuka, S. M., Favina, A., Rukundo, G. Z., Ashaba, S., & Mamun, M. A. (2022). Substance use disorder among adolescents before and during the COVID-19 pandemic in Uganda: Retrospective findings from a psychiatric ward registry. *PLOS ONE*, *17*(5), e0269044. <https://doi.org/10.1371/journal.pone.0269044>
- Kamenderi, M., Muteti, J., Okioma, V., Kimani, S., Kanana, F., & Kahiu, C. (2021). Status of drugs and substance abuse among the general population in Kenya. *African Journal of Alcohol & Drug Abuse*, *1*, 54–59.
- Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., Lowry, R., Chyen, D., Whittle, L., Thornton, J., Lim, C., Bradford, D., Yamakawa, Y., Leon, M., Brener, N., & Ethier, K. A. (2018). Youth risk behavior surveillance — United States, 2017. *MMWR. Surveillance Summaries*, *67*(8), 1–114. <https://doi.org/10.15585/mmwr.ss6708a1>
- Kanyoni, M., Gishoma, D., & Ndahindwa, V. (2015). Prevalence of psychoactive

- substance use among youth in Rwanda. *BMC Research Notes*, 8(190), 1–8. <https://doi.org/10.1186/s13104-015-1148-2>
- Karataş, H., Kahraman, S., & Marangoz, Z. (2017). Substance use among adolescents, and influencing factors in Şanlıurfa. *The Journal of Pediatric Research*, 4(1), 21–27. <https://doi.org/10.4274/jpr.85547>
- Kariuki-Githinji, S. (2020). Delinquency in urban Kenya secondary schools: Implications for parenting. *International Journal of Research and Innovation in Social Science*, 4(7), 95–101.
- Kariuki, S. N., Aloka, P. J. O., Gatumu, H. N., & Gitonga, C. (2015). Relationship between perceptions of parental punitive discipline and involvement in delinquent behaviours among selected kenyan secondary school students. *Journal of Educational and Social Research*, 5(1), 329–338. <https://doi.org/10.5901/jesr.2015.v5n1p329>
- Kebaso, G. (2021, November 9). *Nine counties hotspots for teenage pregnancy*. People Daily. <https://www.pd.co.ke/news/nine-counties-hotspots-for-teenage-pregnancy-102634/>
- Kerns, K. A., & Brumariu, L. E. (2014). Is insecure parent-child attachment a risk factor for the development of anxiety in childhood or adolescence? *Child Dev Perspect*, 8(1), 12–17. <https://doi.org/10.1111/cdep.12054>
- Keto, T., Tilahun, A., & Mamo, A. (2020). Knowledge, attitude and practice towards risky sexual behaviors among secondary and preparatory students of Metu town, south western Ethiopia. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-09371-4>
- Keyzers, A., Weiler, L., Haddock, S., & Doty, J. (2019). Family problem-solving and attachment quality: associations with adolescent risk-taking behavior. *Journal of Youth Development*, 14(1), 70–92. <https://doi.org/10.5195/jyd.2019.637>
- Khasakhala, L. I. (2012). *Perceived parenting behaviour, parental and youth psychopathology and the efficacy of family-cognitive behavioural therapy at a youth psychiatric clinic in kenya*. (Unpublished PhD Thesis) University of Nairobi, Nairobi.
- Khosravi, M., & Kasaeiyan, R. (2020). The relationship between neuroticism and suicidal thoughts among medical students: Moderating role of attachment styles. *J Family Med Prim Care*, 9(6). https://doi.org/10.4103/jfmprc.jfmprc_1200_19
- Kiambi, M. J. (2018). Factors influencing drugs and substance abuse among public secondary school students in Kiambu county, Kenya. *International Journal of Psychology*, 3(1).

- Kid, S., & Shahar, G. (2008). Resilience in homeless youth: The key role of self-esteem. *American Journal of Orthopsychiatry*, 78(2), 163–172. <https://doi.org/10.1037/0002-9432.78.2.163>
- Kingendo, M. (2015). Behaviordisorders related to drug abuse among secondary school students in Kenya . *Journal of Education and Practice*, 6(19), 170–179.
- Kircaburun, K., Üñübol, H., Sayar, G. H., Çarkçı, J., & Griffiths, M. D. (2021). Sex addiction in Turkey: A large-scale survey with a national community sample. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01632-8>
- Klettke, B., Hallford, D. J., & Mellor, D. J. (2014). Sexting prevalence and correlates: A systematic literature review. *Clinical Psychology Review*, 34(1), 44–53. <https://doi.org/10.1016/j.cpr.2013.10.007>
- Krpalek, D., Meredith, P., & Ziviani, J. (2017). Exploring associations between adult attachment patterns , time spent unemployed and use of substances to regulate affect among australian job seekers. *Psychol Behav Sci Int J*, 4(3). <https://doi.org/10.19080/PBSIJ.2017.04.555639>
- Kombech, E. R. (2017). *Perceived parenting behavior and its relationship to early sexual initiation among adolescents in urban secondary schools in Nairobi County*. (Masters Thesis) University of Nairobi, Nairobi.
- Kosenko, K., Luurs, G., & Binder, A. R. (2017). Sexting and sexual behavior, 2011-2015: A critical review and meta-analysis of a growing literature. *Journal of Computer-Mediated Communication*, 22(3), 141–160. <https://doi.org/10.1111/jcc4.12187>
- Kotera, Y., & Rhodes, C. (2019). Pathways to sex addiction: Relationships with adverse childhood experience, attachment, narcissism, self-compassion and motivation in a gender-balanced sample. *Sexual Addiction & Compulsivity*, 26(1-2), 54–76. <https://doi.org/10.1080/10720162.2019.1615585>
- Kruger, N., Gouws, E., & Dicker, A. (2014). *The adolescents: an educational perspective. only study guide for ged-201w*, University of South Africa, Pretoria, South Africa.
- Kunchal, N., Sanyal, N., Ali, S., & Fernandes, T. (2016). Attachment, aggression and victimization among adolescents. *IOSR Journal Of Humanities And Social Science*, 21(8), 37–47. <https://doi.org/10.9790/0837-2108043747>
- Lacasa, F., Mitjavila, M., Ochoa, S., & Balluerka, N. (2015). The relationship between attachment styles and internalizing or externalizing symptoms in clinical and nonclinical adolescents. *Anales de Psicología*, 31(2), 422–432. <https://doi.org/10.6018/analesps.31.2.169711>

- Lai, C., Pierro, L., Begotaraj, E., Marani, A., Sambucini, D., & Pellicano, G. R. (2019). Metacognitive style, attachment dimension and risk for alcohol abuse in Italian adolescents. *Rassegna Di Psicologia*, 36(1), 39–53. <https://doi.org/10.4458/1965-03>
- Lakhtdir, M. P. A., Rozi, S., Peerwani, G., & Nathwan, A. A. (2020). Effect of parent-child relationship on physical aggression among adolescents: Global school-based student health survey. *Health Psychology Open*, 7(2), 205510292095471. <https://doi.org/10.1177/2055102920954715>
- Langhinrichsen-Rohling, J., Thompson, K., Selwyn, C., Finnegan, H., & Misra, T. (2017). Maladaptive schemas mediate poor parental attachment and suicidality in college students. *Death Studies*, 41(6), 337–344. <https://doi.org/10.1080/07481187.2017.1280714>
- Le, T. L. (2017). *The Influence of Attachment Phenomena on Alcohol and Tobacco Use*. (Phd Thesis) University of Toronto, Toronto, ON.
- Lemelin, C., Lussier, Y., Brassard, A., & Naud, C. (2014). Risky sexual behaviours : The role of substance use , psychopathic traits , and attachment insecurity among adolescents and young adults in Quebec. *The Canadian Journal of Human Sexuality*, 23(3), 189–199. <https://doi.org/10.3138/cjhs.2625>
- Levitt, A., & Leonard, K. E. (2015). Insecure attachment styles, relationship-drinking contexts, and marital alcohol problems: testing the mediating role of relationship-specific drinking-to-cope motives. *Psychol Addict Behav*, 29(3), 696–705. <https://doi.org/10.1037/adb0000064>.Insecure
- Li, X., Bian, C., Chen, Y., Huang, J., Ma, Y., Tang, L., ... Yu, Y. (2015). Indirect aggression and parental attachment in early adolescence : Examining the role of perspective taking and empathetic concern. *PAID*, 86, 499–503. <https://doi.org/10.1016/j.paid.2015.07.008>
- Lim, K.-S., Wong, C. H., McIntyre, R. S., Wang, J., Zhang, Z., Tran, B. X., Tan, W., Ho, C. S., & Ho, R. C. (2019). Global lifetime and 12-month prevalence of suicidal behavior, deliberate self-harm and non-suicidal self-injury in children and adolescents between 1989 and 2018: A Meta-analysis. *International Journal of Environmental Research and Public Health*, 16(22), 4581. <https://doi.org/10.3390/ijerph16224581>
- Lindberg, M. A., & Zeid, D. (2017). Interactive pathways to substance abuse. *Addictive Behaviors*, 66, 76–82. <https://doi.org/10.1016/j.addbeh.2016.11.016>
- Liu, H., Dou, K., Yu, C., Nie, Y., & Zheng, X. (2021). The relationship between peer

- attachment and aggressive behavior among chinese adolescents: The mediating effect of regulatory emotional self-efficacy. *International Journal of Environmental Research and Public Health*, 18(13), 7123. <https://doi.org/10.3390/ijerph18137123>
- Lockhart, G., Phillips, S., Bolland, A., Delgado, M., Tietjen, J., & Bolland, J. (2017). Prospective relations among low-income african american adolescents ' maternal attachment security , self-worth , and risk behaviors. *Front Psychol*, 8(33). <https://doi.org/10.3389/fpsyg.2017.00033>
- Maalouf, E., Salameh, P., Haddad, C., Sacre, H., Hallit, S., & Obeid, S. (2022). Attachment styles and their association with aggression, hostility, and anger in Lebanese adolescents: a national study. *BMC Psychology*, 10(1). <https://doi.org/10.1186/s40359-022-00813-9>
- Magadi, M., Kaseje, D., Wafula, C., Kaseje, M., Ochola-Odhiambo, P., Ogotu-Owii, S., Orton, B., Onukwugh, F., Hayter, M., & Smith, L. (2021). Sexual and reproductive health knowledge and behavior of adolescent boys and girls aged 10–19 years in western Kenya: evidence from a cross-sectional pilot survey. *Journal of Biosocial Science*, 1–20. <https://doi.org/10.1017/s0021932021000353>
- Majimbo, E. (2017). Influence of attachment styles on academic performance of adolescents in high cost private secondary schools in Nairobi County , Kenya. *European Scientific Journal*, 13(10), 90–104. <https://doi.org/10.19044/esj.2017.v13n10p90>
- Malonda, E., Llorca, A., Mesurado, B., Samper, P., & Mestre, M. V. (2019). Parents or peers ? predictors of prosocial behavior and aggression : a longitudinal study. *Front Psychol*, 10(October), Article 2379. <https://doi.org/10.3389/fpsyg.2019.02379>
- Mancinelli, E., Li, J.-B., Lis, A., & Salcuni, S. (2021). Adolescents' attachment to parents and reactive–proactive aggression: The mediating role of alexithymia. *International Journal of Environmental Research and Public Health*, 18(24), 13363. <https://doi.org/10.3390/ijerph182413363>
- Marroquin, L. J. (2021). *The parental relationship and adolescent female risky sexual behavior at first sex and later*. (Doctoral Dissertation) Texas Woman's University, Denton, TX.
- Matson, P. A., Levy, R., Chung, S., & Ellen, J. M. (2014). Attachment style and risk for sexually transmitted infections within a prospective cohort of urban adolescent females. *Journal of Adolescent Health*, 54(2), S23–S24. <https://doi.org/10.1016/j.jadohealth.2013.10.061>
- Mbuthia, G., Wanzala, P., Ngugi, C., & Nyamogoba, H. (2019). Patterns of risky sexual behavior and associated factors among undergraduates in the coastal region of Kenya. *African Journal of Health Sciences*, 32(3), 16–26.

- Mcdade, E. M. (2013). *The Impact of Self-Reported Attachment Style on Aggression and Depressed Mood in Urban African American Adolescents*. (PhD Dissertation) University of Michigan, Ann Arbor, MI.
- Melesse, D. Y., Mutua, M. K., Choudhury, A., Wado, Y. D., Faye, C. M., Neal, S., & Boerma, T. (2020). Adolescent sexual and reproductive health in sub-Saharan Africa: Who is left behind? *BMJ Global Health*, 5(1), e002231. <https://doi.org/10.1136/bmjgh-2019-002231>
- Memiah, P., Wagner, F. A., Kimathi, R., Anyango, N. I., Kiogora, S., Waruinge, S., Kiruthi, F., Mwavua, S., Kithinji, C., Agache, J. O., Mangwana, W., Merci, N. M., Ayuma, L., Muhula, S., Opanga, Y., Nyambura, M., Ikahu, A., & Otiso, L. (2022). Voices from the youth in Kenya addressing mental health gaps and recommendations. *International Journal of Environmental Research and Public Health*, 19(9), 5366. <https://doi.org/10.3390/ijerph19095366>
- Merino, C., Underwood, L. A., Crump, Y., & Williams, C. (2018). The Relationship between attachment , depression , and anxiety in juveniles with sexual behavior problems. *J Ment Disord Treat*, 4(1). <https://doi.org/10.4172/2471-271X.1000152>
- Micheni, E. M, & Muketha, J. M. (2019). Analysis of the problem internet use (PIU) among adolescents in Kenyan schools. *Journal of Information Engineering and Applications*, 9(6), 23-39. <https://doi.org/10.7176/jiea/9-6-04>
- Miga, E. M., Hare, A., Allen, J. P., & Manning, N. (2010). The relation of insecure attachment states of mind and romantic attachment styles to adolescent aggression in romantic relationships. *Attach Hum Dev*, 12(5), 463–481. <https://doi.org/10.1080/14616734.2010.501971>
- Mikulincer, M., & Shaver, P. R. (2007). A behavioral systems perspective on the psychodynamics of attachment and sexuality. In D. Diamond, S. J. Blatt, & J. D. Lichtenberg (Eds.), *Attachment and sexuality* (pp. 51–78). The Analytic Press.
- Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry*, 11, 11–15.
- Mikulincer, M., & Shaver, P. R. (2016). *Attachment in adulthood: Structure, dynamics, and change* (2nd ed.). The Guilford Press.
- Milkman, H. B. & Wanderg, K. W (2012). Adolescent development and pathways to problem behavior. In: H. B. Milkman & K. W. Wanderg (Orgs). *Criminal conduct and substance abuse treatment for adolescents: Pathways to self-discovery and change*. (pp 21-54). SAGE.
- Miniati, M., Callari, A., & Pini, S. (2017). Adult attachment style and suicidality.

- Miranda-Mendizabal, A., Castellví, P., Parés-Badell, O., Alayo, I., Almenara, J., Alonso, I., Blasco, M. J., Cebrià, A., Gabilondo, A., Gili, M., Lagares, C., Piqueras, J. A., Rodríguez-Jiménez, T., Rodríguez-Marín, J., Roca, M., Soto-Sanz, V., Vilagut, G., & Alonso, J. (2019). Gender differences in suicidal behavior in adolescents and young adults: systematic review and meta-analysis of longitudinal studies. *International Journal of Public Health*, 64(2), 265–283. <https://doi.org/10.1007/s00038-018-1196-1>
- Mohammadzadeh, M., Awang, H., Jun, C. Y., Hashim, N. F., & Premkumar, A. (2020). Relationship between attachment styles and risk behavior (smoking and bullying) among secondary school students: An experience from Hulu Langat, Malaysia. *Iranian Journal of Public Health*. <https://doi.org/10.18502/ijph.v49i10.4708>
- Momeñe, J., Estévez, A., Pérez-García, A. M., Jiménez, J., Chávez-Vera, M. D., Olave, L., & Iruarrizaga, I. (2021). Substance abuse and its relationship to emotional dependence, attachment and emotional regulation in adolescents. *Anales de Psicología*, 37(1), 121–132. <https://doi.org/10.6018/analesps.404671>
- Monahan, K. C., Rhew, I. C., Hawkins, J. D., & Brown, E. C. (2015). Adolescent pathways to co-occurring problem behavior: the effects of peer delinquency and peer substance use. *J Res Adolesc*, 24(4), 630–645. <https://doi.org/10.1111/jora.12053>. Adolescent
- Moullin, S., Waldfogel, J., & Washbrook, E. (2018). Parent-child attachment as a mechanism of intergenerational (dis)advantage. *Families, Relationships and Societies*, 7(2), 265–284. <https://doi.org/10.1332/204674317X15071998786492>
- Muarifah, A., Mashar, R., Hashim, I. H. M., Rofiah, N. H., & Oktaviani, F. (2022). Aggression in adolescents: The role of mother-child attachment and self-esteem. *Behavioral Sciences*, 12(5), 147. <https://doi.org/10.3390/bs12050147>
- Mugambi, P., Munene, A., & Mogute, M. (2020). Prevalence of Suicidal Behavior among Adolescents with Depressive Disorders and Posttraumatic Stress in Informal Settlements of Nairobi, Kenya. *African Journal of Clinical Psychology*, 03(01), 1–25.
- Mugenda, O. & Mugenda, A. (2003). *Research methods quantitative and qualitative approaches*. Act Press.
- Muhammad, Z. J., & Ayryza, Y. (2020). Relationship between child-mother secure attachment style and violence in adolescent romantic relationship. *Psychological Research and Intervention*, 3(2), 80–91. <https://doi.org/10.21831/pri.v3i2.42195>

- Murphy, T. P., Laible, D., & Augustine, M. (2017). The influences of parent and peer attachment on bullying. *Journal of Child and Family Studies*, 26(5), 1388–1397. <https://doi.org/10.1007/s10826-017-0663-2>
- Musetti, A., Terrone, G., Corsano, P., Magnani, B., & Salvatore, S. (2016). Exploring the link among state of mind concerning childhood attachment , attachment in close relationships , parental bonding , and psychopathological symptoms in substance users. *Front Psychol*, 7(1193). <https://doi.org/10.3389/fpsyg.2016.01193>
- Musyoka, C. M., Mbwayo, A., Donovan, D., & Mathai, M. (2020). Alcohol and substance use among first-year students at the University of Nairobi, Kenya: Prevalence and patterns. *PLOS ONE*, 15(8), e0238170. <https://doi.org/10.1371/journal.pone.0238170>
- Mutiso, V. N., Musyimi, C. W., Krolinski, P., Neher, C. M., Musau, A. M., Tele, A., & Ndeti, D. M. (2019). Relationship between bullying, substance use, psychiatric disorders, and social problems in a sample of Kenyan secondary schools. *Prevention science*, 20(4), 544-554.
- Nakhoul, L., Obeid, S., Sacre, H., Haddad, C., Soufia, M., Hallit, R., ... Hallit, S. (2020). Attachment style and addictions (alcohol , cigarette , waterpipe and internet) among Lebanese adolescents : a national study. *BMC Psychology*, 8(33).
- Nassiuma, D. K. (2000). *Survey sampling: Theory and methods*. University of Nairobi Press.
- Neuman, W. L. (2007). *Basics of social research: Qualitative and quantitative approaches*. Pearson Education, Inc
- Ngesu, L. M., & Kyule, M. (2019). Parenting Dilemma: the kenyan experience. *International Journal of Innovative Research and Advanced Studies*, 6(6), 59–61.
- Ngondi, J. M. (2016). *The Relationship between K.C.S.E Examination Scores and Symptoms of Anxiety, Depression and Suicide Ideation among Adolescents in Nairobi, Kenya*. (Unpublished Masters Thesis) United States International University, Nairobi
- Nikiforou, M., Georgiou, S. N., & Stavriniades, P. (2013). Attachment to parents and peers as a parameter of bullying and victimization. *Journal of Criminology*, 2013.
- Nivette, A., Sutherland, A., Eisner, M., & Murray, J. (2018). Sex differences in adolescent physical aggression: Evidence from sixty-three low-and middle-income countries. *Aggressive Behavior*, 45(1), 82–92. <https://doi.org/10.1002/ab.21799>
- Noll, M., Noll, P. R. E. S., Gomes, J. M., Soares Júnior, J. M., Silveira, E. A., & Sorpreso, I. C. E. (2020). Associated factors and sex differences in condom non-use

- among adolescents: Brazilian National School Health Survey (PeNSE). *Reproductive Health*, 17(1). <https://doi.org/10.1186/s12978-020-00987-8>
- Norman, J. M. (2017). *Implications of parenting behavior and adolescent attachment for understanding adolescent sexting*. (Doctoral Dissertation) University of Windsor, Windsor ON.
- Nwagboso, L. N. (2018). *Single parent attachment styles and its relationship with teenage pregnancy in Namibia*. (Masters' Thesis) University of South Africa, Pretoria.
- Obare, F., Odwe, G., & Birungi, H. (2016). *Adolescent sexual and reproductive health situation : insights from the 2014 Kenya demographic and health survey*. Nairobi.
- Ochieng, J. A. (2013). *Risky sexual behaviour among adolescents attending public secondary schools in Nairobi, Kenya*. (Master's Thesis) University of Nairobi, Nairobi.
- Okeke, N. U., & Anierobi, E. I. (2020). The relationship between parental attachment and aggressive behaviours among in-school adolescents in Anambra State, Nigeria. *Journal of Guidance and Counselling Studies*, 4(1), 338–351. <https://doi.org/10.5281/zenodo.4055779>
- Okello, J., Nakimuli-mpungu, E., Musisi, S., Broekaert, E., & Derluyn, I. (2014). The association between attachment and mental health symptoms among school-going adolescents in northern Uganda : the moderating role of war-related trauma. *PLoS ONE*, 9(3), 1–7. <https://doi.org/10.1371/journal.pone.0088494>
- Olmstead, S. B. (2020). A decade review of sex and partnering in adolescence and young adulthood. *Journal of Marriage and Family*, 82, 769-795. <https://doi.org/10.1111/jomf.12670>
- Ombasa, E.A. (2021). *Influence of peer bullying on student engagement in school activities: the case of secondary schools in Laikipia County, Kenya*. (Master's Thesis) Kenyatta University, Nairobi
- Önen, S., Inel, A., Kanat, B., Taymur, İ., Budak, E., & Eraybay, S. (2017). Comparison of childhood traumatic experience and attachment styles among patients in suicide attempts with drugs and the healthy control group. *Journal of Cognitive-Behavioral Psychotherapy and Research*, 1. <https://doi.org/10.5455/jcbpr.244662>
- Opere, O. A., Kamere, I., & Wawire, V. (2019). School violence as a cause of non-peaceful coexistence in public secondary schools in. *Open Journal of Social Sciences*, 7, 130–145. <https://doi.org/10.4236/jss.2019.79010>
- Orodho, A.J. (2012). *Techniques of writing research proposals and reports in education*

and social science. Kanezja Publishers, Nairobi

- Owino, J. (2017). *Awareness and Knowledge of drug and substance use among 18-24 year-old female adolescents: a case study of Soweto - Kayole Nairobi County*. (Master's Thesis) University of Nairobi, Nairobi.
- Owuor, H. A., & Karega, M. (2019). Relationship between attachment styles and risk for problematic drug use among undergraduate students in selected universities In Kenya. *African Journal of Alcohol & Drug Abuse*, 2, 20–30.
- Özer, Ü., Yildirim, E. A., & Erkoç, Ş. N. (2015). Relationship of suicidal ideation and behavior to attachment style in patients with major depression. *Arch Neuropsychiatr*, 52, 283–288. <https://doi.org/10.5152/npa.2015.7459>
- Pakdaman, S., Saadat, S. H., Shahyad, S., Ahmadi, K., & Hosseinialhashemi, M. (2016). The role of attachment styles and resilience on loneliness. *Int J Med Res Health Sci*, 5(9s), 268–274.
- Paulk, A., & Zayae, R. (2013). Attachment style as a predictor of risky sexual behavior in adolescents. *Journal of Social Sciences*, 9(2), 42–47.
- Pei, M. (2011). *The relation between parent-child attachment, child-rearing behaviors, and aggression in childhood and adolescence*. (Master's Thesis) Brandeis University, Waltham MA.
- Perera, H. (2013). Childhood predictors of adult mental disorders: Implications for prevention. *Journal of Psychiatry*, 4, 1-2. doi: <http://doi.org/10.4038/sljpsyc.v4i1.5712>
- Pereira, A. A. G., & Cardoso, F. M. dos S. (2017). Searching for psychological predictors of suicidal ideation in university students investigando preditores psicológicos de ideação suicida em estudantes universitários. *Psicologia: Teoria E Pesquisa*, 33, 1–8.
- Pinyopornpanish, K., Thanamee, S., Jiraporncharoen, W., Thaikla, K., McDonald, J., Aramrattana, A., & Angkurawaranon, C. (2017). Sexual health, risky sexual behavior and condom use among adolescents young adults and older adults in Chiang Mai, Thailand: findings from a population based survey. *BMC Research Notes*, 10(1). <https://doi.org/10.1186/s13104-017-3055-1>
- Pooravari, M., Ghanbari, S., Mohammadi, A. Z., Panaghi, L., & Aghdasta, E. (2014). The comparison of tendency to risky behaviour, in secure/insecure attachment in parents. *International Journal of Scientific Research and Innovative Technology*, 1(1), 11–25.
- Potard, C., Courtois, R., Réveillère, C., Bréchon, G., & Courtois, A. (2017). The

- relationship between parental attachment and sexuality in early adolescence. *International Journal of Adolescence and Youth*, 22(1), 47–58. <https://doi.org/10.1080/02673843.2013.873065>
- Potard, C., Combes, C., & Labrell, F. (2020). Suicidal ideation among french adolescents: Separation anxiety and attachment according to sex. *The Journal of Genetic Psychology*, 181(6), 470–488. <https://doi.org/10.1080/00221325.2020.1822773>
- Ratip, D. (2013). *The role of attachment in violent offending and violence in institutions*. (Doctoral Dissertation) University of Birmingham, Birmingham UK.
- Rawatlal, N., Kliewer, W., & Pillay, B. J. (2015). Adolescent attachment , family functioning and depressive symptoms. *S Afr J Psychiatr*, 21(3), 80–85. <https://doi.org/10.7196/SAJP.8252>
- Reyes, B. D., Hargreaves, D. S., & Creese, H. (2021). Early-life maternal attachment and risky health behaviours in adolescence: findings from the United Kingdom Millennium Cohort Study. *BMC Public Health*, 21(1). <https://doi.org/10.1186/s12889-021-12141-5>
- Ristić-Dimitrijević, R., Lazić, D., Nenadović, M., Djokić-pješčić, K., Klidonas, N., & Stefanović, V. (2011). Aggression in adolescents : characteristics and treatment. *Srp Arh Celok Lek*, 139(suppl 1), 61–64. <https://doi.org/10.2298/SARH11S1061R>
- Rohani, F., & Esmaeili, M. (2020). Psychological factors of vulnerability to suicide ideation: Attachment styles, coping strategies, and dysfunctional attitudes. *J Educ Health Promot*, 9(50). https://doi.org/10.4103/jehp_260_19
- Rozzaqyah, F., Ar, S., & Wisma, N. (2020). Aggressive behavior : Comparative study on girls and boys in the middle school. *Advances in Social Science, Education and Humanities Research*, 513, 416–420.
- Sajjadi, S. F., Behbuei, S., & Riyahi, H. (2019). Role of early traumatic life events , insecure attachment style and callous- unemotional traits in predicting aggression in high school students. *Razavi International Journal of Medicine*, 7(2). <https://doi.org/10.30483/RIJM.2019.118317>
- Santona, A., De Cesare, P., Tognasso, G., De Franceschi, M., & Sciandra, A. (2019). The mediating role of romantic attachment in the relationship between attachment to parents and aggression. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01824>
- Sarracino, D. & Innamorati, M. (2012). Attachment, social value orientation and at-risk behavior in early adolescence. In C. Bassani (Ed.), *Adolescent behavior* (pp.97-116). New York: Nova Publishers.

- Schindler, A. (2019). Attachment and substance use disorders—theoretical models, empirical evidence, and implications for treatment. *Frontiers in Psychiatry, 10*(727). <https://doi.org/10.3389/fpsy.2019.00727>
- Schindler, A., & Broning, S. (2015). A Review on attachment and adolescent substance abuse: empirical evidence and implications for prevention and treatment. *Substance Abuse, 36*(3), 304–313. <https://doi.org/10.1080/08897077.2014.983586>
- Schoeps, K., Monaco, E., Cotoi, A., & Montoya-Castilla, I. (2020). The impact of peer attachment on prosocial behavior, emotional difficulties and conduct problems in adolescence: The mediating role of empathy. *PLoS ONE, 15*(1). <https://doi.org/10.1371/journal.pone.0227627>
- Sheftall, A. H., Mathias, C. W., Furr, R. M., & Dougherty, D. M. (2013). Adolescent attachment security, family functioning, and suicide attempts. *Attach Hum Dev, 15*(4), 368–383. <https://doi.org/10.1080/14616734.2013.782649>. Adolescent
- Sheftall, A. H., Schoppe-Sullivan, S. J., & Bridge, J. A. (2014). Insecure attachment and suicidal behavior in adolescents. *Crisis, 35*(6), 426–430. <https://doi.org/10.1027/0227-5910/a000273>. Insecure
- Sheinbaum, T., Bifulco, A., Biful, Ballespi, S., Mitjavila, M., Kwapil, T. R., & Barrantes-Vidal, N. (2015). Interview investigation of insecure attachment styles as mediators between poor childhood care and schizophrenia-spectrum phenomenology. *PLoS ONE, 10*, 1–12. <http://doi.org/10.1371/journal.pone.0135150>
- Shi, X., Wang, B., He, T., Wu, L., & Zhang, J. (2020). Secure attachments predict prosocial behaviors: A moderated mediation study. *PsyCh Journal*. <https://doi.org/10.1002/pchj.348>
- Shongwe, M. C., Chung, M.-H., Chien, L.-Y., & Chang, P.-C. (2021). Does parenting style moderate the relationship between parent-youth sexual risk communication and premarital sexual debut among in-school youth in Eswatini? *PLOS ONE, 16*(1), e0245590. <https://doi.org/10.1371/journal.pone.0245590>
- Shumaker, D. M., Deutsch, R. M., & Brenninkmeyer, L. (2009). How do i connect? attachment issues in adolescence. *Journal of Child Custody, 6*, 91–112. <https://doi.org/10.1080/15379410902894866>
- Simsek, G., Unubol, B., & Bilici, R. (2021). Attachment styles of parents with alcohol use disorder and the relation of their parenting perception to their parenting attitudes. *ALPHA PSYCHIATRY, 22*(6), 308–317. <https://doi.org/10.5152/alphapsychiatry.2021.21239>
- Sprecher, S. (2013). Attachment style and sexual permissiveness: The moderating role of

- gender. *Personality and Individual Differences*, 55(4), 428-432. doi:10.1016/j.paid.2013.04.005
- Stagaki, M., Nolte, T., Feigenbaum, J., King-Casas, B., Lohrenz, T., Fonagy, P., & Montague, P. R. (2022). The mediating role of attachment and mentalising in the relationship between childhood maltreatment, self-harm and suicidality. *Child Abuse & Neglect*, 128, 105576. <https://doi.org/10.1016/j.chiabu.2022.105576>
- Suárez Colorado, Y., & Campo-Arias, A. (2019). Asociación entre apego y riesgo suicida en adolescentes escolarizados de Colombia. *Revista Chilena de Pediatría*, 90(4), 392. <https://doi.org/10.32641/rchped.v90i4.985>
- Substance Abuse and Mental Health Services Administration. (2021). *Key substance use and mental health indicators in the United States: Results from the 2020 National Survey on Drug Use and Health* Retrieved from <https://www.samhsa.gov/data>
- Sun, C. J., Seloilwe, E. S., Magowe, M., Dithole, K. S., Miller, K. S., & St. Lawrence, J. S. (2018). Gender differences in sexual and reproductive health protective and risk factors of Botswana adolescents: Implications for parent and adolescent interventions. *AIDS Education and Prevention*, 30(1), 35–46.
- Sutiyo, Z. D. A. P. (2018). The effect of attachment style on adolescent's conflict resolution styles. *Proceedings of the 3rd ASEAN Conference on Psychology, Counselling, and Humanities (ACPOCH 2017)*. <https://doi.org/10.2991/acpoh-17.2018.53>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach ' s alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Thibodeau, M.-ève, Lavoie, F., Hébert, M., & Blais, M. (2017). Pathways linking childhood maltreatment and adolescent sexual risk behaviors: The role of attachment security. *J Sex Res*, 54(8), 994–1005. <https://doi.org/10.1080/00224499.2017.1316816>. Pathways
- Tracy, J. L., Shaver, P. R., Albino, A. W., & Cooper, M. L. (2003). Attachment styles and adolescent sexuality. In P. Florsheim (Ed.), *Adolescent romantic relations and sexual behavior: Theory, research, and practical implications* (pp. 137–159). Lawrence.
- Trub, L., & Starks, T. J. (2017). Insecure attachments: Attachment, emotional regulation, sexting and condomless sex among women in relationships. *Computers in Human Behavior*, 71, 140–147. <https://doi.org/10.1016/j.chb.2017.01.052>
- Tucker, J. S., Rodriguez, A., Davis, J. P., & D'Amico, E. J. (2022). Cross-lagged associations of insecure attachment style, alcohol use, and sexual behavior during emerging adulthood. *Archives of Sexual Behavior*. <https://doi.org/10.1007/s10508->

- Tuckman, B.W. & Harper, B.E. (2012) *Conducting educational research* (6th ed). Rowman & Littlefield Publishers, Inc.
- Tuncay, A. F., Kiran, B., & Cakmak, S. (2022). Investigation of the relationship between the starting age of substance, alcohol, cigarette use, attachment styles, and temperament features of substance users. *ADDICTA: The Turkish Journal on Addictions*, 9(1), 1–7. <https://doi.org/10.5152/addicta.2021.21046>
- Tussey, B. E., Tyler, K. A., & Simons, L. G. (2018). Poor parenting, attachment style, and dating violence perpetration among college students. *Journal of Interpersonal Violence*, 088626051876001. <https://doi.org/10.1177/0886260518760017>
- UNESCO (2019). *Behind the numbers: Ending school violence and bullying (Revised Edition)*. UNESCO
- Vagos, P., & Carvalhais, L. (2020). The impact of adolescents' attachment to peers and parents on aggressive and prosocial behavior: A short-term longitudinal study. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.592144>
- Van den Berg, A., & Oei, K. (2009). Attachment and psychopathy in forensic patients. *Mental Health Review Journal*, 14, 40 – 51.
- Van Oudenhoven, J. P. L. M., Hofstra, J., & Bakker, W. (2003). Ontwikkeling en evaluatie van de Hechtingstijlijst [Development and evaluation of the Attachment Styles Questionnaire]. *Nederlands Tijdschrift voor de Psychologie en haar Grensgebieden*, 58, 95-102.
- Velotti, P., Rogier, G., Beomonte Zobel, S., Chirumbolo, A., & Zavattini, G. C. (2020). The relation of anxiety and avoidance dimensions of attachment to intimate partner violence: A meta-analysis about perpetrators. *Trauma, Violence, & Abuse*, 152483802093386. <https://doi.org/10.1177/1524838020933864>
- Vu, B. T., Van Heel, M., Finet, C., Cuyvers, B., Houbrechts, M., Hoang, T. D., Cao, T. A., Duong, H. H., & Bosmans, G. (2022). Comparing attachment across cultures, child gender, age, and parental gender: Vietnamese versus Belgian adolescents' self-reported attachment anxiety and avoidance. *Psychological Assessment*. <https://doi.org/10.1037/pas0001143>
- wa Teresia, J. N. (2021). Juvenile delinquency and crime Nairobi slum areas, Kenya. *East African Journal of Arts and Social Sciences*, 4(1), 22–38. <https://doi.org/10.37284/eajass.4.1.449>
- Waithima, C. (2017). Substance use assessment among school going adolescents in Kenya. *African Journal of Clinical Psychology*, 1, 23–35

- Walker, J. L. & Mata Kreitler, C. (2018). Attachment styles and perceptions of alcohol consumption in a college population. *Psychology and Behavioral Science International Journal*, 8(4). <https://doi.org/10.19080/pbsij.2018.08.555743>
- Wamaitha, J. A. (2017). *Knowledge, attitude and practice of condom use among out of school adolescent girls and young women aged 15- 24: a case study of Majengo slums, Nairobi County*. (Master's Thesis) University of Nairobi, Nairobi.
- Wambua, G. N., Obondo, A., Bifulco, A., & Kumar, M. (2018). The role of attachment relationship in adolescents ' problem behavior development : a cross - sectional study of Kenyan adolescents in Nairobi city. *Child and Adolescent Psychiatry and Mental Health*, 12(27). <https://doi.org/10.1186/s13034-018-0237-0>
- Waraan, L., Mehlum, L., Rognli, E. W., Czajkowski, N. O., & Aalberg, M. (2021). Associations between insecure attachment styles to parents and suicidal ideation in adolescents with depression. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*, 9, 41–51. <https://doi.org/10.21307/sjcapp-2021-006>
- Weisskirch, R. S., Drouin, M., & Delevi, R. (2017). Relational anxiety and sexting. *The Journal of Sex Research*, 54(6), 685–693. <https://doi.org/10.1080/00224499.2016.1181147>
- Wojtynkiewicz, E., Glogowska, K., & Mickiewicz, K. (2014). Attachment relationships among alcohol dependent persons. *Alkoholizm I Narkomania*, 27(2), 145–161. [https://doi.org/10.1016/S0867-4361\(14\)70010-0](https://doi.org/10.1016/S0867-4361(14)70010-0)
- Woo, J., Wrath, A. J., & Adams, G. C. (2020). The relationship between attachment and self-injurious behaviors in the child and adolescent population: A systematic review of the literature. *Archives of Suicide Research*, 1–22. <https://doi.org/10.1080/13811118.2020.1804024>
- Woolley, N. O., & Macinko, J. (2019). Association between sociodemographic characteristics and sexual behaviors among a nationally representative sample of adolescent students in Brazil. *Cadernos de Saúde Pública*, 35(2). <https://doi.org/10.1590/0102-311x00208517>
- World Health Organization. (2008). 10 Facts on adolescent health. Retrieved on April 11, 2016, from <http://www.who.int/features/factfiles/adolescent health /en/index.html>
- Wrath, A. J., & Adams, G. C. (2018). Self-injurious behaviors and adult attachment: A review of the literature. *Archives of Suicide Research*, 1–24. <https://doi.org/10.1080/13811118.2018.1486251>
- Wu, J., Wang, X., Zheng, Y., Shi, J., Liu, J., Yang, L., Kang, C., Yang, W., Guan, T., Liu, S., & Zhao, N. (2022). *Sex Differences in the Prevalence and Clinical*

Correlates of Suicidal Ideation in Adolescent Patients with Depression in a Large Sample of Chinese. <https://doi.org/10.21203/rs.3.rs-1400419/v1>

- Yamane, T. (1967) *Statistics: An introductory analysis* (2nd ed). Harper & Row.
- Yarkovsky, N., & Timmons-Fritz, P. A. (2013). Attachment Style , early sexual intercourse , and dating aggression victimization. *Journal of Interpersonal Violence*, 29(2), 279–298. <https://doi.org/10.1177/0886260513505143>
- Yaseen, Z. S., Galynker, I. I., Briggs, J., Freed, R. D., & Gabbay, V. (2016). Functional domains as correlates of suicidality among psychiatric inpatients. *Journal of Affective Disorders*, 203, 77–83. <https://doi.org/10.1016/j.jad.2016.05.066>
- Ying, L., Ma, F., Huang, H., Guo, X., Chen, C., & Xu, F. (2015). Parental monitoring, parent-adolescent communication, and adolescents' trust in their parents in china. *PLOS ONE*, 10(8), e0134730. <https://doi.org/10.1371/journal.pone.0134730>
- Zapf, J. L., Greiner, J., & Carroll, J. (2018). Attachment styles and male sex addiction. *Sexual Addiction & Compulsivity*, 15(2), 158–175. <https://doi.org/10.1080/10720160802035832>
- Zeinali, A., Sharifi, H., Enayati, M., Asgari, P., & Pasha, G. (2011). The mediational pathway among parenting styles, attachment styles and self-regulation with addiction susceptibility of adolescents. *Journal of Research in Medical Sciences* 2011; 16(9): 1105-1121
- Zimonyi, S., Kasos, K., Halmai, Z., Csirmaz, L., Stadler, H., Rózsa, S., Szekely, A., & Kotyuk, E. (2021). Hungarian validation of the Buss–Perry Aggression Questionnaire—Is the short form more adequate? *Brain and Behavior*, 11(5). <https://doi.org/10.1002/brb3.2043>
- Zisk, A., Abbott, C. H., Ewing, S. K., Diamond, G. S., & Kobak, R. (2017). The Suicide Narrative Interview: Adolescents' attachment expectancies and symptom severity in a clinical sample. *Attach Hum Dev*, 19(5), 447–462. <https://doi.org/10.1080/14616734.2016.1269234>.
- Zortea, T. C., Gray, C. M., & O'Connor, R. C. (2020). The relationship between adult attachment and suicidal thoughts and behaviors : a systematic review. *Archives of Suicide Research*, 25(1), 1–36. <https://doi.org/10.1080/13811118.2019.1661893>

APPENDICES

Appendix I: Letter to the Respondents

Owino W. Odera
Maasai Mara University
P.O Box 861,
NAROK

Dear student;

I am a PhD student from Maasai Mara University conducting research on the relationships between attachment styles and students' behaviors in public secondary schools in Nairobi County. Your participation will help me achieve my research objective and will be highly appreciated. All the information you give in the questionnaire will be kept confidential and will not be shown to your teachers. You will not write your names, admission numbers or any personal detail in the questionnaire that can identify you. Your participation is voluntary.

If you agree to participate, please sign in the space below. Thank you.

Signature _____ (I agree to participate in the study)

Thank you for accepting to participate in the study.

Appendix II: Students' Questionnaire

Section A: Background Information

Please select the option that is applicable to you:

(a) Sex: Male [] Female []

(b) Age (in years): _____

(c) What is your parent(s)/guardian(s) marital status?

Married []

Divorced []

Single []

Separated []

Widowed []

Other: Specify _____

(d) Which of the following describes your **living arrangement at home**?

(1) Mother and father []

(2) Mother only []

(3) Father only []

(4) Guardians/relatives []

(5) Live on your own []

In the following sections, you are presented with a number of statements that describe you. Read each statement and select the option that **best describes you** by putting an “**X**” in the spaces provided.

Section B: Attachment Styles Questionnaire

	Statement about you...	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	I feel very comfortable sharing my feelings with friends and other people I am close to					
2	I try to avoid forming close relationships with other people					
3	I find it easy to trust other people					
4	I find it easy to form close friendships or relationships with other people					
5	I feel very comfortable in relationships that are very close or intimate					
6	I think it is important that people should be able to depend on each other					
7	I feel that I can trust other people to be there for me when I need them					
	Statement about you...	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	I often ask myself whether people like me					
2	Sometimes I feel that I like other people more than they like me					
3	I am often afraid that other people don't like me					

4	I fear to be left alone					
5	I am worried when other people don't like me					
6	I usually want to find out whether other people like me or not					
7	I usually feel like other people are interesting but they don't find me interesting					
	Statement about you...	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	I feel OK even if I don't have close friendship or relationships with other people					
2	I feel it is important to me to be independent					
3	I prefer that other people don't depend on me, and I also don't want to depend on them					
4	I like to be self-sufficient i.e. I don't want to need others					
5	I am not worried or afraid of being alone : I do not need other people that much					
	Statement about you...	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	I wish to be more open to others, but I feel I cannot trust other people					
2	I would like to have closer friendship or relationships with other people, but I find it difficult to fully trust them					
3	I'm afraid I will be disappointed if I become very close to other people					
4	I am afraid to get into close friendships or relationships because I am afraid of getting hurt					
5	I feel very uncomfortable the closer my friendships or relationships with other people become					

Section C: Suicidal Behavior

	Statement about you...	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	There are times when I have felt it would be better if I was not alive					
2	I have felt that nobody cares for me and it would be better if I was not alive					
3	When life gets difficult for me, I have thought about ending my life					
4	I usually threaten to end my life when stressed or annoyed by close relatives and friends					
5	At times I feel am a burden to others, and ending my own life will remove the burden					
		Not at All	One or Two Times	Three to Four Times	Five to Six Times	Six or More Times
1	I have ever thought about a method I could use to end my life but never planned to do it					
2	I have seriously thought of ending my life but did not do it					

3	I have wished I could get an easy way to end my life in order to end my problems					
4	I have made a plan to end my life but I really did not want to die					
5	I have ever taken some actions that could end my life but I did not really want to die at the time					
6	I have taken actions to end my life and I really wanted to die but failed					

Section D: Aggressive Behavior

Statement about you...		Extremely UNTRUE of me	Somehow UNTRUE	Neither TRUE nor UNTRUE	Somehow TRUE	Extremely TRUE of me
1	Sometimes I can't resist hitting another person even if there is no good reason for hitting them					
2	If I am provoked enough, I may hit another person					
3	If somebody hits me, I hit them also					
4	I get into fights more often than the average person					
5	If I have to use violence to protect my rights, I will					
6	Some people have pushed me so far that we physically fought					
7	I have become so angry that I have broken things					
Statement about you...		Extremely UNTRUE of me	Somehow UNTRUE	Neither TRUE nor UNTRUE	Somehow TRUE	Extremely TRUE of me
1	I tell my friends openly when I disagree with them					
2	I often find myself disagreeing with people					
3	When people annoy me, I may tell them what I think about them					
4	I easily get into arguments when people disagree with me					
5	My friends say that I like to argue a lot					
6	I tell people the truth even if it hurts their feelings					
7	I am not afraid of hurting someone's feelings by speaking my mind					

Section E: Substance Use

Statement about you...		Not at All	One or Two Times	Three to Four Times	Five to Six Times	Six or More Times
1	Have you consumed alcohol or any drugs at a party or social event in the past year?					

2	In the past year, have you taken alcohol or other drugs under pressure although you didn't want to?					
3	Have you taken alcohol in the past 12 months ?					
4	Have you smoked cigarettes in the past 12 months					
5	Have you ever taken enough alcohol to get drunk in the past one year?					
6	Have you smoked bhang in the past 12 months					
7	Have you ever taken alcohol or other drugs to relieve stress or worry?					
8	Have you ever used other intoxicating drugs apart from alcohol, cigarettes and bhang in the past year?					
9	In the past one year, have you taken alcohol or other drugs when bored or lonely?					
10	Have you taken drugs or alcohol in order to feel accepted by your friends?					

Section F: Risky Sexual Behavior

	Statement about you...	Not at All	One or Two Times	Three to Four Times	Five to Six Times	Six or More Times
1	Have you sent someone explicit pictures of yourself in the past 12 months ?					
2	Have you taken part in sexual or romantic activity* even though you really never wanted to but boy/girlfriend insisted?					
3	Have you ever taken alcohol or other drugs just before engaging in romantic activities or sexual intercourse?					
4	Have you ever had sexual intercourse with a boy/girlfriend or any other person of the opposite sex in your whole life?					
5	If you have ever had sex with boy/girlfriend, how old were you the first time you did? (indicate in the appropriate space) _____	Not at all	Below 13	14 to 15	16 to 17	18 & above
		→				
6	If you have ever had sex with boy/girlfriend, have you had more than one boy/girlfriend? _____	None	Only One	Two	Three	4 & above
		→				
7	Have you had sexual intercourse with your boy/girl friend or any other person of the opposite sex in the past 12 months ?					
8	Have you ever had sex with a person you did not know very well?					
9	Have you ever had sexual intercourse with a person older than you by more than five years ?					
10	Have you ever had sexual intercourse without using a condom?					

11	In one week , approximately how many times do you look at sexually explicit material e.g. videos?					
----	----------------------------------------------------------------------------------------------------------	--	--	--	--	--

*note: Romantic activities refer to things like kissing, petting or fondling each other's genitals but without having sex

Thank you for your time. Your participation is highly appreciated

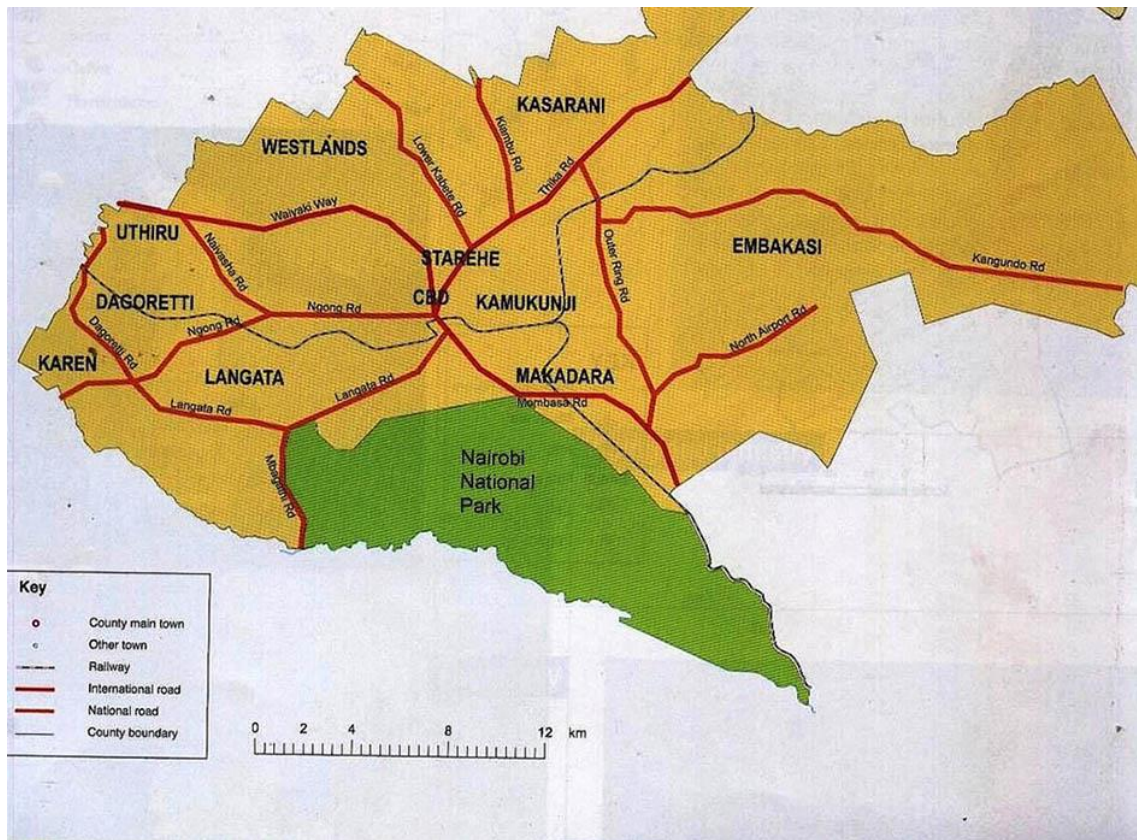
Appendix III: Time Frame

Activity	2021			2022						
	Jan - Sep	Sep - Nov	Nov - Dec	Jan - Mar	Mar - May	May - Jul	Aug - Sep	Sep - Oct	Oct - Nov	Nov - Dec
Development of proposal and corrections										
Departmental presentation and corrections										
Faculty presentation and corrections										
Data collection										
Data analysis and report writing										
Submission of thesis draft and corrections										
Mock defense and corrections										
Submission for external examination										
Thesis defense										
Corrections and final submission										
Seminar presentation and graduation										


Appendix IV: Proposed Budget

Item	Cost (Ksh)
Printing	5,000
Photocopying	11,000
Stationery	10,000
Transport	20,000
Data analysis	30,000
Miscellaneous	10,000
Total	86,000

Appendix V: Map of Nairobi County



Appendix VI: Research Permit



REPUBLIC OF KENYA

Ref No: 988912

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Date of Issue: 04/February/2021

RESEARCH LICENSE




This is to Certify that Mr. WALTER ODERA OWINO of Maasai Mara University, has been licensed to conduct research in Nairobi on the topic: ATTACHMENT STYLES AS PREDICTORS OF SELECTED BEHAVIORS AMONG STUDENTS IN PUBLIC SECONDARY SCHOOLS IN NAIROBI COUNTY, KENYA for the period ending : 04/February/2022.

License No: NACOSTI/P/21/8837

988912
Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix VII: Letter of Research Authorization – Ministry of Education



Republic of Kenya

MINISTRY OF EDUCATION

STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telegrams: "SCHOOLING", Nairobi
Telephone: Nairobi 020 2453699
Email: rcenairobi@gmail.com
cdenairobi@gmail.com

REGIONAL DIRECTOR OF EDUCATION
NAIROBI REGION
NYAYO HOUSE
P.O. Box 74629 – 00200
NAIROBI

When replying please quote

Ref: RDE/NRB/RESEARCH/1/65 Vol.1

DATE: 19th February, 2021

Mr. Walter Odera Owino
Maasai Mara University

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on the topic: *"Attachment Styles as Predictors of Selected Behaviors among Students in Public Secondary Schools in Nairobi County, KENYA."*

This office has no objection and authority is hereby granted for a period, ending 4th February, 2022 as indicated in the request letter.

Kindly inform the Sub County Director of Education of the County you intend to visit.



JAMES KIMICHIO
FOR: REGIONAL DIRECTOR OF EDUCATION
NAIROBI.

Copy to: Director General/CEO
National Commission for Science, Technology and Innovation
NAIROBI.



Appendix VIII: Letter of Research Authorization – Maasai Mara University



MAASAI MARA UNIVERSITY

(OFFICE OF THE DIRECTOR, POSTGRADUATE STUDIES)

TEL. No.0722346 419
Email: graduatestudies@mmarau.ac.ke

P. O. Box 861-20500
NAROK, KENYA

Ref/MMU/AA0328/45/ VOL I (56)

Date: 25th January, 2021

Council Secretary,
National Council for Science and Technology,
P.O. Box 30623-00100
NAIROBI-KENYA

Dear Sir/Madam,

**RE: APPLICATION FOR A RESEARCH PERMIT FOR: OWINO WALTER ODERA,
REG. NO. DE05/4007/2014.**

I wish to recommend the above candidate for a permit to enable him collect data for his research. He defended his proposal at the School of Education successfully and has made the necessary corrections. The title is "*Attachment Styles as Predictors of Selected Behaviors Among Students in Public Secondary Schools in Nairobi County.*" He therefore qualifies for a permit to conduct research.

Any assistance accorded to him will be highly appreciated.

Thank you
MAASAI MARA UNIVERSITY
P. O. Box 861 - 20500
NAROK
R. Abila
25 JAN 2021

Prof. Romulus Abila, PhD.
DIRECTOR, BOARD OF POSTGRADUATE STUDIES