

**RELATIONSHIP BETWEEN SELECTED FORMS OF BULLYING AND
PSYCHOSOCIAL ADJUSTMENT AMONG SECONDARY SCHOOL
STUDENTS IN BUNGOMA COUNTY, KENYA**

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**A Thesis Submitted to the Institute of Postgraduate Studies of Kabarak University
in Partial Fulfilment of the Requirements for the Award of Doctor of Philosophy in
Counselling Psychology**

KABARAK UNIVERSITY

NOVEMBER, 2021

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RECOMMENDATION

To the Institute of Postgraduate Studies:

The research thesis entitled “**Relationship Between Forms of Bullying and Psychosocial Adjustment among Students of Public Secondary School in Bungoma County, Kenya**” and written by **Jane Ingado Misigo** is presented to the Institute of Postgraduate Studies of Kabarak University. We have reviewed the research Thesis and recommended it be accepted in partial fulfilment of the requirement for award of Doctor of Philosophy in Counselling Psychology.

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DEDICATION

This thesis is dedicated to my father, Albert Misigo and mother, Margaret Misigo for laying the foundation for my education. It was indeed a sacrifice. Thank you very much.

ABSTRACT

Psychosocial health of many learners at both primary and secondary levels in the 21st century has been adversely affected by various factors. Amongst many documented factors, the influence of bullying on psychosocial adjustment has not been established conclusively. In Bungoma County particularly, 20% of patients aged 14 to 20 years that visit the County referral hospital are cases of mental health issues. This age group is school going learners both at Primary and Secondary level. There are efforts to improve the psychosocial adjustment in schools but given that there are varying factors, the crucial question for this study is “Is there a relationship between selected forms of bullying and psychosocial adjustment among the learners?”. The purpose of this study was to explore the relationship between selected forms of bullying and psychosocial adjustment among students in secondary schools in Bungoma County, Kenya. The objectives of the study were to establish the relationship between forms of bullying and self-esteem, to examine the relationship between forms of bullying and aggression, to find out the relationship between forms of bullying and suicidal ideation and to find out the relationship between forms of bullying and social withdrawal. The study was anchored on two theories, the Social-ecological Theory by Bronfenbrenner and Psychosocial Theory by Eric Erickson. The study was based on descriptive cross-sectional survey and correlation designs. A total of 106,559 students in secondary schools in Bungoma County, 360 Guidance and Counselling teachers and 370 Deputy Principals drawn from 360 schools were targeted. Krecjie and Morgan (1970) formula was used to derive a sample size of 399 students who were selected by means of simple random sampling techniques. The school sample of 36 was sampled from a population of 360 schools. The Guidance and Counselling teachers and Deputy Principals were drawn from each of the 36 sampled schools. The Form three students were purposively selected. Stratified random sampling and simple random sampling were used to sample schools and students respectively. The Instruments for data collection were questionnaires and interview schedule. Face, content and construct validity of instruments were ascertained through experts in the department. A pilot study of the instruments established test-retest reliability of coefficient indices of between $r = 0.74$ for students and inter-rater reliability of $r = 0.72$ for Deputy Principals and $r = 0.76$ for Guidance and Counselling teachers. Face, content and construct validity was ascertained. Quantitative data was analysed using percentages, means, Pearson Products correlation and multiple regression analysis. Qualitative data was transcribed, organised into themes and reported in narrative. All analysis was done using the statistical Package for Social Sciences (SPSS) Version 25. The findings revealed that there was a significant negative relationship between forms of bullying and self-esteem $r = - 0.34$; there was a significant positive relationship between forms of bullying and depression $r = 0.38$; there was a significant positive relationship between forms of bullying and aggression $r = 0.44$; there was a significant positive relationship between forms of bullying and suicidal ideation $r = 0.42$ and there was a significant positive relationship between forms of bullying and social withdrawal $r = 0.35$. The null hypotheses were all rejected. The study concludes that there was a significant relationship between forms of bullying and student psycho-social adjustment. The study recommends that, Guidance and Counselling department should be strengthened to offer psychological services to students. The findings give an empirical backing to policy makers in addressing bullying as an important variable among contributors to student psychosocial adjustment.

Key Words: Bullying, Self-Esteem, Depression, Aggression, Suicidal Ideation, Social Withdrawal.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAUW	American Association of University Women
AOR	Adjusted Odds Ratio
CDC	Centre for Disease Control
NACOSTI	National Commission for Science Technology and Innovation
RSES	Rosenberg Self-Esteem Scale
SEI-HS	Social Exclusion Index for Health Surveys
SPSS	Statistical Package for Social Sciences
USA	United States of America
W.H.O	World Health Organisation
M.O.E	Ministry of Education

OPERATIONAL DEFINITIONS OF TERMS

Adolescence: Refers to a period of transition between childhood and adulthood. In this study, it refers to the developmental stage of Form 3 students between 14 and 19 years.

Aggression: Refers to feeling of anger or antipathy resulting in hostile or violent behaviour in readiness to attack or confront. In this study, it refers to harmful social interactions with the intention of inflicting damage or other unpleasantness upon another individual.

Bullying: Refers to aggressive behaviour repeatedly done over time with an intention of doing harm characterised with an imbalance in power. In this study, this refers to repeated acts of cyber bullying, social exclusion, sexual bullying and stalking targeting a weaker or relatively defenceless students.

Bullying-Victims: Refers to individuals that are both victims and bullies. In this study it refers to students who have been bullied but also engage in bullying.

Co-education: Refers to educating both sexes jointly at the same institution. In this study it refers to secondary institution that are categorised for both boys and girls.

Cyber Bullying: This refers to wilful and repeated harm inflicted through the use of cell phones, computers and other electronic devices. In this study, it refers to bullying using cell phone, computers and tablets. It could be through emails, instant messaging chat room or websites.

Psycho Social Adjustment: This refers to people's capacity to adapt to the environment. In this study it refers to emotional and behavioural response to bullying. This includes; depression, low self-esteem suicidal ideation and aggression, anger, absenteeism, and poor academic achievements.

School: Refers to institution of learning. In this study, it refers to Secondary institution of learning

Self-Esteem: Refers to individual's perception of their own value and worth. In this study it refers to favourable or unfavourable attitude towards the self. Such as "I feel good about myself", "I like my being just the way I am".

Sexual Bullying: Refers to uninvited sexual behaviour such as receiving unwanted sexual comments, jokes, gestures or looks or being touched, grabbed or pinched in an unwanted sexual way. In this study, it refers to unwelcome conduct that is sexual in nature.

Social Exclusion: This refers to deliberate exclusion from a social group by intimidation. In this study it refers to situations where other students ignore a student completely or exclude them from their group activities intentionally.

Social Withdrawal: Refers to a student who is withdrawn from the rest of the students.

Stalking: Refers to a pattern of repeated behaviour under several domains such as invasion of personal space, property or privacy, surveillance/monitoring. In this study, it refers to repeated pursuit behaviour by a student to fellow student that threatens one's safety.

Suicidal Ideation: Refers to a complex construct encompassing "the domain of thoughts and ideas about: death, suicide and self- injurious behaviour. In this study it refers to thinking about, feeling being better dead, unusual preoccupation with suicide thoughts such as life isn't worth living and nothing can make life much better.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter covers the following: the background of the study, the statement of the problem, the purpose, objectives, hypotheses, significance, scope, limitations and the assumptions of the study.

1.2 Background of the Study

Internationally, there has been a growing trend on the consequences of bullying on the emotional health among adolescents (Cook, et al., 2010). Many psychosocial symptoms are seen in individuals who have been exposed to bullying pose concern for educators and mental health practitioners (Cowie, 2013). Studies related to bullying in schools revealed many psychopathological problems, hence associated with serious short-term and long-term negative effects on all students involved (victims, bullies, and bully-victims) whose effects could be social, emotional, and psychological (UNICEF, 2014). Research demonstrates that there are considerable long-term effects of bullying which can persist throughout childhood into adulthood (Winsper et al., 2012); with those bullied during adolescence showing greater risk on psychosocial maladjustments (Scarf et al., 2016).

According to Farrington and Baldry (2010), some socio-demographic features like age, race, gender, and one's ethnicity are significant predictors of bullying and behaviour among adolescents. The researchers noted that bullying seriously impacts on students' personal sense of safety and academic performance. In a study by National Centre for Educational Statistics (2016) in the United States of America, it was discovered that 33% of high school going students stated that they were bullied at school at least on one day

on because they felt unsafe at school. Of those students who reported being bullied, 13% were made fun of, called names or insulted, 12% were the subject of rumours, 5% were pushed, shoved, tripped or spat on, and 5% were excluded from activities on purpose. In an effort to address bullying in schools, the Centre for Disease Control in America has made bullying prevention a national priority. It aims at increasing safety in school and advocates for adoption and implementation of the anti-bullying policies in the coming decade (US Department of Health and Human Services, 2011). This observation was critical as far as studies on bullying were concerned hence prompted the researcher to carry out the study to establish the extent of bullying among adolescents in secondary school.

Some psychopathologies in bullying literature include low self-esteem, depression, aggression, suicidal ideation and social withdrawal (Wolke, et al., 2013). The study showed that most young people who are bullies or bullied are at risk of getting involved in maladaptive and antisocial behaviour. A growing substantial body of research has indicated that there is an association between peer bullying and early adolescence maladjustment outcomes. This includes: low self-efficacy, lower self-esteem (Patchin, & Hinduja, 2010), depression and anxiety symptoms (Hinduja, & Patchin, 2010), increased psychosomatic symptoms (Tural Hesapcioglu, & Ercan, 2017) suicidal ideation (Kim, & Chun, 2019) poor academic achievement, alcohol and substance disorder (Vaughn, et al., 2010) decreased social functioning and school engagement (Perren, et al., 2010). These studies clearly indicate that youths who experience bullying tend to experience psychological and emotional distress resulting in psychosocial adjustment difficulties. Although understanding the underlying mechanisms between bullying and psychosocial outcomes is essential, it is critical both from a theoretical and a policy perspective to test whether bullying had any direct impact on youth's psychosocial adjustment. The current

study explored the relationship between selected forms of bullying and psychosocial adjustments among students in secondary schools in Bungoma County.

Bullying is a problem of the past dating as far as 1970s and was perceived as “ritual of passage”, in Public schools. Olweus (1978) pointed out that youth development is negatively affected by bullying. Research in 79 countries reported that bullying and victimisation was a widespread global problem with an estimate of 30% adolescents reporting bullying (Elgar et al., 2016). Bullying is a form of aggressive behaviour involving a power imbalance that allows a bully to victimise a less powerful individual (the bullied) Olweus (2013). The bully seeks to harm or intimidate the targeted individual (bullied). Menesini and Salmivalli (2015) define bullying as a repeated act of physical, verbal, psychological attack, intimidation intended to cause, harm, distress or fear to the victims. The researchers indicated that bullying is not only inform of verbal threats and physical violence but inform relational bullying, including; spreading rumours, name-calling and social isolation. However, there were evidences of differences in the meaning of bullying due to cross-cultural differences and how it related to different forms of bullying (Kawabata, Crick, & Hamaguchi, 2010).

A substantial body of research has shown that bullying among students exists on profiles categorised as; bullies, aggressive bullies, victims, bully-victims, bystanders, and normal controls (Weng, Chui & Liu, 2017). For instance, Smokowski, Evans and Cotter (2014) reported that adolescents who experienced episodes of chronic and cumulative physical bullying and cyber-bullying had highest levels of school hustles, perceived discrimination, peer rejection, anxiety, depression, and externalising behaviours. Although these studies indicated that negative behavioural and psychosocial problems run across the profiles, not many studies have tracked the profiles to establish specific

profiles and the psychosocial adjustments (Fanti, & Kimoni, 2013). The current study specifically assessed bullying victims on four measures of psychosocial adjustments: self-esteem, depression, aggression, suicidal ideation, and social withdrawal.

Kowalski and Limber (2013) identified hitting, kicking, pushing, shoving and spreading false information as traditional forms of bullying. Literature from developed countries indicates evidence of forms of bullying such as cyber-bullying. Notably, in the 1990s, most studies focused on conventional forms of bullying, such as physical and relational. In recent years, adolescent peer bullying has evolved due to an increase in technology (Hinduja, & Patchin, 2010). Ultimately, in the 2000s cyber-bullying started due to increase in technology, reduction in the cost of smartphone gadgets and availability of internet services coupled with increased laws promoting privacy (Hinduja, & Patchin, 2014). However, extant studies have focused primarily on investigating cyber-bullying with developed countries datasets. Thus, little is known regarding the psychosocial effects of cyber-bullying in unexplored culture such as Kenya and ultimately Bungoma County.

It is clear that forms of bullying have shifted away from stereotypical physical bullying and has evolved to more crude forms of bullying. This includes extortion of money, destruction to personal property, threatening or forcing a person to do, something they do not want to do, prejudice driven bullying which includes racial harassment, faith-based bullying, sexual bullying and homophobic bullying (Hensley, 2014). As forms of bullying become relatively important constructs within the psychological literature, there is a paucity of explorative research specifically addressing the potential impact on the victims. The current study addresses the existing gaps in the literature by exploring the

relationship between forms of bullying and psychosocial adjustment, specifically among adolescents in Bungoma County.

In almost all societies, a significant number of school students have been survivors of school bullying. Fleming and Jacobsen (2010) investigated the prevalence of bullying in middle school students. They found out that in the U.S approximately 30% of students who were involved in bullying were perpetrators (13.0%), victims (10.6%) or bullying/victims (6.7%) of some bullying. In Latin America, the prevalence of bullying ranged between 40-50%. Large scale surveys carried out in individual countries have also reported bullying rates of between 4-9 per cent in developed countries and 47 -73 per cent in developing countries (Juvonen, & Graham, 2014). A review of studies done by Chan and Wong (2015) the prevalence of bullying victimisation ranged from 2% to 66% in China, 20 % to 62 % in studies done in Hong Kong, 24% to 50% Taiwan. The reported prevalence of bullying may however not reflect the magnitude and nature of psychosocial outcomes such as low self-esteem, depression, aggression, suicidal ideation and social withdrawal arising from bullying that was investigated in this study.

Any form of stressful experience among adolescents has been associated with severe psychopathological problems such as self-esteem. Self-esteem is shaped by how one is viewed by others in their lives (Darney, Greg, & Stroud, 2013). It is thought that exposure to bullying and low self-esteem is associated with each other. Patchin and Hinduja (2010) explored the relationship between self-esteem and cyber-bullying in a sample of 1,963 adolescents in the United States. The findings revealed a moderately significant relationship between experiences of cyber-bullying and low self-esteem. In Seoul Korea, Cho and Choi (2017) research examined the effects of peer victimisation in vocal, physical, or relational bullying on the self-worth of adolescents from Korea,

disconnect to peers, school commitment, and academic performance. This research was a longitudinal survey that lasted for two years and was done among 3, 266 sixth –grade school-going adolescents. Findings of the study revealed that relational forms of bullying were related to increased negative effects on self-worth, disconnect to peers, school engagements and academic performance. Their study, however, did not include suicidal ideation, depression and aggression. Also, the study was based on a sample drawn from Korean and America adolescents and given the difference in culture in predicting youth behaviour; there is need to conduct a similar study in Bungoma County to generate meaningful recommendations.

Another common pathology in bullying literature is depression. Studies have reported discrepancies in the association between bullying and depression. Dempsey et al. (2009) reported that cyber-bullying was not significantly associated with depression, while Perren et al. (2010) found that cyber-bullied victims reported more depressive symptoms when other forms of bullying were controlled.

However, longitudinal studies have shown that being a bully or victim was associated with depression. Kaltiala-Heino, Frojd and Marttunen (2010) conducted a two-year study in two Finnish cities among 2,070, 15-year-old boys and girls surveyed at ninth grade and followed up two years later investigated whether depression was as a result of involvement in the bullying. The findings revealed that both being a victim or a bully were predictors of later depression. Given the discrepancies in findings that could be attributed to the type of bullying or the sample characteristics or measures, it is clear that further research is needed to determine whether forms of bullying affected students' psychosocial adjustment. This creates a knowledge gap which this study filled. The current study extends the above research by examining the contribution of cyber-

bullying, stalking, sexual bullying and social exclusion to the prediction of low self-esteem, depression, aggression and social withdrawal among secondary school in Bungoma County, Kenya.

Various studies revealed that the association between bullying and aggressive behaviour was present. According to Espelage and Colbert (2016), aggressive behaviour can be a form of bullying if aggression is done repeatedly. Wang, Iannotti and Luk (2012) examined engagement in four types of traditional bullying: physical bullying, verbal bullying, social exclusion and spreading rumours. The differential consequences associated with the various forms of bullying were explored. Results suggested that the bullies belonged to a group of highly aggressive adolescents. Nixon (2014) reviewed the impact of cyber-bullying on adolescent health across multiple studies worldwide. The review of the evidence suggested that cyber-bullying posted a threat to adolescent health and wellbeing. In the review, Nixon noted that correlation studies had demonstrated a relationship between involvement in cyber-bullying and negative health indices, such as increased depressive effects, anxiety, loneliness, suicidal behaviour and somatic symptoms. Thus, perpetrators of bullying were more likely to report increased substance use, aggression and delinquents. Nixon however, did not quantify the claim that the relationship between cyber-bullying and negative health indices was significant; this is the knowledge gap that the current study sought to fill.

Exposure to bullying in adolescents has been associated with psychological problems such as suicide. Suicide is a severe emotional and psychological problem (Gradus, 2017). It has also been found to be the leading causes of deaths in many countries. The genesis of suicide begins with an idea in the individual's mind, which is referred to as suicidal ideation then followed by an attempt and finally the execution of suicide. Klomek,

Sourander and Gould (2010) conducted a two-year follow-up study of students involved in and those not involved in bullying in relation to suicide. The researchers observed that students who were involved in bullying had more suicidal ideation and functional impairments compared to the non-involved.

Hinduja and Patchin (2010) in the United States of America examined the extent to which cyber-bullying was related to suicidal ideation. In the study, a random sample of 1,963 was selected from middle school from one of the largest schools completed a survey of internet use and experiences. The findings revealed that the suicidal ideation for youths who experienced either cyber-bullying or traditional bullying was higher than those who had not experienced any form of bullying. The two studies were compared those involved and non-involved in bullying, unlike the current study that examined only those involved bullying. The current study sought to investigate the relationship between bullying and suicidal ideation which is the starting point for committing suicide.

Sterzing (2012) studied the risks and protective factors for bullying victimisation among the sexual minority youths in Washington. The study indicated that the youths who had higher frequencies of bullying victimisation had higher levels of anxiety, psychological distress and depression as well as having seriously considered suicide. It is worth noting that, the above findings were from developed countries which might not necessarily apply to developing countries like Kenya due to variation in lifestyle. This creates a knowledge gap which this study filled by investigating the relationship between forms of bullying and psychosocial adjustment among students of secondary schools in Bungoma County, Kenya.

In Africa, research on bullying has demonstrated a significant association between involvement in bullying and psychosocial adjustment. Penning, Bhagwanjee and

Govender (2010) surveyed bullying and behaviour of 486 male students aged 12 to 17 years in South African School. The findings of the study showed that anxiety and depression were highest in victims of bullying followed by bully/victims, bullies and bystanders compared to non-involved students. In Nigeria, Fareo and Habila (2018) examined the effects of bullying on learning among Secondary Students in Mubi Educational Zone. The findings revealed that bullying forms among students were hitting, flogging, injuries, threatening and rumour spreading. Many of them engaged in relational bullying. The study also established that bullying had a lot of effects on Students.

Siziya, Rudatsikufa and Muula (2012) conducted a study among a nationally representative sample of adolescents on bullying among school attended adolescents in grade 7 and 10 in Zambia; the findings reported the number of adolescences that affirmed bullied were more than 60%. Wilson et al. (2013) conducted a study in Tanzania; they revealed that school-attending adolescents who had been bullied in Dar es Salaam were mostly truant, may have possibly experienced depression, hunger and social isolation or most probably suffer from mental health problems. Although these studies focused on Zambia and Dar as Salaam, which are developing countries like Kenya, they did not indicate the specific forms of bullying experienced by adolescents. The current study sought to establish whether a similar scenario existed in Kenya.

Notably, little has been documented on some forms of bullying such as cyber-bullying in Kenya. Yet, research indicates that approximately 60.3% of young people spend an average of 4hours online in one way or another (Njoroge, 2013). In addition, advancement in technology and the availability of computers, the internet and social media has facilitated the emergence of cyber-bullying (Muia, 2016). Arguably, social

networking sites including Facebook, Twitter, availability of computers, internet connections and exchanging visits has enhanced socialisation between young people from Kenya and other developed countries. This has laid a platform for exchanging information globally hence predisposing the youth to cyber-bully (Makori, & Agufana, 2020). While there are advantages of digital technology, such as access to information and maintaining socialisation with their friends, there are also risks accompanying this modern technology (Muinde, 2015).

Studies done in secondary schools in Kenya have shown the presence of bullying. Ngesu et al. (2013) study in selected secondary schools in Kenya found that bullying manifested in different forms which included students being absent, increase in violence, high rate of school dropouts as well as low self-esteem. The study also revealed there are devastating effects that bullying has on the social, physical and psychological wellbeing of adolescents, and this was bound to jeopardise their future development. Sexual bullying was also reported among students in secondary schools in Kenya by (Kodero et al. 2011). Okoth (2014), also carried out a study in Kisumu East District, Kenya. The study found that name-calling, group isolation and use of technological visual messages were prevalent. However, these studies did not spell out the effects of the forms of bullying on the general development of the victims, a factor to be considered in the current study.

Children and adolescent's mental health problems prevalence varied between 10 and 50.5% (Khasakhala et al., 2012; Karsberg, & Elklit, 2012; Mbwayo, & Mathai, 2016; Ndeti et al., 2016). Osborn et al. (2019) conducted a cross-sectional study on depression and anxiety symptoms in a community sample of high school students in Kenya. The association between those symptoms and Psychosocial and socio-demographic factors were examined. Findings revealed high levels of depression symptoms (45.90% above

clinical cut off) and anxiety symptoms (37.99% above clinical cut-off). The study, however, focused only on depression and anxiety. The current study addressed other variables such as self-esteem, aggression, suicidal ideation and social withdrawal among secondary school students, Bungoma County.

Similarly, Mungai, Malik and Koot (2018) examined emotional and behavioural problems in a school setting in Central Kenya. The results showed that 17.53% of adolescents scored in the clinical range of internalising problems using the youths Self Report Questionnaires Broadband Scale included a multiple of types of internalising problems such as somatic problems, worry and depression symptoms. However, the study did not specify the age group of the targeted sample involved in the study. The current study involved students in secondary school, ages 14-19years.

Findings from Kenyan studies cited elaborately indicate the fact that bullying had a profound influence on the psychological development of adolescents. Findings from other studies indicate that different forms of bullying influence psychosocial adjustment both positively and negatively. Between 2018 and 2019, out of the 150 schools assessed for quality by the county Education office, 50% recorded cases of bullying behaviour among the students (Bungoma County Office, 2019). While the County Education Office had sufficient evidence of bullying behaviour among the secondary school students in Bungoma County, they lacked empirical evidence on the relationship of this vice on psychosocial adjustment. The current study sought to investigate the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County.

Studies done in Bungoma County confirmed the existence of bullying behaviour in schools. Poipoi (2017) conducted a study on perceived forms and psycho-social

determinants of violent behaviour among secondary school students. The research revealed that Bungoma County is among the top counties affected by many incidences of violent behaviour caused by students in schools. The perceived forms of violent behaviour as perceived by teachers and students included; rioting, fighting, bullying and sexual violence. Nonetheless, it did not establish the influence of the perceived forms of bullying on psychosocial adjustment among the student under study. The current study specifically focused on forms of bullying and its relationship to psychosocial adjustment of students in Bungoma County.

Wakoli et al. (2016) investigated the relationship between psychosocial factors and aggressive behaviour that is often manifested in bullying among students in a secondary school in Bungoma County. Research findings of the study revealed a significant relationship between psychosocial factors and aggressive behaviour among secondary school students. The findings also established that aggressive behaviour was predominant than fighting and vandalization of school property. Nevertheless, the research did not focus on the psychosocial wellbeing in relation to aggressive behaviour. The present study investigated the association between forms of bullying and psychosocial adjustment among secondary school students in the same county.

Socio-cultural factors play an important role in understanding bullying behaviour among youth and could put them at risk of bullying and psycho-social problems (Wasike,2013). Whereas bullying is discouraged within our Education system, in African culture, the vice is tolerated from the cultural and societal perspective. In Bungoma County, for example, at about the age of 14 years, Bukusu boys undergo circumcision. They are prepared to be men; hence, they are supposed to be muscular, aggressive, violent and hardened. There is, therefore, a high possibility that strong boys will bully those who

seem to be weak. Studies indicate that masculinity predisposes boys to vulnerability and developmental sequelae (Patton et al., 2013). This included; depression, sensitivity to peer rejection and fear of safety and was linked to the aggressive expression of anger, frustration, suppression of weak emotion, the domination of others and acceptance of sexual aggression. Emphasis on masculinity may also restrain the Bukusu boys from receiving social support and act as precursors to bullying behaviour.

On the other hand, girls are prepared to be industrious, meekness and submissive (Namulunda, 2016). Schools bring together a mixture of students from diverse socio-cultural backgrounds and lacking cultural and social homogeneity. These socio-cultural practices among the Bukusu and reported cases of bullying in secondary schools in Bungoma County made it an area of interest in researching the relationship between forms of bullying and psychosocial adjustments.

Based on the reviewed literature, studies converge towards the fact that bullying has a profound influence on the psychological development of the learners. However, there is need for additional academic research on the relationship between the specific forms of bullying such as cyber-bullying, social exclusion, sexual bullying and stalking on psychosocial outcomes of bullying such as low self-esteem, suicidal ideation, depression, aggressive behaviour and social withdrawal among students. In this study, the relationship between different forms of bullying and psychosocial adjustment was explored.

1.3 Statement of the Problem

Emotional and Psychosocial status of many learners in both primary and Secondary schools in the 21st century has been adversely affected by various factors. These factors include bullying, poverty, domestic violence, physical violence, alcohol and substance

abuse. Their influence on student's adjustment, particularly among adolescents in secondary school has not been established conclusively. Existing research studies consistently shows that students involved in bullying suffer negative developmental effects. However, findings of previous studies majority of which were carried out in developed, individualistic cultured countries cannot be generalised to all populations since bullying incidences differ in cultural context.

Current statistics from Department of Health Bungoma County indicates that 20% of the patients aged 14 to 20 years who visit the facility have mental health related issues. This is a school-aged going learners in primary and secondary school (Department of Health Bungoma County, 2020). In Kenya, most documented studies on psychosocial health of adolescents have been carried out in Nairobi and Kiambu within the school setting. Therefore, there was paucity of documented studies on the various psychosocial adjustments among students in secondary school in Bungoma County.

Bullying is one of factors that has an important influence on the psychosocial adjustment of learners in Bungoma County. It has been documented both in electronic and media forms on various cases of bullying among students in secondary schools. Bullying affects bullies, victims and the bystanders. This observation was critical as far as studies on bullying were concerned hence was put to test in the current study.

Bungoma County Education office had sufficient evidence of bullying behaviour among the students though it lacked empirical evidence on its influence on psychosocial adjustment among the students. Between 2018 and 2019, from the 150 schools assessed by the Quality Assurance and Standards office, 50% of the schools reported bullying behaviour. The report indicated that students blamed their teachers for not taking issues of mental health seriously when approached for help. This discouraged them from

talking about their struggle, implying, teachers did not know what to do and how to help them (Bungoma County Education Office, 2018). Hence, this study provided empirical evidence on the relationship between forms of bullying and the psychosocial adjustment among secondary school students in Bungoma County.

Notably, the government was keen on the realisation of the vision of a hundred percent transition. This effort of the government would become futile if the issue of psychosocial adjustment was never addressed. This rising trend of mental issues among students threatened the realisation of the national goals of Kenyan education. Because of the rising number of mental health in our secondary schools, the researcher, sought to examine the relationship between forms of bullying on psychosocial adjustment among student. This study used a multidimensional approach to investigate the relationship between forms of bullying and the psychosocial adjustment of students. Ultimately the question to be answered in this research is “Is there a relationship between forms of bullying and psychosocial adjustment?”

1.4 Purpose of the Study

The purpose of the study was to examine the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County.

1.5 Research Objectives

This study was guided by the following objectives:

- i. To establish the relationship between forms of bullying and self-esteem among secondary school students in Bungoma County.
- ii. To examine the relationship between forms of bullying and depression among secondary school students in Bungoma County.

- iii. To determine the relationship between forms of bullying and aggression among secondary school students in Bungoma County.
- iv. To find out the relationship between forms of bullying and suicidal ideation among secondary school students in Bungoma County
- v. To find out the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County

1.6 Research Hypothesis

To achieve the research objectives, the following null hypotheses were tested at 0.05 significance level:

H₀1: There is no statistically significant relationship between forms of bullying and self-esteem among secondary school students in Bungoma County.

H₀2: There is no statistically significant relationship between forms of bullying and depression among secondary school students in Bungoma County.

H₀3: There is no statistically significant relationship between forms of bullying and aggression among secondary school students in Bungoma County.

H₀4: There is no statistically significant relationship between forms of bullying and suicidal ideation among secondary school students in Bungoma County.

H₀5: There is no statistically significant relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County.

1.7 Significance of the Study

This study sought to establish the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County. Based on the findings of this study, the study informs literature, provides support to existing theories and ideas on the psychosocial adjustment among adolescents and bullying.

Hence, forming the basis on which interventions could be developed. The study informs the Guidance and counselling teachers and school administration to provide psychological services to emotionally affected students. Hence, Guidance and counselling programs should be strengthened to complement the present disciplinary methods in use to reduce bullying.

The current work also informs both policy and practice. For instance, bullying significantly correlates to psychosocial adjustment. It is possible for schools, parents or practitioners to identify students at increased risk of bullying and offer referrals to the relevant professionals who are skilled to handle the situation. The parents will use the study findings to give more support and connectedness with their children emotionally as well as guide them on healthy ways of expressing their emotions. The findings of the study provide vital information that may be useful to the managers and the administrators of secondary schools in making decision on how to support the establishment of functional Guidance and counselling departments that can address the psychosocial issues affecting students. Also create a school environment that is conducive to students to vent their feelings and obtain help, comfort, emotional support and understanding.

Findings of this study may also inform Bungoma County by acting as a baseline survey to understand the status of psychosocial adjustment among secondary school students in the county. This serves as an eye opener to the stake holders of Education for the need to have a formal inter-sectoral working relationship with the department of health in order to address effectively issues of psychosocial adjustment among school students. This study also yields data which is useful for planners and policy makers such as the Ministry of Education, school administrators and donors on matters of enforcing educational and legal policies to protect the learner in secondary school, as well as in

organising capacity building seminars for Guidance & Counselling teachers and deputy principals.

The study should therefore form the basis for reference to other researchers and other readers in general on the relationship between forms of bullying on psychosocial adjustment among secondary school students. Due to the nonclinical samples, it is hoped that the study will give an idea about general adolescent populations in or out of the bullying cycle and open areas for further study by other researchers and other practitioners thus, benefitting the whole community.

1.8 Justification of the Study

Bullying is the most profound and persuasive cause of concern for students and all schools' stakeholders (McDougall, & Vaillancourt, 2015). Bullying has consistently been associated with poorer psychosocial adjustment. Studies indicate that both the bullied and bully students show significant increases in internalising disorders, such as depression, low self-esteem, suicidal ideation, aggression, and social withdrawal (Patchin, & Hinduja, 2010; Hinduja, & Patchin, 2014; Ttofi, & Farrington 2011; Cook, Williams, Guerra, Kim, & Sadex, 2010). However, the extant findings have primarily focused on datasets from developed countries hence cannot be generalised to all populations since bullying incidences differ in different socio-cultural contexts (Cho, & Choi, 2017).

Forms of bullying may have a varying degree of influence on psychosocial adjustments, and it is essential to distinguish the different consequences (Wang, Nansel, & Iannotti, 2011). Notably, there is a paucity of studies on the association between specific forms of bullying and psychosocial adjustments in Kenya. A majority of the studies done have overly concentrated on the composite bullying scores. The current study investigated the

association between cyber, stalking, sexual and social exclusion and low self-esteem, depression, aggression, suicidal ideation and social withdrawal.

Literature indicates that bullying is more frequent during middle childhood and early adolescence and declines during adolescent (Swearer, & Hymel, 2015). Notably, most of the studies on bullying have overly focused on children in middle childhood (7-12yrs) with only a few involving children above 12 years (Reijntjes et al., 2010; Poipoi, 2011; Cheng et al., 2010). Thus, it is not clear to the extent the findings would be applicable to the adolescents. Yet it is at the adolescence stage that peer relationships are essential in development as it is a period of increased transition and autonomy. Moving from primary school to secondary school is one of the changes during adolescence where young people are bound to encounter bullying (Lester et al., 2013). Sexual bullying has also been observed to be rampant in the literature of adolescence, and this has been attributed to their increased focus on intimate relationships (Menesini, & Salmivalli, 2017).

Despite these important experiences of adolescence, there is lack of research empirically investigating the experiences of bullying within this specific age group as most large-scale studies include participants across a wide age range (Troop-Gordon, 2017). Hence, the need for specific attention to be paid to bullying in adolescence due to the unique complexity of this population. In addition, the literature on bullying has expanded considerably in recent times; much of it is descriptive in nature, focussing on bullying prevalent rates (Patchin, & Hinduja, 2010; Olweus, 2012b; McCuddy, & Esbensen, 2016). In addition, researchers are moving beyond descriptive studies that rely on small samples (McCuddy, & Esbensen, 2016). The current study used relatively a large sample and correlation in addition to descriptive design.

Furthermore, the impact of forms of bullying such as cyber-bullying remains unclear, with conflicting findings regarding the unique impact of cyber-bullying, and variance in measurements and sample characteristics (Beran et al., 2015; Hase et al., 2015). This calls for the need in establishing a more functional understanding of forms of bullying and potential negative outcomes and the need to focus on each form of bullying. Existing literature demonstrates that prior psychosocial adjustments difficulties increased the likelihood of involvement in bullying or becoming a bully. For instance, loneliness, depression, lower self-esteem, few or no close friends at school and lack of support network and more vulnerable to being bullied by other children (Cheng et al., 2010). These prior psychosocial difficulties placed a child at risk of involvement in bullying and victimisation. These experiences set the stage for future adjustment problems. The psychosocial adjustment can then be viewed both as a consequence and an antecedent of bullying, with the clear multidirectional relationship. In the current study, the psychosocial adjustment was considered as a consequence of bullying. There was, therefore, need to explore the relationship between forms of bullying and depression, low self-esteem, aggression, suicidal ideation, and social withdrawal.

Although bullying has been banned in Kenya, in recent years, peer bullying has become quite prevalent in Kenya, placing youths at risk of both physical and psychopathologic problems. Bullying in schools in Bungoma County has been cited both in electronics and media forms (Wakoli, 2019). Studies have also indicated the presence of bullying in secondary schools in Bungoma County (Simatwa, 2007; Poipoi, 2017; Wakoli et al., 2016). This necessitated the current study in the County.

1.9 Scope of the Study

The study on relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County was conducted between April 2019 and September 2019. The research was done in 36 secondary schools selected from the nine sub-counties in Bungoma County, Kenya. The study focused on the relationship between selected forms of bullying on the psychosocial adjustment among students in secondary Bungoma County secondary schools. Form three students in secondary schools participated in the research. Form three students were selected because they are at the top of adolescence stage whereby search for identity is crucial and in the event of this become vulnerable in developing mental health problems. The respondents in this study were Deputy Principals, Guidance and Counselling teachers and Form three students. The study also focused on public secondary schools because indiscipline issues were common in schools especially with the 100% transition many students came with non-academic issues that need attention. Bungoma County had more public schools than private schools hence the need for schools to participate in the study.

The study specifically sought to investigate cyber bullying, sexual bullying, social exclusion and stalking as independent variable. These selected forms of bullying have been adversely documented as prevalent in literature though mostly in developed countries and was likely that they are also prevalent in Kenya yet little is known about them. The study also investigated psychosocial adjustments which include; low self-esteem, depression, aggression and suicidal ideation as the research dependent variable while gender, government policy, age and psychosocial support as intervening variable.

1.10 Limitations of the Study

The following limitations were encountered:

- i. The study did not investigate all forms of bullying and psychosocial outcomes for reasons of feasibility. Only four forms of bullying were examined: cyber bullying, stalking, sexual bullying and social exclusion. Similarly, only self-esteem, depression, suicidal ideation, aggression and social withdrawal were investigated. The study recommended future research to examine other forms of bullying and psychosocial adjustment.
- ii. The study employed cross sectional nature of design which was limited in drawing of causal associations between forms of bullying and psychosocial adjustment. The researcher recommended a longitudinal research to investigate whether the students' low self-esteem, depressive symptoms, suicidal ideation, aggression and social withdrawal were related to forms of bullying.
- iii. Information on bullying was very sensitive. To counter this, the researcher consistently made a reminder that the study was confidential and anonymous before, during and after data collection.

1.11 Assumptions of the Study

The study was based on these assumptions:

- i. There is a relationship between forms of bullying and psychosocial adjustment among secondary school students.
- ii. The responses from the respondents in this study reflected a true and honest replication of facts on the ground elsewhere in the country to enable the universal application of principles developed.
- iii. Most respondents in secondary schools in Bungoma County had experienced at least one form of bullying.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviewed literature related to the study under the following major headings of discussions: General overview of study variables, the concept of bullying, the concept of psychosocial adjustment, the relationship between forms of bullying and self-esteem, the relationship between forms of bullying and depression, the relationship between forms of bullying and aggression, the relationship between forms of bullying and suicidal ideation and the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County. The theoretical and conceptual framework was addressed in this chapter.

2.2 General Overview of Study Variables

Among the psychosocial issues accompanying the growth and development process of adolescents is negotiating their developmental milestones, young people are faced with both internal as well as external conflicts as they expand their social circles. These have significant implications for their life adjustment. In this study, the concept of bullying and its attendant implications for psychosocial adjustment was explored.

2.2.1 The Concept of Bullying

According to Gladden et al. (2014), bullying refers to unwanted aggressive behaviours. There is an imbalance in the victim's power who repeatedly seeks to hurt or harm a targeted individual. A similar opinion was earlier shared by Olweus (2013). He defines bullying as a long-term exposure of the victim, to physical aggression or verbal attack such as making threats and spreading rumours to isolating or social exclusion by a group of students. To Omoteso (2010), bullying is a psychological, and aggression that is done

repeatedly to strip a person of control and dignity. The bully seeks to harm or intimidate the targeted individual. Research identifies three distinct categories of individuals in relation to bullying. These are; bully, victim and bully/ victim (Williams, & Veeh, 2012).

World over, bullying of students has become more prevalent than ever before. For instance, Spiel, Salmivalli and Smith (2011) revealed that it is the most common form in which students engage aggressively and violently in many schools. This observation is further strengthened by studies carried out on bullying. For example, a survey to examine chronicity and type of bullying in six middle schools in U.S.A. Department of Education and Bureau of justice statistics found that approximately 28% of students aged 12 to 18 years were reported being bullied at school (Robert et al., 2012). In Europe, a meta-analysis of 82 studies in 22 countries in Northern America, reported that bullying was prevalent across countries (Cook, Williams, Guerra, & Kim, 2010) with considerable variability reported across the investigated countries. In Scandinavian countries, Fleming and Jacobsen (2010) revealed that prevalence rates ranging between 6%- 15.2% of students in the sample engaged in school bullying. Similar findings were recorded in Australia; bullying prevalence lies between 15 and 20 per cent (Hemphil et al., 2012).

In Asia, starting with China, the prevalence and correlates of being bullied among adolescents in school was found out to be 20 to 62 per cent. Simultaneously, in South Korea, 40% of respondents were involved in bullying (Chen, Lui, & Cheng, 2011). For Bangladeshi, Ahmed (2005) found out that 30% of the students engaged in bullying someone at least once. In Africa, studies indicate that 60 per cent of students in Zambia reported being bullied at least once in one month (Siziya et al., 2012). A study conducted in Free State Province, South Africa, as reported by Liang, Flisher and Lombard (2007) high prevalence of bullying behaviour was also established in 36.3% schools. For

Botswana, research by Moswela (2005) cited by Selemogwe, Setlhare-Oagile and Mphele (2014) on peer victimisation in 6 primary and 12 secondary schools found out that student victimisation occurred 100 per cent. The study further revealed that the beating of boys and girls accounted for 21% and 9% respectively while name-calling of boys and girls was 15% and 22% respectively.

In the Benin City of Nigeria, a study by Egbochuku (2007) as cited by Alude (2011), students disclosed that almost 4 in every 5 participants (78%) reported being bullied and 85% of the children admitted bullying others at least once. In a study in Ghana, senior high school, they were established that physical and verbal bullying was rampant in various schools in Ghana (Antiri, 2016). In East Africa, Ndibalema (2013) while exploring teachers' and students' perception about bullying behaviour among secondary schools in Dodoma Municipality, Tanzania, found that there was a high prevalence of bullying in schools. A similar study by Moris (2012) in Dar-es-Salaam, corroborated with Ndibalema (2013) findings reporting high prevalent gossiping behaviour at 74.3%, spreading rumours at 70% group exclusion at 70.2% among peers. Furthermore, a study by Saito (2011) that assessed primary school violence between the years 2000-2007, revealed the form of bullying which had the highest occurrence was identified in Zanzibar Island, for example, abusive language was used by 73-98% of the pupils.

In a study by Marsh et al. (2012) found out that bullying has an impact on bystanders as well as on victims and bullies; hence it is likely that bullying can affect both of them at once. This observation is critical as far as studies on bullying are concerned and will be put to the test in the current study. In addition, despite the fact that bullying behaviour could be detrimental to students' wellbeing and may likely affect their learning environment, much is yet to be established on the psychological adjustment of

adolescents who engage or are bullied in schools (Tippet, Wolke, & Platt, 2013). Thus, there is a need for specific attention to be paid on bullying in adolescent, a key issue that was investigated in the current study.

Studies on bullying in Kenya reveal a long history, as evidenced by increased violent cases in schools. Though efforts were made by the Ministry of Education (MoE) to ban bullying acts in all schools in 2003 (Ajowi, 2005). A study by Ndetei et al. (2007) showed that students experience high levels of bullying between 63 and 82 per cent in public secondary schools in Nairobi Province. For example, in 2001, 68 students from Bombolulu High School were burnt to death and many injured after two boys from their school set their dormitory on fire using petrol (Muli, Nzoka & Muthee, 2019). In 2006, a form one student in Nyeri High School was bullied to death by senior students. The student succumbed to injuries attained from the bullying two weeks later (Okwemba, 2007). In 2008, Mathiu (2008) reported that more than 254 secondary schools in Kenya experienced violence and Kitui County, which had 54 cases was among the top ten.

In Daily Nation, 2012, a form two in Kangundo, a student set their dormitory to fire protesting for their stolen personal items by the senior students. Form One of Kiriani Boys High School, Meru South District was bullied by fellow students on their first night. They were ordered to strip naked by the senior boys and inspected as to whether they were circumcised or not. They were tortured and insulted the whole night. About 30 uncircumcised boys spent the night in the corner of the dormitory where they were splashed with water, locked up four prefects in their rooms at night for bullying them and doused them in petrol killing them instantly (Ngesu et al. 2013). In 2017a group of prefect students in Alliance High School beat up with sticks and slapped, forcing them to lie on the graves of the school founder (Kigotho, 2017). A survey indicated that the

prevalence of bullying in Kenya was at 57% and schools in Western Kenya, where Bungoma County is situated was higher than the national prevalence level at 66%. Studies that have been done in Bungoma County indicate the presence of bullying behaviour. Simatwa (2012) and Chumbe et al. (2015) on discipline management for students in secondary schools revealed that Bungoma County had experienced many cases of deviant behaviour associated with bullying.

There are various forms of bullying in school setups. For instance, Limo (2015) cites threatening, teasing, stealing victim's property, taunting, and hitting or isolating student socially by intentional exclusion were some of the incidences of bullying experienced in a school set up. Smith (2014) categorises these incidences of bullying into physical, verbal, relational and technological/cyber types of bullying, verbal forms of bullying. Further literature review on forms of bullying revealed that physical bullying was any unwanted physical contact between the bully and the victim. This can be through s such as; hitting, kicking, punching, pushing, shoving, inappropriate touching, pinching, using available objects as weapons and pulling of the hair (Okoth, 2014). According to Okoth, verbal bullying entails making abusive comments and insults are aimed at making fun, making one unhappy or feeling hurt. To the scholar, this type of bullying is common among girls than boys. Name-calling; threatening, insults, sarcasm, teasing, mocking and taunting were some of the verbal bullying. Muli et al. (2019) conducted a study in Kitui which revealed that verbal and indirect bullying were the most types of bullying and students agreed that bullying still happens in their schools and every student had been bullied.

Closely linked to verbal bullying is social exclusion. Mulvey, Boswell and Zheng (2016) defined this form of bullying as a behaviour where the victims are deliberately excluded

from a social group by intimidation. Exclusion and peer rejection can happen for various reasons that are likely to result in psychological harm (Killen, & Rutland, 2011). Social exclusion can be deemed aggressive if it involves a power imbalance that repeatedly occurs (Espelage, & Colbert, 2016). It can also be a behaviour that harms another individual intentionally by manipulating social relationships (Leff, Waasdorp, & Crick, 2010).

Further, relational aggression which is a form of social exclusion takes two forms; reactive and instrumental. Reactive relational bullying occurs when a learner uses social manipulation in response to having been wronged, instrumental is where the learner manipulates relationships by being violent. Okoth (2014), furthers the discussion on social exclusion as a form of bullying by pointing out; gossiping, hostile gesturing, humiliation and ostracising victims were associated with it.

Additionally, bullying has further evolved with the advancement of technology. Smith (2015) described cyberbullying as an aggressive, intentional act carried out by a group or individual, using electronic forms repeatedly and overtime against a victim who cannot easily defend himself or herself. Olweus (2013) defines it as bullying done through emails, instant messaging, chat rooms and websites using computers, cell phones and tablets. Cyberbullying has attracted interest drifting attention from traditional bullying, which takes place away from school (Schneider, O'Donnell, & Smith, 2015). The estimates vary greatly due to inconsistent conceptualisation and measures (Olweus, & Limber, 2017). According to Okoth (2014), this was a new and insidious type of bullying that has emerged in different parts of the world. It involved deliberate sending of menacing text messages via e-mail, cell phones and computers by an individual or a group of persons intended to harm others.

Thomas and McGee (2012) defined cyberbullying as using technology, for instance, the cell phone or internet to insult, threaten or intimidate someone deliberately, for example, through mean text. This form of bullying is extremely prevalent in today's society. The author, however, cautions that it can easily go undetected because of lack of parental or authoritative supervision. Njoroge (2013) established that 63% of the young people in Kenya spent the utmost four hours online within a day and as a result majority of them suffer cyberbullying as well as build others. Reidy, Smith-Darden and Kernsmith (2016) pointed out stalking as a form of bullying which is a pattern of repeated behaviour under several domains including invasion of personal space, property or privacy; attempts to initiate contact; excessive or inappropriate expressions of affection, surveillance/monitoring, coercion/harassment; intimidation/threats and aggressions. The researchers noted that stalking profiles confer varying degrees and forms of risks.

Sexual bullying as a form of bullying was defined by Bendixen and Kennair (2014) as 'unwelcome conduct of sexual nature which may include sexual advances, requests for sexual favours or other verbal, non-verbal or physical conduct of sexual nature. The verbal forms may include derogatory sexual remarks or sexual jokes while the non-verbal forms may include being subject to sexual rumours or distribution of some pictures on media. Sexual bullying can also be physical coercion which includes being held sexually, having private parts touched or forced into kissing or any other forms of sexual behaviour (Lichy, & Campbell, 2012). The authors evaluated how the emotional state of students is related to sexual bullying. This research noted that most of the students in the middle school were targets and witnesses of sexual bullying. The results also revealed a negative association between sexual bullying with psychological well-being. The current study extended this study by determining the relationship between

bullying and both psychological and social well-being of students in the adolescence stage where youth are more likely to engage in sexual activities.

However, there is no scientific data on some forms of bullying that go unnoticed and may affect response to student bullying in some parts of the world. The current study explored the extent of bullying in our schools in Kenya, specifically Bungoma County. It sought to establish if forms of bullying that have been reported in other developed countries exist among students aged 14 to 19 years in Kenya. It further established the association between bullying and psychosocial adjustments among the students, an area that previous scholars have not addressed.

2.2.2 The Concept of Psychosocial Adjustment

Studies about bullying in school reveal many emotional, social and mental problems that seem to be related to bullying. According to Madariaga, Arribillaga and Zulaika (2014), psychosocial adjustment refers to a person's capacity to adapt to the environment. This may include sufficient individual mechanisms to feel good, integrate, and respond adequately to the environment's demands. The adjustments normally involve emotional and behavioural problems (Espelage, & Swearer, 2011). Bullying in children, preadolescents and adolescents is associated with both short term and long-term effects that are social and psychological in nature. Internalising and externalising behaviour problems resulting from bullying have received considerable attention from researchers (Juvonen, & Graham, 2014; Swearer, & Hymel, 2015; McDougall, & Vaillancourt, 2015).

Furthermore, Kowalski, Limber and Agatson (2012) details that the short-term effects of bullying include; social isolation, feelings of shame, symptoms of anxiety, changes in eating habits, low self-esteem, school absenteeism, sleep disturbance, higher risk of

illness and psychosomatic symptoms (headaches, muscle aches, stomach aches and other physical complaints with unknown medical cause). The three scholars also observed that the long-term effects of bullying on the victim could result in anxiety disorders, chronic depression, post-traumatic stress disorder, self-destructive and difficulty in establishing trust. The authors termed this response to bullying as a psychosocial adjustment discussed in the next section of this literature review.

According to Holden (2010), the externalising problems are directed towards others, while internalising problems are directed inwards towards an individual. Whereas the internalising problems, include difficulties such as; anxiety, depression, loneliness, and poor self-esteem the externalising problem, relates to being aggressive, highly emotional, hot-tempered, and hyperactive (Reijntjes et al., 2010). A number of studies reviewed consistently show that bullying brings about serious risks for both bullies and victims on a number of psychosocial outcomes later in their lives (Stavvinides et al., 2011). For example, both bullies and victims demonstrate greater health problems, poorer emotional adjustment, poorer school adjustment, and poor school performance (Kubiszewski et al., 2015). Specifically, victims of bullying demonstrate poorer social and emotional adjustment, greater difficulty in making friends, poorer relationships with classmates, and greater loneliness. They further tend to have increased school absenteeism and avoid school more as the victimisation increases (Cheng, Newman, Qu, Mbulo, Chai, Chen, & Shell, 2010).

Further review of the literature revealed that prior psychosocial adjustment difficulties and especially emotional problems increased the likelihood of one's involvement in bullying or becoming a victim of bullying (Stavvinides, Georgiou, Nikiforou & Kiteri, 2011) For instance, students with psychosocial adjustment problems such as;

loneliness, depression, or anxiety, lower self-esteem, few or no close friends at school, social isolation, and lack of network support are at high risk to being bullied by other children (Cheng et al., 2010). The scholar further notes that prior good psychosocial adjustment operates as a protective mechanism for avoiding future involvement in bullying and victimisation.

From the literature reviewed, bullying has negative social, physical and psychological effects on the victims. Specifically, victims of bullying exhibit negative outcomes such as the feeling of sadness and hopelessness, loneliness, insomnia and suicidal ideation (Fleming, & Jacobsen, 2010). However, despite the existing literature, there are many discrepancies, methodological issues and gaps within the field of bullying, providing clear evidence for continuous efforts to investigate the consequences further and correlates of bullying (Olweus, 2013). In Kenya, little has been done to understand psychosocial adjustment among adolescents despite the high prevalence of bullying in our schools. This study intended to explore the relationship between forms of bullying and psychosocial adjustment specifically; self-esteem, depression, aggression behaviour, suicidal ideation, and social withdrawal among secondary school students in Bungoma County with the intention of knowing the extent of the problem which is important in developing the effective intervention.

2.3 The Relationship between Forms of Bullying and Self Esteem

Adolescence is a period of identity development (Braet, Wante, & Vervoort, 2016) this depends on the cues from the immediate environment. The adolescence, however, tends to imitate behaviours and situation that help them value selves either positively or negatively. Existing studies provide evidence that demonstrates a consistent correlation between bullying and self-esteem, with those exposed to greater frequencies of bullying

showing lower levels of self-esteem (Patchin, & Hinduja, 2010). Low self-esteem is a sign of internalising psychopathology in adolescents (Isomaa et al., 2013). High levels of self-esteem before bullying is also likely to influence the way a victim adjusts, suggesting that self-esteem may be vital in the relationship between bullying and adverse outcomes (Tetzner, Becker, & Baument, 2016).

Orth et al. (2014) define self-esteem as a favourable or unfavourable attitude toward the self. Other researchers such as Darney et al. (2013) define self-esteem as an individual's evaluations of their own self-value. Thus, the extent to which one values or perceives him/herself. Documented literature on bullying and self-esteem indicates that victims of bullying tend to have lower self-esteem than non-victims. This could be associated with involvement in bullying. Those who have low self-esteem are more likely to be targeted as victims (Tariq, & Tayyab, 2011). In the current study, the researcher hypothesised that there could be an association between forms of bullying such as cyberbullying, stalking, social exclusion, sexual bullying with self-esteem.

Cross-sectional and longitudinal studies done on cyberbullying indicate that it has negative effects on pre-adolescents and adolescents. The effects that were reported included low self-esteem, suicidal attempts, eating disorders, depression, sadness, hopelessness, anxiety, fear, anger, frustration, absenteeism, and low school commitment (Juvonen, & Graham, 2014; Swearer, & Hymel, 2015; McDougall, & Vaillancourt, 2015). Zhou et al. (2013) investigated the epidemiological characteristics and risk factors of cyber-bullying, using a sample of 1,438 high school students from Central China. Findings of the study revealed that cyber-bullying among high school students in the heartland of Central China is relatively common for a total of 501(34.84%) of participants reported having bullied someone, and 818(56.88%) reported having been

bullied online. Significant gender differences were found where boys were more likely to be involved in cyber-bullying both as perpetrators and victims compared to girls. The study was longitudinal in nature and did not assess the association between this form of bullying and psychosocial adjustment of the students, a factor to be evaluated in this study using a cross-sectional survey.

Kowalski and Limber (2013) examined the relationship between children and adolescents' experiences with cyber-bullying and traditional bullying and psychological health, physical health and academic performance in Pennsylvania. The survey sample consisted of 931 students (433 female and 485 male) students aged 11-19 years in grade 6 through 12. The research noted that 21% of respondents had been a part of cyber-bullying at least once, and 20% had been involved in traditional bullying. In the study, participants were put in four groups; cyber-victims, cyber-bullies, the most negative results on many measures of psychological health, physical, health and academic performance especially among males were for cyber-bully/victim group. The study also found that cyber victimisation and perpetration had a stronger correlation with self-esteem compared to traditional victimisation and perpetration. Thus, cyber victimisation significantly correlated with self-esteem and cyber perpetration was also significantly associated with self-esteem. The study focused on the four categories of bullies. However, this particular finding is based upon the Pennsylvania sample, with potential cultural differences to a Kenyan population, restricting the results' generalisability. The current study explored the relationship between cyber-bullying and students' self-esteem in Kenyan Secondary schools under-documented.

Patchin and Hinduja (2010) investigated the relationship adolescent's exposure to cyber-bullying on self-esteem among 1,963 students in middle school in the United States. The

study revealed that victims of bullying irrespective of gender and age had significantly lower levels of self-esteem. The study concluded that the relationship between lower self-esteem levels was significant for victims compared to cyber-bully offenders. Based on these findings, it is eminent that self-esteem is lowered by the incidence of cyber-bullying. From the literature reviewed above, research has a consistent link between low self-esteem and cyber-bullying. In light of this study, it is important to examine this in a Kenyan context.

Viviano (2014) investigated the moderating effects of global self-esteem and perceived social support on the relationship between cyber-bullying victimisation and psychosocial adjustment among adolescents. The sample comprised of 312 adolescents aged 11-18 years from diverse locations within the United States. Results indicated that cyber-bullying; self-esteem and perceived social support significantly predicted internalising problems which could, in the end, affect the self-esteem of the adolescents. This study was not specific to the context in which bullying behaviour existed. The current study focused on adolescents who were in secondary schools in Bungoma County.

In China, Ong (2015) reported that while digital development has brought immense benefits to the global society, abuse of technologies causes irreversible harm to another person's reputation and create a record that develops serious psychological and emotional trauma. Leung and McBride-Chang (2013) carried out an investigation among 626 Chinese children in 6th and 5th grade from Hong Kong. Their experiences of victimisation and bullying online and real-life context were compared. The children reported that their best friends at school and online were those playing multiplayer online games. The study revealed that online victimisations uniquely and negatively explained variance in friendship satisfaction. In addition, online friendship positively and

significantly explained additional variance in children's social competence, friendship, satisfaction, life satisfaction and self-esteem. The two studies did not, however, explain how the online and real-life context affected the psychological adjustment of the children. It would be fascinating to establish whether similar findings would be the same for secondary school students and if the impact of online victimisation was similar.

Chang et al. (2013) examined the relationship among cyber-bullying, school bullying and mental health in adolescents in China. Findings of the study revealed that students with internet risks were more likely to be involved in cyber-bullying and/or cyber victimisation. In addition, students who had cyber-bullying or victimisation experiences also tended to be involved in school bullying. Notably, both cyber/school victims and bully-victims were at a high risk of lower self-esteem, and cyber/school victims were at a greater risk for depression. This study was done in China. This scenario prompted an investigation in Bungoma County to find out if similar results would be yielded in this cultural context.

In Africa, Popvac and Leoschut (2012) reported that South Africa is one with the highest user of mobile technology and mobile social networking. A total of 9 out of 10(92%) people either own or have access to a mobile phone. Further, the study showed that cyber-bullying takes place in various forms, such as sending malicious messages or texting messages, sexting or sending pictures or videos of someone with the intention of distributing the information to others. The study findings, however, did not specify the psychological well-being. The current study focused on the association between these forms of bullying and psychosocial adjustments among students in secondary schools in Kenya. The findings would form a basis for further research on issues affecting students in Kenyan schools.

Pillay (2012) also sought to examine the behavioural and psychological bullying among grade 8-10 learners in a cross-section of schools, in Kwazulu-Natal, South Africa. The data from the study confirmed that cyber-bullying was prevalent in various secondary schools in Kwazulu-Natal. There was a notable difference between victims and non-victims on their performance on the psychological well-being scale, and this was also the case for perpetrators and non-perpetrators of cyber-bullying. The findings, however, did not specify the psychological wellbeing scale, a finding worth investigating in the current study. In addition, the survivors had low self-esteem, a lot more, negative self-perceptions which affected their psychological well-being. They also expressed feelings of hopelessness, isolation, sadness, despair, anger, and self-pity. On the other hand, perpetrators had strong feelings of worthlessness, guilt, sadness and hopelessness. They were fearful and expressed a loss of interest in daily activities, experienced difficulty concentrating on school work and expressed a lack of enthusiasm and motivation.

On the association between cyber-bullying and self-esteem, Priebe, Hansson and Svedin (2010) investigated the association between adolescents' self-reported experiences of sexual abuse and aspects of psychosocial adjustment such as emotional and behavioural problems involving 1,107 Swedish high school seniors. Results showed that sexual abuse predicted immense emotional and behavioural problems, weaker sense of coherence and lower self-esteem compared to none abused. The study failed to focus on other forms of bullying. The current study focused on investigating forms of sexual bullying and self-esteem among students in a secondary school in Kenya.

Bendixen, Daveronis and Kennair (2017) also examined how the wellbeing of high school students was affected by being victims to non-physical sexual bullying. The study used self-report data from two separate large-scale surveys carried out in 2007 (study 1)

and 2013-2014 (study2) in Sor-Trondelag County, Norway. The results revealed that being subjected to incidences such as peer sexual bullying, coercion, and force was consistently associated with more symptoms of anxiety depression and lower levels of self-esteem and more negative body image. The study used self-report data from two separate large-scale surveys carried out in 2007 (study 1) and (study 2) in Sori-Trondelag County Norway. Unlike previous studies, the current study focused on one study in Kenya.

Stalking has mostly been identified among the university student population (Jordan, Wilcox, & Pritchard, 2007). Studies indicate a strong correlation between stalking and psychological and also social outcomes (McEwan et al., 2009). The psychosocial outcomes include anxiety, fear, terror, and anger, and irritation, loss of self-esteem, helplessness, and deterioration in social relationship.

Darney et al. (2013) posited that the exclusion of individuals or the degree of acceptance and respect one feels may play a role in self-esteem development. Thus, the amount of perceived acceptance obtained from others may be incorporated into an individual's personal feeling of self-worth. Thomas et al. (2016) examined the association of frequency, emotional response form of bullying to psychological distress and emotional well-being among adolescents from New Zealand. The results revealed a high prevalence of all the four forms of bullying; teasing 30.6%, rumour spreading (17.9%), social exclusion 14.3% and physical threats or harm (10.75). The study found that all four forms were associated with higher psychological distress and reduced emotional well-being. In particular, the study revealed that social exclusion had a strong association with mental ill-health, including low self-esteem.

Brito and Oliveira (2013) performed a cross-sectional study with 327 students in the 9th grade of middle school from public school in the city of Olinda to identify the level of self-esteem of students by gender and role in a bullying situation. The results indicated that the prevalence of bullying was 67.5 %. It was found that in the group of victims /aggressors and aggressors ($p = .006$ and 0.044 , respectively), males had higher statistically significant self-esteem scores when compared to females. The same study was performed to ascertain if similar results would be found among the forms of bullying.

In Kenya, few studies have been carried out on bullying. Ndeti et al. (2007) conducted a study in seventeen secondary schools in Nairobi County. Self-report questionnaires were administered to 1,012 students. The study revealed that there are various forms of bullying that existed Nairobi public secondary schools. The research also established that bullying had an effect on concentration in class, academic performance and self-esteem of the victims. In another study, Poipoi (2011) also examined teachers and students' perceptions of psycho-physiological causes of bullying among public secondary schools in the western province. The study research population consisted of 6,354 teachers and 65,869 Form two students from a stratified sampling of public schools. It was noted that perceived psychological issues of the bullies were; being physically strong, having mental disturbances and being older than the victims. In a different study, Manyibe and Anyona (2018) conducted a study on the effects of bullying on victim's behaviour among girls in public secondary schools in Kajiado West, Kenya. The sample comprised of 118 students. The findings implied that bullying had a number of effects on the survivors' behaviour. These included: irritability, poor concentration, poor performance, low self-esteem and panic attacks. It is critical to note that these were some of the variables being investigated in this study. Therefore, unlike Poipoi (2011) and Manyibe

and Anyona (2018) studies, the current study examined the psychological outcomes of bullying which includes, low self-esteem, social withdrawal, depression, aggression and suicidal ideation.

From the literature reviewed, the above research indicates that there is a link between low self-esteem and forms of bullying. In light of this research, it is relevant to examine in a Kenyan context. Most studies have concentrated on assessing the prevalence of bullying in developed and Asian countries. There is a paucity of data on bullying in Africa. The little that is available, especially in Kenya, is on traditional forms of bullying and not the new forms of bullying such as stalking, social exclusion and sexual bullying which are being investigated in this study. It was pertinent for this research to find out whether the relationship between bullying and psychological outcomes in Kenya is comparable to the developed countries where similar studies have been carried out. This made the current study to investigate the relationship between forms of bullying and self-esteem.

2.4 The Relationship between Forms of Bullying and Depression

Depression is the most frequently diagnosed mental health problem among youths, and it leads to devastating long-term outcomes (Granic, 2016). The alarming increase in depressive symptoms during early and mid-adolescence is posing a concern not only to the western world but also in the developing countries (Weichold, & Blumenthal, 2016). Depression is defined as a mental health problem that involves a low mood and a loss of interest in activities. In Germany, for instance, 5.6 percent of 14-17 years old adolescents showed clinically relevant symptoms of depression. Studies have shown a connection between forms of bullying and depression (Kaltiala-Heino, & Frojd, 2011). The studies revealed that depression was associated with bullying result in distortion of the

processing of social information, negative self-perception. Depression may impair social skills among adolescents and may cause them helpless. However, extant research has only examined the association between traditional forms of bullying and little is documented on the forms of bullying and depression, especially in underdeveloped countries like Kenya.

Selma, Habibe and Filiz (2018) investigated depressive symptoms, self-esteem, and suicidal ideation in high school students in Turkey with respect to the involvement in the cycle of bullying. The information was collected using a structured questionnaire from 1173 students from five secondary schools in a city in Turkey. It was found that the bullied, bullies and people in the bullying cycle had higher depressive symptoms, lower self-esteem and higher tendencies than the non-involved with the bullying cycle. Being bullied increases the suicidal ideation risk with aim odds of 1.447, and bullying increases the suicidal ideation risk an odd ratio of 1.663. No causal connection was established, the bully, being a victim of bullying and involvement in the cycle were all associated with depression, suicidal ideation and low self-esteem. Data was collected using peer bullying questionnaire, Beck Depression Inventory and Cooper Smith Self Esteem Scale. The current study used a similar questionnaire to compare findings done in other countries like Turkey.

Longitudinal and cross-sectional studies on sexual bullying carried out among secondary school students range from 40% to 85% (Bendixen, & Kennair, 2014; Chiodo et al., 2009; Landstedt & Gillander Gadin, 2011; Lichty, & Campbell 2012; Skoog, Khoo, & Nygren, 2015). In the United States, Chiodo et al. (2009) found that sexual harassment victimisation among boys at 42.4% and 44.1% in grade 9. Girls experienced more sexual comments and jokes as well as experiencing touch that is unwanted than boys. In boys,

homosexual chats or receiving unwanted sexual contents was the highest reported. Notably, this sexual bullying among girls in grade 9 was linked to self-harm, suicidal ideation, maladaptive dieting as well as the early relationship, abuse of drugs and substance use and being worried of their safety in school. The study observed that harassed students had higher chances of reporting victimisation 2.5 years later as compared to the non-harassed students. Whether sexual bullying was linked to depression symptoms among the students was not assessed in the study, a gap to be filled by the current study.

In a different study, Dahlqvist et al. (2016) investigated the relationship between the dimension of sexual bullying by peers, victimisation and profiles of depressive symptoms from ages 14-16 in adolescents. The study also aimed at investigating gender difference in this pathway. Results revealed that sexual name-calling was the profile that had the strongest associations to all profiles of depressive symptoms irrespective of gender. Amongst boys, name-calling was preceded by all dimensions of depressive symptoms. The study failed to establish an association between other forms of bullying and psychosocial adjustment among students. This study intended to assess the association between forms of sexual bullying that has been under-explored and depressive symptoms among students in secondary schools in Kenya to find out whether the association was similar to documented research in other countries.

Apart from sexual bullying, a number of studies have found an association between cyber-bullying and depressive symptoms among young people. For example, Kaur (2017) examined the prevalence and influence of cyber-bullying on student's behaviour in a sample of 862 school pupils aged 13-17 years in India. The results of the study revealed that a majority (65%) of students experienced cyber victimisation in one form

or another from occasionally to almost every day. The findings indicated a positive correlation between cyber victimisation, anxiety and depressive mood. In addition, poor self-control and poor general health were exhibited among the samples of cyber victims.

Chang et al. (2013) examined the relationship between cyber-bullying, school bullying and mental health in adolescents. Findings of the study revealed that students with internet risk behaviours were more likely to be involved in cyber-bullying and/or cyber victimisation. In addition, students who had cyber-bullying or victimisation experiences also tended to be involved in school bullying. Both cyber/school victims and bully-victims had higher chances of having lower self-esteem, and cyber/school victims were at a higher risk for depression. The study focused on cyber-bullying between School bullying and mental health in adolescents in China.

Schneider et al. (2012) evaluated the prevalence of cyber-bullying and school bullying victimisation and their associations with psychological distress in the USA. The study that was done among adolescent revealed that a total of 15.8% of students reported cyber-bullying and 25.9% reported cyber-bullying in the past 12 months. Controlled analysis indicated that distress (depressive symptoms, self-injury and suicidal tendency) was highest among victims of both cyber-bullying and school bullying. Adjusted odds ratio (AORs) ranged from 4.38 for depressive symptoms to 5.35 for suicide attempts requiring medical treatment. The current study examined both forms of bullying and their impact on the psychosocial adjustment adolescent and not independently construct since there is considerable overlap between traditional bullying and cyber-bullying.

Wang et al. (2010) assessed the co-occurrence of five subtypes of peer victimisation in US adolescence in Grade 6 through 10 in 2005/2006. Results identified three latent classes that included; old types' victim class that had 9.7% and 6.2% male and female

respectively, a verbal/relational victim class made up of 28.1% and 35.1% female respectively and a none-victim class consisting of 62.2% and 58.7 male and female respectively. Notably, males had a high chance of being all type victims, and a graded relationship existed between the three latent classes and level of depression, frequency of injuries attending medically and medicines use mainly among female. The study also reported that victimisation from social exclusion posed a great risk to adolescents in terms of poor physical and psychological outcomes. The study, however, focused on forms of bullying in relation to socio-demographic characteristics, parental support and friends, which were not the variables under this study.

Thomas et al. (2016), examined the association of all three factors (frequency, emotion response and forms of bullying) to psychological distress and emotional well-being. Results revealed that adolescents reported a high prevalence of the four forms of bullying, called names (30.6%), rumours spreading (17.9%), social exclusion (14.3%) and physical threats/harm (10.7%). Victimisation was significantly and independently associated with higher levels of psychological distress and reduced levels of emotional well-being. For all forms of bullying, social exclusion, in particular, had a strong association with mental ill-health. Adolescents who experienced frequent bullying that was upset reported higher psychological distress and reduced emotional well-being. This study did not, however, show the magnitude and nature of the health and social problems associated with the types of bullying which the current study sought to investigate.

Weng et al. (2017) examined bullying behaviour among Macanese Adolescents psychosocial conditions and demographic characteristics in discriminating. 2288 adolescents aged between 10 and 20 years from thirteen different primary and secondary schools in Macau China were the participants in the research. It was established from the

results that there were significant differences among groups. Thus, adolescents that were engaged in school bullying experienced diverse psychosocial adjustment. The bullied reported the strongest feelings of depression and anxiety and expressed the lowest life satisfaction. The study further found out that bullies experienced more anxiety and depression. The study focused more on demographic and psychosocial differences between victims, and bully-victims using Macanese sample. This study went further to explore the effect of different forms of bullying and psychosocial adjustment among the bullied, which was not established in Weng, Chui and Liu study. The findings may be an eye-opener to teacher counsellors when addressing bullying behaviour in secondary schools in Bungoma County.

Similarly, in Norway, a study by Sigurdson et al. (2015) examined the association between bullying in Mid-Norway adolescents and mental health. It was found that adolescents involved in bullying had adverse mental health-related problems such as fear, anxiety, depression, and withdrawal from social contacts in adulthood compared to the non-involved. Compared to non-involved, those who were bullied were affected especially regarding increased total sum of depressive symptoms and high level of total, internalising and critical symptoms, the risk of having receive help for mental health problems increased, and reduced functioning due to Psychiatric problem in adulthood. The bully-victims and those being bullied showed an increased risk of high levels of critical symptoms.

In Africa, Adeoye (2013) examined the influence of peer victimisation on sexual behaviour with the view of finding out the relationship and ways of coping with the problems. The results showed that peer bullying contributed to the sexual behaviour of the students; the study adopted an ex-post facto research design. In Kenya, the

prevalence of depression among students in secondary schools was high. The prevalence of clinically depressive symptoms in Kenya was at 43% among secondary school students in public schools (Khasakhala, Ndetei, & Mathai, 2013).

A study by Khasakhala et al. (2012) sought to determine the prevalence of depressive symptoms among adolescents in Nairobi public secondary schools. The researchers made a comparison between day and boarding students and identified associated factors in that population. 17 out of 49 public secondary schools-going adolescents were sampled randomly using stratified sampling in Nairobi province which was used so as to take account of geographical distribution, day and boarding school, boys only, girls only and coeducation school. Self-administered instruments were used to measure perceived parental behaviour and levels of depression in 1276 students. The results showed that the prevalence of clinically significant depressive symptoms was 26.4% and that boarding school students had more clinically significant depressive symptoms compared to students today. The results also showed positive correlations between scores for depression and perceived rejecting parental behaviour. However, the study never focused on the underlying factors which could contribute to depression, such as bullying. The current study sought to establish the association between bullying and depression among the secondary school students, hence a gap in knowledge that the current study attempted to fill.

Kodero et al. (2011) investigated student's perception of homosexual practice in secondary schools in Kenya, the secondary school type where homosexuality is most practised and the root cause of sexual bullying in the form of homosexuality. The results indicated that majority of the participants 93% knew the meaning of homosexuality, that homosexuality is practised in secondary schools in Kenya; that homosexuality was

mainly practised in single-sex boarding secondary schools in Kenya that sexual starvation was perceived as the main root cause of homosexuality in secondary schools.

The literature reviewed indicates the presence of sexual bullying exists in schools. However, establishing how these acts influence the psychosocial development of students, especially in rural boarding schools in Kenya is yet to be done. This is one of the gaps that were to be filled by the current study. Taken together, this study may be the first one of its kind to document on stalking, cyber-bullying, sexual bullying and social exclusion and its effects on students' psychosocial adjustment in Bungoma County, in Kenya.

2.5 The Relationship between Forms of Bullying and Aggression

Studies indicate that there is an association between bullying and aggressive behaviour. Espelage and Colbert (2016) aggressive behaviour can be a form of bullying if the aggression is done repeatedly. Social exclusion as a form of bullying causes psychological harm and negative adjustment, such as aggression (Killen, Mulvey, & Hitti, 2013). Social exclusion takes two forms reactive and instrumental. Reactive relational bullying is where a learner uses social manipulation in response to having been wronged, instrumental where the learner manipulates relationships by being violent (Mulvey et al., 2017). Experiences of exclusion can have adverse effects in terms of emotional and behavioural health (Killen, & Rutland, 2011) behaviour that intentionally harms another individual through the manipulation of the social relationships (Mulvey, Hitti, & Killen, 2010).

Nixon (2014) reviewed the impact of cyber-bullying on adolescent health across multiple studies worldwide. A review of the evidence suggested that cyber-bullying posed a threat to adolescent health and well-being. In the review, Nixon noted that correlation

studies have demonstrated a relationship between cyber-bullying and negative health indices, such as increased depressive effects, anxiety, loneliness, suicidal behaviour and somatic symptoms. Thus, perpetrators of cyber-bullying are more likely to report increased substance use, aggression and delinquents. Nixon however, did not provide empirical evidence of the significant relationship between cyber-bullying and negative health, this is the knowledge gap that the current study sought to fill.

Kubiszewski et al. (2013) investigated the prevalence of adolescents engaged in cyber-bullying and then identify whether students involved in cyber-bullying and school bullying presented the same characteristics of internalising problems (insomnia, perceived social disintegration, psychological distress) and externalising problems (general aggressiveness, antisocial behaviour). Results revealed that one student in four had gone through cyber-bullying with 16.4%, 4.9 and 5.6% as cyber-victim, cyber-bully and cyber-bully/victim respectively. Also, 14% of the selected sample were involved as victims in school bullying, 7.2% were involved as a bully, while about 2.8% were bully/victim. Victims of cyber-bullying as well as bullies had both externalising and internalising problems among cyberbully and victims. Insomnia was elevated among those who experienced cyber-bullying. Notably, cyber-bullies and cyber-bully/victims were more affected by aggressiveness and antisocial behaviour. The results assessed prevalence among adolescents who engaged in cyber-bullying but not the relationship between cyber-bullying and the outcome behaviour the current study sought to establish.

McGee et al. (2011) observed that peer victimisation which included being the target of forms of bullying teasing, deliberate exclusion and targets of physical threats and malicious gossip was associated with externalising behaviour problems such as aggression, truancy and delinquency. Nevertheless, there is need for more scientific data

to explore the extent of different forms of such cyber, sexual, stalking bullying and psychosocial outcomes in other cultures such as students in a secondary school in Kenya, a gap that the current study sought to fill. The recent research, other than assessing the externalising problems such as aggression, also considered the internalising behaviour problems such as social withdrawal, depression and suicidal ideation and forms of bullying.

Wakoli et al. (2016) investigated the relationship between psychosocial factors and aggressive behaviour that is often manifested in bullying in students learning in Bungoma secondary school. A sample of 379 form two students who were randomly selected participated in the study. The findings indicated that there was a significant relationship between psychosocial factors and aggressive behaviour among students in secondary school. The study also showed that aggressive behaviour was most common in comparison to fighting and destruction of school property by students, unlike Wakoli et al. (2016) study that used social learning theory to investigate the psychosocial factors that contribute to aggressive behaviour, the current study combined social-ecological theory that has been widely advocated for when studying bullying behaviour and psychosexual theory by Eric Ericson. They two theories provided more insight in understanding aggressive behaviour related to bullying and provide a baseline for future researchers on the same.

2.6. The Relationship between the Bullying Forms and then Suicidal Ideation

Suicidal Ideation is defined as ideas, wishes and the tendencies towards committing suicide (Ahmad et al., 2014). Suicide among youths continues to be a significant global concern and is the leading cause of deaths among adolescents (Centre for Disease Control, 2017). The numbers have grown and doubled, especially among females aged

15–17 years. A lot of research has been conducted to ascertain the relationship between traditional bullying and suicidal ideation. Barzilay et al. (2017) examined bullying victimisation and suicidal ideation and behaviour among adolescents in Europe. The results revealed that the prevalence of victimisation was 9.4%, 36.1% and 33.0% for physical, verbal and relational. Suicidal ideation was linked to physical victimisation while suicide attempts were linked with relational victimisation. According to Kaltiala-Heino and Frojd (2011) adolescents involved in bullying are at significant risk of experiencing suicidal ideation or acts and victims of bullying seem to be at a greater risk of experiencing low psychosocial adjustment as many internet users are socially isolated. Therefore, there was a need to establish authentic data among adolescents in a secondary school in Bungoma County.

Different studies have been carried out on bullying and suicidal ideation. Hinduja and Patchin (2010) surveyed 1,963 America middle school students in the United States. They examined the relationship between involvement in cyber-bullying and suicide. The results revealed that both targets and perpetrators of cyber-bullying were more likely to have suicidal ideation and were likely to commit suicide when compared to their peers who were not involved in cyber-bullying. Targets of cyber-bullying were likely to commit suicide 1.9 times compared to the perpetrators 1.5 times. Alavi et al. (2017) also conducted a study to investigate the relationship between bullying and suicidal ideation among adolescence who were patients under 18 years of age in Canada. The study revealed that 77% of the sampled adolescents had experienced bullying, while 66% of the adolescent had suicidal ideation. Also, the study established that cyber-bullying victims were 11.5 times more likely to suicidal ideation. A similar study may yield different results when conducted in a different scope of participants like secondary school students in Bungoma County.

Sampasa-Kanyinga, Roumelictis and Xu, (2014) found that there is an association between cyber-bullying and a number of adverse health and social outcomes and also suicidal ideation, plans and attempts among Canadian school children. The study done among middle and high school students showed that school bullying and cyber-bullying victims incurred a significantly higher suicidal ideation risk. This study investigated cyber and school bullying alone. Apart from cyber-bullying, the current research ascertained whether there was a link between other forms of bullying in schools, such as stalking, sexual bullying, social exclusion and suicidal ideation.

Chiodo et al. (2009) research focused on gender differences in prevalence and type of sexual harassment that involved grade 9. The research also covered how this harassment contributes to the relationship between victimisation and psychological adjustment. 23 schools produced 1,734 students who did a self-report survey at the entry of grade 9 and 11 on different victimisation experiences including sexual harassment, physical dating, and peer violence and relational victimisation and adjustment such as problematic substance use, emotional distress, self-harm, suicidal ideation, maladaptive dieting, feeling unsafe and interpretation of violent delinquency. The study formed a basis of the current research to ascertain the relationship between bullying and suicidal ideation among students in secondary schools in Bungoma County that has been under-documented.

Williams et al. (2017) carried out a study to explore sex difference in various forms of bullying and its impact on depressive symptoms and suicidal behaviour in ninth-grade students. From the results, it was reported that female victims of cyber-bullying had a higher chance of reporting depression, suicidal ideation. Similarly, Mueller et al. (2015) carried out a study on Suicidal ideation and bullying among US adolescent. They

examined the intersection of sexual orientation, gender and race/ethnicity. The results indicated that Black and Hispanic heterosexual youths were less likely to be bullies more likely to report suicidal ideation regardless of their race/ethnicity. The study, however, did not specify the kind of bullying that was experienced. The current study interrogated on specific types of bullying in relationship to psychosocial adjustment among the adolescents in secondary school level.

Montoro, Igartua and Thombs (2016) investigated the association of bullying with suicidal ideation and attempt among adolescents with different dimensions of sexual orientation. The study revealed that adolescents with a non-heterosexual identity had a greater likelihood to have suicide attempts when subjected to bullying. The study, however, did not reveal much about the heterosexual behaviour among adolescents in relation to suicidal ideation. This gap was filled by the recent study by ascertaining the link between sexual bullying among girls and boys in girls', boys, and co-educational schools.

Almansur and Siziya (2017) determined the prevalence of suicidal ideation and its correlates with school-going adolescents in Swaziland. Results indicated that the overall proportions of students who considered suicide were 18.3% of 1866 females and 15% of 1672 males. Some of the risk factors of suicidal ideation identified were physical bullying and feeling lonely, related to social exclusion in the current study. Whereas the study was based on secondary analysis of data, the current study was used primary data which was more current and reliable in ascertaining the relation between bullying and suicide.

Shayo and Lawala (2019) used a secondary analysis of the Tanzania Global School-Based Student Health Survey conducted in 2014 among adolescents in schools to

estimate the prevalence and association between bullying and suicidal behaviour. The study found that 27% of 3793 students were bullied. Being bullied was also associated with suicidal ideation and suicide attempt. The study concluded that bullying is prevalent and a potential predictor of suicidal behaviour among in-school adolescents in Tanzania. Like Tanzania, Kenya is also a low-income country, it would be essential to find out if there is any similarity in the association between bullying and suicidal ideation in the two countries.

In Kenya, Makori and Agufana (2020) conducted a study on cyber-bullying among learners in Higher Educational Institutions in Sub Saharan Africa. The study involved 123 respondents who responded to a questionnaire. The results study revealed that cyber-bullying has serious psychological harm on the victims, some leading to suicidal ideation and suicide, among others. Reviewed studies produced evidence that suggested that there is a relationship between different forms of bullying and suicidal ideation in both low- and high-income countries. However, there exists limited information on the prevalence of bullying and its association with suicidal ideation among in-school adolescents (Shayo, & Lawala 2019). Notably, matters revolving around suicide are perceived negatively in African culture.

2.7. The Relationship between Forms of Bullying and Social Withdrawal

Social Withdrawal is the display of solitary behaviour among peers. There is, however, little data information on the long-term social consequences of peer victimisation (Rudolph et al., 2014). In a study on peer victimisation and social alienation among middle (5-12 years) school-going children, the researchers found that peer victimisation predicted social alienation which then predicted deviant peer affiliation. Pavri (2015) also reviewed researches on loneliness and peer victimisation for children and youth. The

researcher reported that persistent and chronic peer victimisation resulted into loneliness; social anxiety and lower self-esteem as common outcomes from bullying in school. Fleming and Jacobsen (2010) investigated on bullying and symptoms of depression in children middle school students. The sample size of the study was 800 children. The study revealed that about half (47%) of the students had been bullied over the past month, with 30% of the students indicating that they felt sad and hopeless. Further, those who reported higher levels of bullying also reported loneliness, sleep difficulties and suicidal ideation.

In a large-scale longitudinal study conducted with 388 students in 1st, 2nd and 3rd grades, Kochenderfer-Ladd and Wardrop (2001) cited Pavri (2015) investigating children's adjustment trajectories who were peer victimised. Key variables of loneliness and social satisfaction were measured, and the authors found that the trajectories differed on these two forms of psychosocial maladjustment. The study showed that children who were chronically victimised by peers reported increasing and stable levels of sadness and loneliness over time. It was found that victimised children were not always unhappy with their social situation. Some of them reported being satisfied with their peer relationships. The study indicated that although youngsters who are victimised may reap the social benefits of companionship and guidance from peers, they may not enjoy the emotional benefits of validation and intimacy that result in elevated experiences of loneliness.

Similarly, Tariq and Tayyab (2011) in a study on adolescents in schools and adults in Pakistan, established that a strong correlation between experiences of bullying and more social withdrawal exists. The study did not indicate specific forms of bullying that resulted in the maladjustment which this study investigated. The study also used two age groups (adolescents and adults) and the results could be skewed to one of the age group

in terms of the variables investigated. The current study specifically focused on adolescents. Cotterson and Hunter (2010), there is some evidence to indicate that a child's sense of control over the victimisation affects his experience with loneliness and hopefulness. In the study with 110 students aged 8 – 12 in Scotland schools, the researchers found that a perceived sense of control over victimisation helped alleviate loneliness. Children reporting higher loneliness and higher victimisation gave themselves lower appraisals of control. Contrary, children who rated themselves as having higher perceived control over the social situation were better able to adjust with loneliness. In the study, peer victimisation, which is a form of bullying was a predictor of social withdrawal.

Children's solitary behaviour is correlated with loneliness and peer victimisation. It could be that solitary children with fewer friends are the target of bullies or that victimised children withdraw from social contact and have fewer friends. According to Pavri (2015), loneliness is a personality trait found in victims of bullying, which, once detected by the bully, increase the probability of victimisation. The lonely students with few friends and are prone to less social support are vulnerable to being victimised by their peers. Loneliness also emerges as a salient outcome of persistence and chronic peer victimisation. The research confirmed that adolescents who are rejected by peers and who have smaller social networks are at risk of victimisation. On the other hand, adolescents with a large number of friends enjoy strong reciprocal friendships, are typically less likely to be victimised. Nonetheless, this was a meta-analysis review of studies, the current study empirically ascertained the association between bullying and social withdrawal.

A different study by Coelho and Romao (2018) investigated how social anxiety and social withdrawal were related to middle school student's involvement in bullying. A total of 668 participants who were screened for inclusion in social and emotional learning program participated in the study. The study found out that bullying and cyber-bullying victims across the profiles of students (victims, bullies, and bully-victims) had higher social withdrawal levels; however, bully-victims were those who showed the highest levels. These findings also revealed that cyber-bullying roles strongly impacted on social withdrawal. This study involved middle-level school students but the current study involved form three students who are in the adolescence stage where social identity is of great concern to them. In this case, therefore, social withdrawal may have negative effects on their general development, a factor that prompted this study.

2.8 Theoretical Framework

The study was guided by two theories; Bronfen brenner's Social-ecological theory and Erickson's psychosocial theory. The two theories complemented each other in explaining the association between bullying and psychosocial adjustment in this study.

2.8.1 Social-Ecological Theory

The study adopted the Social-ecological Theory developed by Uric Bronfenbrenner's in 1979. The Theory postulates that human behaviour development is a bidirectional interaction between individuals peer and school levels of the social context which influences the development and understanding of young people's behaviour (Hemphil, Tollit, & Herrenkolli, 2014). The behaviour of an individual needs to be understood in terms of the social-ecological environment within which it occurs (Espelage et al., 2014; Hong, & Espelage, 2012; Lim, & Hoot, 2015; Patton et al., 2013; Swearer Napolitano, & Espelage, 2011; Thornberg, 2015). According to the theory, the individual interacts

within multiple systems that form a socio-ecological framework which includes *micro*, *meso*, *exo* and *macro* systems. Each system is located within each other forming a nest. Microsystem is the individual's immediate environment; including parenting, peer relation, school, and the community. Mesosystem refers to interactions of two or more people in the immediate environment (Bronfenbrenner, 1977). Examples include interactions between the Microsystems of family & school, family and peer group, and school and peer groups (Honey & Espelage, 2012). Exosystem refers to interactions that are not direct but directly affect the individual (Bronfenbrenner, 1977). Exosystem indirectly affects the individual through the decisions or actions taken in settings where they are not present (Patton et al., 2013). Example school policies, staff training, budgetary decisions, neighbouring environments, parental stress, the home situation of teachers & peers and the mass media (Espelage et al., 2014; Hong, & Espelage, 2012; Hong, & Garbarino, 2012, Huang et al.; 2013, Thornberg, 2015). Macro systems refers to social-cultural power structures, norms and beliefs relating to gender, sexuality, race, ethnicity, class, religion, disability, age, appearance and so on (Espelage et al., 2014; Huang, Hong, & Espelage, 2013).

According to Bronfenbrenner's 1979 socio-ecological theory, microsystem is the immediate environment that affects interpersonal relationships and individual child development. The microsystem is composed of individuals or groups of individuals within immediate settings (home, school) which has direct influences in bullying behaviour among youth (Hong, & Espelage, 2012). It is within this microsystem that proximal processes of development occur and hence where interactions with other children develop behavioural characteristics. The influences that promote bullying are found within this environment, such as the home where the family spends a lot of time with the individual. Family plays an important role, as interactions in the family may

affect how children interact with their peers. Hence, the extent to which they are involved in bullying interactions as either ‘bullies’ or ‘victims. Such interactions are, for example, between parents, parents and children, parents and siblings.

Factors that are applicable to school bullying within the micro system of the family are lack of parental involvement, lack of parental support, negative family interactions, child maltreatment, and inter-parental violence (Espelage et al., 2014; Hong, & Espelage, 2012; Hong, & Gurbarino, 2012). Parents who fail to provide adequate supervision or are not actively involved in the lives of their children tend to be bullies (Espelage et al., 2014). School is an example of a micro system relevant to school bullying. Factors within the school’s micro system include school environment, teacher-student relationships, school climate, school belonging and school connectedness (Patton et al., 2013; Swearer, & Hymel, 2015).

The teacher and student relationship and the extent to which students feel they can receive support from teachers and the environmental, structural aspects of school life (Hong, & Gurbarino, 2014; Hong, & Espelage, 2012). A number of studies have explored the family characteristics that link to bullying behaviour (Cook et al.; 2010; Espelage, & Swearer, 2010). These characteristics include parental abuse (Corporal punishment) which was positively associated with bullying behaviour (Duncan, 2011), lack of parental support was associated with greater involvement in all kinds of bullying (Wang, Iannotti, & Nansel, 2009). Other researchers also identified poor parental supervision to be associated with an increased risk of bullying among young people (Swearer & Hymel, 2015). Ultimately, parents have the most decisive influence on the adolescent’s behaviour.

In this study, bullying was an ecological phenomenon established and sustained through a complex interaction between individual attributes, peer relation and school levels factors. It influences an individual's psychosocial development. The Social-Ecological Theory proposes that individual characteristics such as psychopathic tendencies (Fanti, & Kimonis, 2013), endorsement of masculine traits (Navarro, Larranaga, & Yubero, 2011), conduct problems (Vaughn et al., 2010) susceptibility to peer pressure (Pepler, Craig, & O'Connell, 2010) contributes to bullying behaviour.

A peer interaction poses another important micro system which occurs within the peer context and enhances or inhibit bullying behaviour (Pepler et al.; 2010). Peers interact and socialise with each other. There exists a link between peer relations and bullying behaviour (Hong, & Espelage, 2012). Researchers are investigating the association between peer relationship and bullying among adolescents' report that the frequency of bullying behaviour was high among adolescents (Wolke, & Skew, 2011). Students who are socially excluded by their peers in the peer group are more likely to be either bullied or bullies, which results in loneliness and social withdrawal (Cowie, 2013). This school neighbourhood can trigger bullying behaviour among students (Hong, & Espelage, 2012).

In most cases, students perceive the school environment unsafe (Fitzpatrick, Dublin, & Piko, 2010), which can contribute to the involvement in bullying. However, there are protective factors such as peer support from teachers, diversity in the classrooms (Felix, & You, 2011). Children who lack teachers' restrictions on their mobile phone users have a higher risk of being victims online (Zhou et al., 2013).

Advancement in technology has also transformed forms of bullying by using phones and the internet to carry out forms of aggression. This can be made possible by using texts,

video clips; email messaging, chat rooms and websites to deliberately harass threaten or intimidate others (Whittaker, & Kowalski, 2015). The current study assumed that the availability of phones and internet connections to students was likely to increase cyber-bullying amongst them. In addition, it was envisaged that an increase in cyber-bullying has been linked to depression and suicidal ideation when experiences of other forms of bullying were under control, indicating cyber-bullying had an impact on the psychosocial adjustment compared to other forms of bullying (Bonanno, & Hymel, 2013). Sexual bullying, stalking, and social exclusion would be linked to low self-esteem and high levels of depression, suicidal ideation, fear, aggression and social withdrawal. However, the Social-ecological System Theory does not address these psychosocial adjustment outcomes. To address this limitation, Eric Erickson Psycho-Social Theory (1968) filled the gap.

2.8.2 Erik Erikson's (1968) Psychosocial Theory

The study supported Erikson's (1968) psychosocial theory. According to the theory, there are eight stages of development in life span of a human being to adulthood. Each stage, representing a developmental task or a crisis that a person must negotiate. These tasks can cause a major impact on one's identity in the adolescent stage. Erikson divided the settings according to the years as follows;

- i. Trust versus mistrust (birth – 1 1/2yrs)
- ii. Autonomy versus shame and doubt 1 ½ - 3yrs)
- iii. Initiative versus guilt (3-5 yrs.)
- iv. Industry versus inferiority (6 – puberty)
- v. Identity versus role confusion (10 – 20yrs)
- vi. Intimacy versus isolation (20s, 30s)
- vii. Generativity versus stagnation (40s, 50s)

viii. Integrity versus despair (60 and above)

In this study, our sample was aged between 14-19 years and hence falls in the fifth stage, which postulates that adolescents experience identity versus role confusion. The study considered the theory because, during the adolescent stage, peer relationship is an integral part of development. There is a marked increase in self-autonomy as they transit from primary school to secondary. In this case, bullying becomes detrimental than at any other life stages (Troop-Gordon, 2017). Research indicates that sexual bullying is expected at the adolescent stage. Thus, much of the bullying experienced at adolescents' surrounds sexuality due to heightened focus on intimate relationships. Literature regarding adolescents reveals that 57 % of adolescents, who were a sexual minority, reported more and frequent bullying, hence an issue that was not observed among young children (Menesini, & Salmivalli, 2017). Despite what has been documented about adolescents' unique encounters, there is lack of research empirically investigating the experiences of bullying within this category of students, as most studies involve respondents across a wide range of (Troop-Gordon, 2017). Search for identity could be overwhelming, disorienting and troubling among the adolescents. At this stage, the adolescents may have school rules problems and may experience role confusion hence react by bullying others. In this study, it is presumed that those who are bullied may have a less developed identity and may likely react by either withdrawing, having suicidal ideation, being aggressive or have low self-esteem.

In addition, it is also at the identity formation stage that development of self-esteem is experienced. Formation of identity depends on external cues such as perceived stereotypes. In this case, there is an attempt to find out from external environments which may make them feel positive about themselves or negative (Hinduja, & Patchin,

2010). Thus, this study was based on this theory since it underpinned that adolescents' behaviour resulted from their social environment. Therefore, filled a gap by focusing specifically on forms of bullying and the psychosocial adjustment among the adolescents. Hence, a dire need to pay specific attention to bullying at this stage because of the complexity of this stage.

2.9 Conceptual Framework

Conceptual framework shows the interrelationships among the independent, intervening and dependent variables. The independent variables were moderated by the moderating variables and vice-versa. The moderating variables influenced the dependent variables. The independent variables in turn influenced the dependent variables directly as shown in Figure 1.

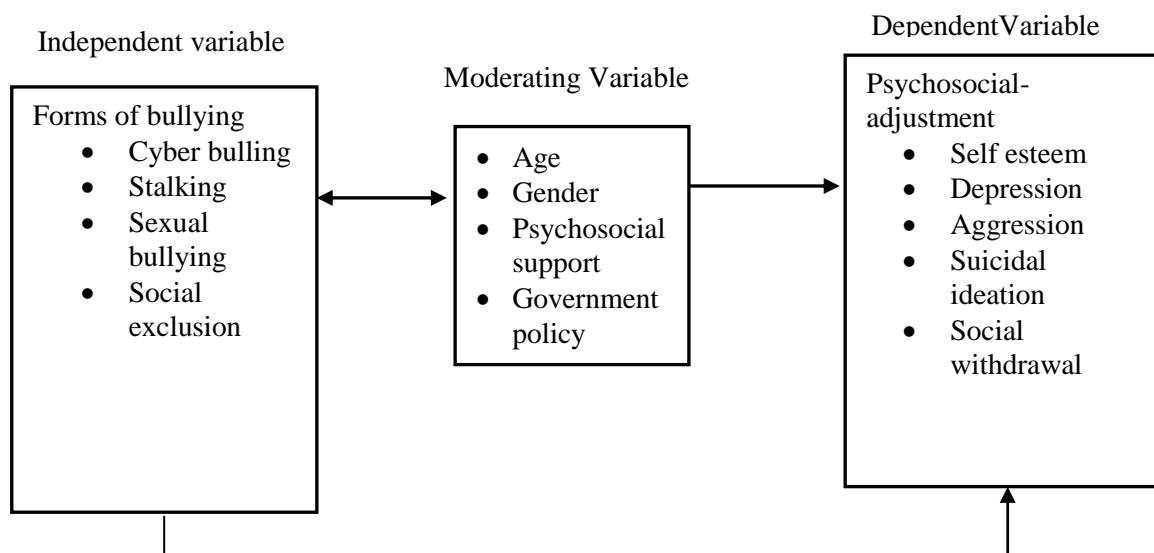


Figure 1: Conceptual Framework of the Study Showing Interplay Between Variables

Source: Researcher (2021)

The independent variables in this study were: cyber bullying, sexual bullying, social exclusion and stalking. The dependent variables would be psychosocial adjustments which included: poor self-esteem, depression, suicidal ideation and social withdrawing.

According to the interrelationships, if the student experience cyber bullying, social exclusion, stalking and sexual bullying they are likely to suffer from social withdrawal, depression, low self-esteem and suicidal ideation. This study addressed the moderating variables such as gender, age, type of school and guidance and counselling services hence due to their interaction it is possible that they can influence psychosocial outcomes among students.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

The chapter presents research philosophy, research design, location of the study, the study population, sampling procedure and sample size, instrumentation, pilot study, validity, reliability, data collection procedures, data analysis and ethical considerations.

3.2. Research Philosophy

The research philosophy that informed this study was guided by the Pragmatic philosophical approach, which is a philosophical approach underpinning for both qualitative and quantitative methods of data collection. Pragmatic research philosophy provides for the use of both qualitative and quantitative research methodologies to collect information and make an inquiry into complex phenomena in society (Creswell et al., 2016). In addition, pragmatic research philosophy helps to understand the assumptions that underpin knowledge and exploration. In this study, pragmatic research philosophy was best suited to investigate bullying as a complex behaviour in view of considering multiple viewpoints, positions, and standpoints of the phenomenon to enable confirmation or corroboration of each other through triangulation to bring rich information (Johnson, & Christensen, 2010).

The researcher merged qualitative and quantitative data collection and analysis within a single study to provide a research problem for the comprehensive analysis (Creswell, 2014). Use of qualitative and quantitative strategies would produce enriched data that cannot be obtained by using one method. The study sought to understand psychosocial adjustment in bullying experiences, ideas, practices, and the values of the practices and the importance of psychosocial adjustment among secondary school students hence

generating qualitative data. The study adopted the quantitative and qualitative data to concurrently collect and then interpreted in overall results (Wisdom et al., 2012). Whereas the quantitative data was collected from students, qualitative data was gathered from Guiding and Counselling teachers and Deputy Head Teachers for triangulation.

3.3 Research Design

Research design is the plan, strategy and structure of investigation to establish research objectives. This study adopted a descriptive cross-sectional and correlational research design. According to Creswell (2012), a descriptive cross-sectional survey research design involves the selection of a sample of participants and administer the questionnaire and interview to gather information on variables under study. The design was appropriate for gathering data at one point in time to describe the current situation with regard to the students thinking, attitude beliefs and opinions on bullying behaviour.

The correlation research design was employed to explore the relationship between variables. In this case, the relationship was between the forms of bullying and psychosocial adjustment among secondary students. This design was appropriate because it enabled the researcher to gather information from a sample in determining the relationship existing and to what degree it exists between the two quantifiable variables in the population under study (Creswell, & Creswell, 2018). In this study, the variables that were correlated were forms of bullying; cyber-bullying, stalking, sexual bullying, and social exclusion and self-esteem, depression, aggression and social withdrawal. The study included self-report questionnaires and interviews used to probe for more information, explore new ideas about the forms of bullying and how it related to both psychosocial adjustments across sampled schools located in Bungoma County.

3.4. Location of the Study

The research was done in Bungoma County, Kenya. It borders the Republic of Uganda and Busia to the West, Kakamega to the South East and Trans-Nzoia to the East counties. Bungoma County consists of nine sub-counties: Bungoma North, Bungoma South, Bungoma West, Bungoma East, Bungoma Central, Kimilili-Bungoma, Mt. Elgon, Cheptais and Bumula. It lies between Latitude 00281N and 10301N and Longitude 34,201 East and 35, 0151 East (Bungoma County Strategic plan 2005-2010). See Appendix X attached for the map of Bungoma County.

Data from the Department of Health Bungoma County indicated that 20% of cases of patients aged 14-20 years that sought medical attention had issues of mental health. Cases of suicide, depression, and even bullying in secondary schools in Kenya have been reported both in print and electronic media, causing concern among teachers, parents and Education Officers. However, little has been documented on whether the cases are associated with bullying behaviour schools. Hence, Bungoma County in Kenya was selected as a representative study area because of the homogeneity of the target population. According to Oburu (2011), homogeneity of the study population exists when the target group experience common local factors, gender-based discriminatory practices and similar global influence.

Bungoma County had a poverty prevalence rate of 53%. This is a reason that can cause many adolescents inside and outside of school into violent behaviour (RoK, 2013). Bungoma County is rated as the largest county with large numbers of deprived children (UNICEF, 2013). These may prompt many young people in school to indulge in bullying others due to an ego defence of the frustrations they suffer from home due to deprivation of their basic needs. Cases of deviant behaviour associated with bullying have also been

reported in the county (Poipoi, 2017; Simatwa, 2012). Bungoma County is in line with sustainable development goals by the United Nations whose focus is reducing bullying in school. This county is also diversified in national schools, girls' schools, coeducational schools, boarding schools, day schools, both performing schools and none performing schools in national exams. This, therefore, prompted the researcher to select the county to collect focused information.

3.5 Population of the Study

This study was done in Bungoma County, Kenya. The county consists of 360 public secondary schools and 12 private secondary schools with eligible age population of 106,559 of which 54,798 were female, and 51,761 were male (Bungoma County Education Office, 2018). 107,249 individuals were the target population comprising of 106,559 students, 370 Deputy Principals and 360 Guidance and Counselling teachers in Bungoma County, Kenya. The County has estimated 370 Deputy Principals and 360 Guidance and Counselling teachers in Secondary Schools in Bungoma County. Therefore, the accessible population in this study was 29,760 individuals with 29,040 form three students 370 deputy principals, guidance and 360 guidance and counselling teachers in Bungoma County. Distribution of target population by school category was as shown in Table 1.

Table 1: Distribution of Target Population by School Category

School Category	Number of Schools	Deputy Principals	Guiding and Counselling Teachers	Students	Total Population
Boys	41	46	41	19,981	20,063
Girls	56	61	56	18,491	18,573
Co-Education	263	263	263	68,613	68,613
Total	360	370	360	106,559	107,289

Table 2: Distribution of Accessible Population by School Category

School Category	Number of Schools	Deputy Principals	Guidance and Counselling	Students	Total Population
Boys	41	41	41	5588	5700
Girls	56	56	56	6330	6412
Co-Education	263	263	263	17122	17648
Total	360	360	360	29,040	29,760

Source: *Bungoma County Education Registry (2021)*

3.6. Sampling Procedures and Sample Size

3.6.1. Sampling Procedure

The probability and non-probability sampling were both employed for the sampling techniques to select study samples. The purposive method was used to select Bungoma County out of 47 counties in Kenya as the county of study. Purposive sampling is an example of non-probability sampling method that allows a researcher to use respondents that have the required information with respect to the objectives of the study (Cohen, Manion, & Morrison, 2011).

Form Three students enrolled in secondary school Bungoma County were involved in the study. Purposive sampling method was used to select the Form Three class from each sampled school. The Form Three students were used in the study because they belong to the adolescent stage which is a transitional stage from childhood into adolescence that has a lot of challenges because young students struggle to cope with the psychological and physiological changes happening in their bodies. They have been in school for a substantial amount of time and were enculturated into the school culture. Also, they were not under any pressure to prepare for (Kenya Certificate of Secondary Education).

Purposive sampling was used in this study as it is effective in studying subjects that possess specific characteristics that are required in the study. The Deputy Principals and

Guidance and Counselling teachers were purposively picked from each sampled school. This is because they had the information that could support what had been gathered from the students. This technique saves time and money (Kombo, & Tromp, 2006). Thirty-six Deputy Principals and thirty-six Guidance and Counselling teachers were sampled. Proportionate Stratified Sampling was the method used to select the required sample size. Stratified sampling is a type of probability that stratifies participants into groups and subgroups based on a factor like a gender to achieve select specific sample from the population of Form Three students who took part in the study. The purpose of stratified sampling is to group population into homogenous strata that share similar characteristics (Kothari, 2011). The technique ensured a satisfactory representation of respondents in the population (Haslam & McGarty, 2014). Hence, it ensured that students were drawn from the different categories of schools and were adequately represented in the sample in the proportion of the three categories of schools: Boys, Girls and Co-education schools.

Simple random sampling is a probability sampling which ensures that each participant has an equal chance in participating in the study (Cohen, Manion, & Morrison, 2018). Each selection is independent of the next. The study used a simple random sampling to select one school category from each Sub- County from all schools in the County. This ensured that each category had an equal probability to be selected for the study. A total of 8 boys-only schools, 10 girls-only schools and eighteen co-educational schools to total up to 36 schools participating in the study. To get a number of students required, a Computer-generated sample was used for random allocation of individuals to different groups. This was done in each of the 36 schools. Hence a total of 399 students were randomly selected to participate in the study.

Proportional to size allocation was applied for each stratum to contribute to the sample, ensuring coeducational, girls' and boys' schools are represented according to their proportion. Deputy Principals and Guidance and Counselling teachers were purposively selected. One Deputy Principal and One Guidance and Counselling teacher were selected from each sampled school. This study, therefore, selected 36 Deputy Principals and 36 Guidance and Counselling Teachers.

3.6.2. Sample Size

A sample is a part of the target population that has been procedurally selected to represent it (Creswell, & Creswell, 2018). According to Bergman (2008), the sample size is important to establish a representation of the sample generalisation. Kothari (2009) noted that researchers select a sample due to various factors that hinder studying the entire population. The formula developed by Krejcie and Morgan (1970) was used to determine the sample size. The methodology suits the study because it gives a sample size that is sufficient to provide enough accuracy to base decisions or the findings with confidence (Cavens, Kidombo, & Gakuu, 2016). However, Krejcie and Morgan's formula (1970) has a weakness that reduces n value to a small sample; this limits the generalisability of the findings to the entire population.

Krejcie and Morgan (1970) formula assumes the form:

$$S = \frac{\left\{ x^2 NP(1-P) \right\}}{\left\{ d^2 (N-1) + X^2 P (1-P) \right\}}$$

Where

S= Required sample size

N= The given population size

P= Population proportion that has been assumed to be 0.5 since the magnitude yields the maximum possible sample size required.

d = The degree of accuracy as reflected by the amount of error that can be tolerated in the fluctuation of population which is 0.05

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level. For a significance of $\alpha=0.05$, $x=1.96$

From the formula, 399 students in Form three students were obtained, and this was assumed to be a representative of the total population of 29,040. The students, Deputy Principals and Guidance and Counselling teachers were drawn from 8 boys only, 10 girls only and 18 co-educational schools proportionately (see Table 3). According to Kumar (2011), sample size above 10 per cent is representative of the total population in a descriptive study. This view was taken into consideration in the selection of the sample for participants in each school.

Table 3: Sampling Frame

School	Population						Sample Size					
	Boy	Girls	Co-Edu.		G/	D/	Boy	Girl	Co-Edu.		G/	D/
	s		s	s	C	P	s	s	s	s	C	P
A	100	130	22	24	3	3	9	11	2	2	3	3
B	180	100	43	38	3	3	16	9	3	3	3	3
C	74	160	53	32	3	3	6	14	4	3	3	3
D	112	234	73	43	3	3	10	12	7	4	3	3
E	277	70	88	42	3	3	25	6	8	4	3	3
F	80	204	208	110	3	3	7	18	20	10	3	3
G	28	124	67	67	3	3	7	11	6	6	3	3
H	94	130	53	39	3	3	8	11	5	4	3	3
I	-	102	69	53	2	2	-	9	6	5	2	2
J	-	104	36	39	2	2	-	9	3	4	2	2
K	-	-	40	39	1	1	-	-	4	4	1	1
L	-	-	43	44	1	1	-	-	4	4	1	1
M	-	-	90	80	1	1	-	-	8	7	1	1
N	-	-	52	47	1	1	-	-	5	4	1	1
O	-	-	121	113	1	1	-	-	11	10	1	1
P	-	-	43	32	1	1	-	-	4	3	1	1
Q	-	-	84	98	1	1	-	-	8	9	1	1
R	-	-	-	80	1	1	-	-	10	7	1	1
TOTAL	945	1,35	118	102	36	36	88	110	118	93	36	36
L		8	5	0								

Source: *Researcher (2021)*

3.7. Instrumentation for Data Collection

Data for this study was obtained using Students' questionnaire, and an Interview schedule for Deputy Principals and Guidance and Counselling teachers. Frankel and Wallen (2000) posited that a research study that employs more than one instrument yields data that enhances validity. Both the interview schedule and questionnaire were used in data collection for complementary purposes. The nature of the data gathered and the study's time guided the instruments' choice (Bergman, 2008). The instruments were used to measure forms of bullying and psychosocial adjustments for secondary schools in Kenya.

3.7.1 Questionnaires

A questionnaire is a collection of items to which a respondent is required to respond to in writing (Kothari, 2009). The instrument consisted of items or questions which were well written down based on the research objectives. Students, under the supervision of the research assistant, completed the questionnaire. The researcher used questionnaires because the study was concerned mainly with the measurement of variables that cannot be observed (like perceptions and respondent feelings). Therefore, a questionnaire was the best tool to collect such information (Jaccard & Becker, 2010). It also offered a sense of confidentiality to the respondents and are objective compared to the interview method, which is biased on personal characteristics.

The sample size was quite large ($N = 399$), and given time, constraints; a questionnaire was an ideal tool for collecting data. This is because questionnaires make it possible to reach many respondents in a short time (Oso, & Onen, 2008). Since the research population was largely literate and therefore unlikely to have difficulties responding to questionnaire items. The questionnaire was used in collecting the quantitative data as well as gather information on variables that cannot be directly be observed, such as views, opinions, perception, and feelings of respondents. The questionnaire was divided into 4 sections each of the sections were as follows: A- demographic information of the respondents B- seeking information on forms of bullying, C- psychosocial adjustments. In this study, standardized questionnaires were adopted and modified where necessary for the students.

The students' questionnaires (Appendix IV) elicited information on the forms of bullying and psychosocial adjustment. This study adapted some items on cyber-bullying from the standardized and validated questionnaire from (Hinduja, & Patchin (2010), Sexual

harassment questionnaire AAUW (2001), Stalking questionnaire (S.V.V, 2006), social exclusion questionnaire (SEI-HS) (Bergen, Hoff-Schreus, Loon &Heirnert, 2017), Self-esteem questionnaire (Rosenberg, 1965). Depression and anxiety questionnaire symptoms (Andrew & Slade, 2001); Aggression questionnaire, (Garcia-Leon et al., 2002), suicidal ideation questionnaire; (Steyn, Vawda, Wyatt, Williams, & Madu, 2013), social withdrawal questionnaire (Hughes et al., 2008).

Students' questionnaire on forms of bullying as presented in Appendix IV consisted of (34 items) and psychosocial adjustment (80 items) close-ended based on a Likert- type of scale having five degrees of agreement. Research objectives were used to arrange the items in the order. The first three questions asked for demographic information on age, gender and type of school.

A twelve items scale for cyber-bullying. The respondents were asked to respond "How often in the last 4 months have you experienced the following" The responses were on a Likert scale having five degree of agreements such as, once =1, twice =2, a few times =3, many times = 4, every day =5. There were 18 items for stalking. The respondents were asked the number of times they have had an experience of unwanted conducts or harassing behaviour; the response was on Likert scale having five degrees of the agreement such as Never = 1, once or twice = 2, a few times = 3, many times = 4, and everyday = 5. Each student's total score was computed based on the sum of the twelve items, with scores ranging from (10 -60). Higher scores on the scale reflect greater cyber-bullying.

There were 14 items on sexual bullying. The respondents were asked, "how often if at all, has anyone done the following things to you during school-related times when you did not want them to?" The response was on a Likert scale having a degree of the

agreement such as never=1, one or two times =2, three to four times =3, four to five times = 4, over five times =5. Each student's total score was computed based on the sum of the fourteen items, with scores ranging from (10-70). Higher scores on the scale reflect more significant sexual bullying.

There were seven items on social exclusion. The respondents were asked the feeling they had about themselves. The responses were on a 5-point Likert scale with five degrees of agreements such as strongly disagree = 1, disagree = 2, not sure =3, agree = 4, strongly agree = 5. Each student's total score was computed based on the sum of the seven items, with scores ranging from (10-35). Higher scores reflected greater involvement in social exclusion.

There were fifteen items on depression the respondents were asked to respond to a list of statements indicating some of the ways they may have felt or behaved during the last week for example, "how often you have felt for the past few days". The responses were made on 5- point Likert scale ranging from: none of the time =1, a little of the time = 2, some of the time = 3, most of the time =4, all of the time = 5. Each student's total score was computed based on the sum of the 15 items, with scores ranging from (0-75). Higher scores on the scale reflected greater depressive symptomatology. There were fifteen items on self-esteem. The respondents were asked "how they felt about themselves" options of different feelings were given. The responses were given based on Likert scale having five degrees of agreements such as: strongly disagree =1, disagree =2, not sure =3, agree = 4, strongly agree =5. Each student's total score was computed based on the sum of 15 items, with scores ranging from (10-75). High scores on the scale reflect high self-esteem and low scores indicated low self-esteem.

There were twenty items on aggression items. The respondents were asked the number of times they experience the issues that were presented on the questionnaires (see appendix IV). The responses were on a Likert scale such as Never = 1, rarely = 2, occasionally = 3, frequently = 4, always = 5. Each student's total score was computed based on the sum of the twenty items, with scores ranging from (10- 100). Higher scores on the scale reflect greater aggression. There were ten items on suicidal ideation. The respondents were asked, "How you feel about yourself?" the response was on a Likert scale having five degrees of agreements such as: strongly disagree =1, disagree =2, not sure =3, agree =4, strongly agree = 5 (see appendix IV). Responses to all 10 items were added to compute a total score (0-50) with higher scores reflecting greater suicidal ideation.

There were twenty items on social withdrawal. The respondents were asked, "How much, how often do you experience the issue presented or how much you have been affected emotionally by your state?" The responses were on a 4-point Likert scale having four degrees of agreements such as Never =1, rarely =2, sometimes =3, often = 4 (see appendix IV). Responses to all 20 items were summed up to compute a total score (10-40) with higher scores reflecting greater social withdrawal.

3.7.2 Interview Schedule

The interview schedule is a set of questions that the interviewer asks when interviewing. An interview schedule makes it possible to obtain the data required to meet the specific objectives of the study (Kothari, 2011). Interview method provides in-depth data which is not possible to get from the questionnaire. In this study, the interview schedule consisted of open-ended items to capture the qualitative data. It made it possible to obtain the required data to meet the specific objectives of the study and in probing for in-depth information. Interviews are flexible than questionnaires because the interviewer

can adapt to the situation and get much information as possible. In this study, the researcher administered the interview to the Deputy Principals (see Appendix IV).

The questions asked were discipline-based, where the Deputy Principals were to explain his understanding of bullying and any of the cases related to bullying handled. Also, explain the forms of bullying they had handled and the effects they had on the students. Similarly, Guidance and Counselling teachers were interviewed on forms of bullying present in their schools, problems they had observed among the students who had experienced bullying. They described the remedial programmes that had been put in place to minimise or deal with bullying (see Appendix v). The researcher administered the interview in person so as to allow respondents time and scope to discuss their perception and knowledge on the fundamental concepts of the study.

The Deputy Principals and Guidance and Counselling teachers were perceived to have adequate information on bullying and psychosocial adjustment, so enabling the researcher to have reliable information as regards the phenomenon under study. The researcher sought relevant information on the forms of bullying in relationship to psychosocial adjustment from the aforementioned respondents.

3.8 Pilot Study

Prior to administering the instruments to a larger sample, a pilot study was carried out. The instruments were pre-tested to determine their accuracy, clarity, validity and reliability of the instruments. This was done to estimate the items, assess the suitability of instruments as far as the wording of questions, the clarity and the arrangement of questions for the purpose of making amendments that would make students understand to enhance the reliability and validity of the instruments. The piloting was done in 3 schools, each representing the category of schools; Girls' only, Boys' only and Co-

education. In each of the three schools selected, one guidance and counselling teacher and one deputy principal were selected for piloting. In reference to Hilton (2017), the piloted schools did not form part of the sampled schools for the actual study, and the results were not included in the main study. Thirty forms three students participated in the pilot study, three deputy principals and three guidance and counselling teachers in each of the three schools selected for piloting.

The test-retest method was used. Research tools were administered to the same group twice after a two-week time interval (Mugenda, & Mugenda, 2003). Connelly (2008) suggested that (10%) of the study sample size is enough for a pilot study. In the current study, forty forms three students participated in the pilot study. However, during the retest, 10 students did not return the questionnaires, and therefore, data for only 30 students were used for the test-retest. According to Field (2018), a sample of 30 participants or above was adequate to ascertain the study instruments' validity and reliability. It can be a representative of a larger sample.

A reliability coefficient was then calculated to indicate the relationship between the two sets of sources attained using Pearson Product Moment Correlation Coefficient (r). The reliability coefficient for the student's questionnaire was $r = 0.74$, and the interview schedule for the guidance and counselling and deputy principals was $r = 0.72$ and $r = 0.76$, respectively. According to Pallant (2013), the reliability of at least $r = 0.7$ and above is reliable and is suitable for data collection. The test-retest helps to point out deficiencies in the instrument and identifies vague items. Items wording and language difficulty was corrected; this enhanced reliability of the instrument. The data of the pilot study was not included in the main study.

3.8.1 Validity of the Research Instruments

Instrument validity refers to the extent a research instrument measures what it is supposed to measure (Creswell, 2014). The validity of the instruments in this study was done before the commencement of carrying out data collection. Face validity of instruments was tested by consulting supervisors, colleagues and several subject experts from the Department of Educational Psychology at Kabarak University. Burton and Mazerolle (2011) asserted that the procedure in assessing the content validity of a measure is to use professionals or experts in that particular field. The experts are individuals with the know-how in the area the instrument were to measure (Netemeyer, Bearden, & Sharma, 2003). Each expert was expected to determine whether the set of items was accurately representing the constructs under study. Content validity was determined using the content validity index in reference to the rating of each item on the scale with 4 Very relevant, 3 Quite relevant, 2 somewhat relevant and 1 Not relevant. This improved the validity of the instrument in relation to the objectives.

C.V.I = Items rated 3 or 4 by both judges divided by the total number of items in the questionnaire. This can be symbolised as follows:

$$C.V.I = \frac{\text{Agreed items by both judges}}{\text{Total number of items}}$$

The validity index of the instruments in the study was $\alpha = 0.85$ before the pilot study. This proved that the instruments were highly valid to collect relevant information hence a high degree of validity. To increase internal validity, control of extraneous variables was done by randomisation during sampling (Kothari, 2009). This ensured representativeness of the sample in relation to the target population hence increasing external validity. After the pilot test, the validity index coefficient of the instruments was $\alpha = 0.93$ using the Statistical Social Science (SPSS). According to Mugenda and

Mugenda (2003), items with a validity coefficient of at least 0.80 or more are valid for use.

Construct validity, according to Ary et al. (2006), is the degree that the data gathered from a research instrument represents the construct measured. The construct validity used is 'criterion validity'. A construct is an informed scientific idea developed to describe or explain behaviour. The purpose of construct validity was to find out the extent to which one variable or a set of variables predicts an outcome based on information from other variables. The researcher investigated the instruments construct validity by use of two different instruments which measured the same concept (Trochim, 2006). The Validity was computed by correlating measurements from the two instruments that measure the same construct. In this study, predicted student's psychosocial adjustment was determined by correlating the scores from different instruments. Validity coefficient index of 0.856 was obtained. The purpose of construct validity for an instrument is done to reduce the research items to only those that relate to the variables under investigation. The interview schedule for the Deputy Principals and Guidance and Counselling teachers' validity was tested by consulting supervisors and several subject experts from the Department of Education Psychology at Kabarak University.

3.8.2 Reliability of the Research Instruments

According to Kothari (2004), reliability refers to the degree of consistency of scores obtained on different occasions with the same instrument. It's the degree to which a research instrument yields consistent results or data after repeated trials. If an instrument is administered twice to the respondents and obtains the same results, then the research instrument is reliable (Pallant, 2016). Reliability ensures consistency, dependability or

stability of the instrument. To establish reliability, Test-retest method was used to assess the reliability of the instrument. A pilot study was carried out to assess the reliability of the instruments. This was done in 3 secondary schools and 30 students, 3 Guidance and Counselling teachers, and 3 Deputy Principals were involved in the study.

The researcher employed the test-retest technique to estimate the reliability of the instruments. The instrument was twice administered to the same group of respondents who had been sampled after two weeks of duration, keeping the initial conditions (Kothari, 2009). The correlation coefficient (r) between the two scores was computed using Pearson Product Moment Correlation coefficient formula, and the correlation coefficient value of $r = 0.74$ was attained. Secondly, the reliability of instruments was determined by using internal consistency method. Internal consistency of instrument is determined by the scores from a single test administered by the researcher to a sample of participants. Cronbach's Coefficient Alpha was then computed to determine how items correlated among themselves. In this study, Kuder-Richardson (K-R) 20 formula was used to calculate the reliability coefficient. This formula was as follows:

$$Kr_{20} = \frac{(k)(s^2 - \sum s^2)}{(s^2)(K-1)}$$

KR_{20} = Reliability Coefficient of internal consistency.

K = Number of items used to measure the concept.

S^2 = Variance of all score

$\sum S^2$ = Variance of individual items

The consistency of respondents' answers to all items was assessed. The reliability of Cronbach's coefficient Alpha of the subscales on the instruments in this study were ascertained. Any value 0.7 and above is accepted as a good measure of reliability

(Pallant, 2013) and hence reliable. The alpha value for each was calculated to avoid inflating the value of alpha. In this study, the alpha coefficient for the constructs was 0.84. The values were in agreement that an alpha coefficient of 0.7 and above is acceptable reliability (Tavakol, & Dennick, 2011). The instruments were adjusted to increase their suitability and dependability. The constructs under study were: cyberbullying, social exclusion, sexual bullying, stalking, self-esteem, depression, social withdrawal and aggression for internal consistency. The results for internal consistency on the various constructs are shown in Table 4.

Table 4: Cronbach's Alpha Values for the Students Questionnaire Study Constructs

Scale	alpha (α)	Correlation (r)
Cyber bullying	.82	.71
Social exclusion	.74	.70
Stalking	.87	.73
Sexual Bullying	.89	.74
Social Withdrawal	.85	.70
Aggression	.88	.72
Depression	.88	.71
Self esteem	.84	.74
Suicidal ideation	.79	.70

The forms of bullying Cyber-bullying, Social Exclusion, Stalking and Sexual Bullying had Alpha Values of $\alpha = 0.82$, $\alpha = 0.74$, $\alpha = 0.87$ and $\alpha = 0.89$, respectively. On the other hand, social withdrawal had an Alpha Value of $\alpha = 0.85$, depression had an Alpha Value of $\alpha = 0.88$, just like aggression had an alpha value of $\alpha = 0.88$. In contrast, self-esteem had an alpha value of $\alpha = 0.84$ and suicidal ideation had an alpha value of $\alpha = 0.79$. All the measures appeared to demonstrate a good level of internal consistency, exceeding the recommended criterion of $\alpha = 0.7$. These measures can be recommended for future research to move towards a consistent and reliable method that is required within

bullying literature (Menesini, & Salmivalli, 2017). The Pearson's Correlation Coefficients for the test-retest for all the scales were $r = 0.70$ and above see Table 4. The findings of the pilot study, therefore, showed that all the scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda, 2008).

Reliability for the interview schedules was ascertained using inter-rater reliability. Gwet (2014) noted that inter-rater reliability is established when two individuals referred to as raters independently classify the same set of objects. Gwet further posited that the extent to which these two categorisations coincide represents inter-rater reliability. In the current study, the researcher and trained research assistant interviewed 3 Deputy Principals and 3 Guidance and Counselling Teachers. After the interviews, the Pearson product correlation coefficient for the scores by the researcher and research assistant was computed. The r values for the Deputy Principal and Guiding and Counselling Teachers was $r = 0.72$ and $r = 0.76$. The data collection instruments were, therefore reliable and acceptable for the study.

3.9 Data Collection Procedures

Data collection procedure began when the researcher obtained a permit from the National Council of Science and Technology (NACOSTI), after an introductory letter from the school of postgraduate studies, Kabarak University. After obtaining the research permit shown by an appendix (IX) The researcher then sought clearance from County Commissioner and the County Director of Education Bungoma County. A letter of introduction to the sampled schools for data collection was given by the offices visited. The principals of the sampled schools were asked to assist where necessary during data collection by the researcher. The study had a purpose of explaining to the principal and

the possible significance of the study. The appropriate day and time when data could be collected were communicated during the discussion with the principal.

A research assistant who assisted in the collection of data was trained for four days by the researcher. The researcher, with the help of research assistant, administered a pre-test to the instruments in the three schools on three Guidance and Counselling teachers and Deputy Principals. This was done in May 2019. First, the researcher and research assistant observed ethical issues by introducing themselves through the administration of the sampled school. This was done through a written letter of introduction shown in appendix I, to accompany questionnaires. Self-administered questionnaires were used to collect data from students. Respondents were asked to fill in the appropriate responses to questionnaires hand-delivered to them by the research assistant.

The researcher and the research assistant gave out the questionnaire to the students selected for the study at lunch break, as agreed by the administration. For reasons of costs and time, respondents were allowed to complete the questions within a given time and then all the questionnaires were gathered for data analysis. The Deputy Principals in each sampled school responded to an interview which was done by the researcher. Similarly, the guidance and counselling teacher was also interviewed. The interview took twenty minutes during a lunch break in their offices. The interview was verbal, and the researcher took note of the responses in a notebook.

3.9.1 Data Analysis Procedures

The independent variables in this study were (forms of bullying) while the dependent variable was (psychosocial adjustment); they are both categorical. Both quantitative and qualitative data was collected. Qualitative data was collected by an interview schedule guides while students' questionnaire collected quantitative data using a close-ended

questionnaire. It was paramount, therefore to analyse data using both descriptive and inferential analysis techniques. Data was keyed and coded into the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 25.

Quantitative data were analysed using standard deviation, Pearson Product Moment Correlation, and multiple regression analysis. The alpha level of significance was set at .05. Before any inferential analysis was conducted, a preliminary analysis was carried to confirm the data's suitability for the intended analytic techniques and eliminate any potential outliers within the data. The data was also assessed for multicollinearity in order to limit the potential influence of independent variables that highly correlated with one another.

Multicollinearity is a common issue within this field, as concepts often overlap theoretically, which can become a problem while interpreting the results, hence, was not included within the same regression model (Marsh et al., 2004). Although debate exists surrounding the recommendation in relation to multicollinearity, a correlation coefficient of 0.7 is typically referred to as the recommended maximum within behavioural research (Pallant, 2013).

3.9.2 Analysis of Quantitative Data

Descriptive and inferential statistics was used to the data quantitatively. Descriptive statistics included: percentages, means, and standard deviation. The average score was used as a cut-off point to indicate how high or low the form of bullying was perceived by the students. Inferential statistics included Pearson's Product Moment Correlation and Multiple regression analysis to test the hypothesis and draw conclusions concerning the relationships and differences found in research findings.

3.9.3 Percentages, Means and Standard Deviation

Oso and Onen (2008) describe descriptive statistics as a measure of central tendency. This includes; percentages, means and standard deviation, which are used in describing characteristics of a sample. In this study, forms of bullying and psychosocial adjustments were analysed and presented in tables using percentages, means and standard deviation.

3.9.4 Pearson Product Moment Correlation Analysis

According to Creswell et al. (2016), Pearson Product Moment Correlation Coefficient was used in determining the strength of the linear relationship strength between two quantitative variables. The analysis indicated the direction and strength of the relationship. In this study, forms of bullying were correlated to psychosocial adjustments of students. The computation of correlation gave a statistic that varied from -1 to 1. The correlation coefficient confirmed the degree of relationship between two variables, forms of bullying and psychosocial adjustment. It also determined the direction of the relationship between the variables. When positive (+), it implied that, there was a positive relationship between the two variables. A negative relationship (-), implied the variables varied greatly in the opposite direction. In this study the strength of relationship between the variables was interpreted as follows: 0 no correlation, 0.01- 0.39 low correlations, 0.40 - 0.69 moderate correlations, 0.70 - 0.99 high correlations and 1 perfect correlation (Cohen et al., 2013).

3.9.5 Regression Analysis

Multiple Regression analysis was used in this study to determine whether forms of bullying together predicted psychosocial adjustment. Field (2005) noted that Multiple Regression is used when there are two or more independent variables used to estimate the values of a dependent variable. In this study, forms of bullying were the independent

variables, and psychosocial adjustment was the dependent variable. The measures of cyberbullying, social exclusion, stalking, and sexual bullying was included in the regression that examined the relationship between each form of bullying and the psychosocial adjustment while controlling for the effect of the other forms of bullying.

The multiple regression equation took the form below where Y denoted dependent variable to be estimated, and x is the independent variable.

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n + \varepsilon$$

Where Y_i = Level of psychosocial adjustment

β_0 = is the constant

$\beta_1 - n$ = are the regression coefficient or change induced in Y by X

$X_1 - n$ = the forms of bullying

ε = Standard error term

Pallant (2013) noted that regression analysis displays how well variables are able to predict a particular outcome. Regression also produces a statistic referred to as the coefficient of determination or R^2 . R^2 refers to the amount of variation resulting from the variables. To ascertain regression and test of significance from the computer, for every value of b (slope) the computer would give a *t*-value and the probability level for each *t*-test. Regression analysis also yields an *F*-statistic and its' probability level. The *F*-statistics inform whether one or more of the independent variables significantly predict the dependent variable at the selected significance level.

Regression and test of significance were done with the assumption that: Each independent variable is linearly related to each other, the observations are independent of each other, which shows that the sample was randomly drawn, homogeneity of variance exist, at each level of X, the variance of the Y values is constant, Y values are normally

distributed around the mean at each level of X in the population. The Standard Beta (β) coefficients and their significance values were also evaluated to determine whether each predictor variable can uniquely predict the outcome variable, with the greatest β coefficient suggesting the greatest unique contribution to the outcome variable. Forms of bullying were hypothesised to predict Self-esteem, depression, aggression, suicidal ideation and social withdrawal.

3.9.6 ANOVA

One-way analysis of variance (ANOVA) tested the hypotheses, and this test was preferred because it was capable of comparing the means of three or more groups. Since F-distributions is the ratio of two variances, the ANOVA test statistics generated F test statistic. In interpreting the researcher focused on the N , mean, F ratio value and the p -value. The null hypothesis would be rejected if the F test statistics (calculated value) exceeded the critical value. The null hypothesis was also rejected if the p -value was less than 0.05. For hypotheses test of difference in means involving two groups, the t -test for independent samples was used. Under this test, the null hypotheses would be rejected if the calculated t -value is greater than the table t -value at a given level of significance and number of degrees of freedom. All these analyses were done using SPSS Version 25.

3.9.7 Analysis of Qualitative Data

Qualitative data were analysed thematically. Thematic analysis is the process of segmentation, categorisation and linking of aspects of the data prior to final interpretation. In the interpretation of the data using thematic analysis, words or explanations of research respondents are put alongside the words of other respondents to enable the researcher to describe the data, explore the data for meanings and look for relationships (Mathews, & Ross, 2010). Data from the interview schedule for Guidance

& Counselling and Deputy Principals were transcribed and organised into themes then presented in verbatim. This served the purpose of gathering information that was not captured in the questionnaire from the students.

According to Mathews and Ross (2010), when analysing thematically, guiding questions include: what respondents say, why they might say that and what might they mean they say? In presenting a thematic analysis, the researcher needs to write an account based on emerging themes from which the researcher selects verbatim quotations from data, how the categories were developed (Mathews, & Ross, 2010). In this study, information gathered from the interview was scrutinised carefully, and emerging themes noted. Information that reflected various themes were identified and connected with the research objectives. The themes were then reviewed in categories and verbatim excerpts extracted.

Repetitive answers were grouped into themes. Items in the interview schedule served the purpose of complementing information that was captured in the students' questionnaire. In this study, data from the interview schedules were compared among respondents, categorised, and interpreted. The information related to the quantitative data gathered in the closed-ended questionnaire was reported in verbatim hence substantiating the findings. Inferences from the analysed data were done to help answer the research objectives and compare with previous research findings.

3.10 Ethical Considerations

The current study strictly adheres to professional research ethics. This practice helped avoid any ethical dilemmas. According to Halai (2006), the purpose of ethical considerations is to ensure that the moral principles and rules are maintained such as pursuing an apt outcome of the study, reducing the magnitude of the harm, and

respecting respondents. In an attempt to protect the respondents in this research, the researcher observed the ethical principles which include the right to voluntary consent, the principle of anonymity, the implication of confidentiality, and the essence of data protection.

3.10.1 The Right to Voluntary Consent

The principle of voluntary consent was adhered to where participation was completely voluntary. There was no obligation for either the teachers or students to participate or any adverse consequences for those who chose not to participate or discontinue participation at any time throughout the current study. All participants had informed consent (see Appendix L) prior to the commencement of the study.

3.10.2 Anonymity of the Respondents

The respondents in this research were encouraged to complete the questionnaires without reservation as they would remain anonymous. To uphold the anonymity of individuals, the researcher used numbers to protect their identities. The questionnaires have used a pseudonym to maintain secrecy. In this context, the researcher used hypothetical names, for instance, teacher or student 1, 2, 3...399, and schools A, B, C...Z to represent the respondents involved in this study. This aspect of anonymity was crucial because it enabled the respondents to participate without fear. This intensified the trustworthiness of the responses.

3.10.3 Confidentiality

To ensure confidentiality in the current study, the researcher reminded the respondents that the information given was entirely meant to support the study and not for any other purpose. Further, the respondents were assured of confidentiality on the information and data they produced.

3.10.4 The Necessity of Data Protection

In this research, the raw data from the field was kept under lock and key while processed data was stored in a computer encrypted by password accessible to only the researcher. All participants were assigned an alpha-numeric code which was used to compile and organise all subsequent data. The data collected was organised and packaged in the form of a thesis and disseminated as papers in refereed journals and conferences for ease of access by participants and other stakeholders.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.1. Introduction

The chapter presents the findings, interpretations according to the objectives and hypothesis as outlined in chapter one. This chapter is divided into five sections corresponding to the research objectives. The objectives were to; establish the relationship between forms of bullying and self-esteem among students in secondary schools; examined the relationship between forms of bullying and depression; to determine the relationship between bullying and aggression among secondary school students; find out the relationship between forms of bullying and suicidal ideation among secondary school students; find out the relationship between forms of bullying and social withdrawal among secondary school students.

The first part of every section in this chapter presents the Questionnaire return rate, demographic information while the third section gives the means and standard deviation of forms of bullying and psychosocial adjustments. Subsequently, results from bivariate correlations using Pearson Product Moment Correlation Analysis, and Multiple Regressions were presented to show the relationship between forms of bullying and psychosocial adjustment. Description from the interviews carried on Deputy Principals and Guidance and Counselling were also reported to triangulate the findings.

4.2 General and Demographic Information

4.2.1 Respondents' Return Rate of Responses

The data for this study was collected within two months using a structured questionnaire. The questionnaire was administered to 463 respondents. A total of 399 questionnaire were successfully completed and returned to the researcher by respondents giving a

response rate of 86.2 %(399) which is above the 60 percent response rate threshold recommended by Dillman (2000) for a social research.

Data collected during the interview with thirty-five (35) Deputy Principals and 33 Guidance and Counselling teachers from the secondary schools sampled. The findings presented here are about the different experiences of bullying behaviour encountered among the participants related to forms of bullying, consequences of the forms of bullying, what programmes the schools had to deal with bullying. These interview findings would be in line with the previous findings from the questionnaires and would also support the statistics, correlation analysis among the variables in this study presented in previous sections.

4.2.2 Guidance & Counselling Teachers and Deputy Principal Interview Response

Rates on Bullying

The Guidance and Counselling teachers and deputy principals were required to state their gender an attribute that has some influence on their role and suitability in Guidance and counselling and handling students' discipline in secondary schools. The respondents in this study are as shown in Table 5.

Table 5: Guiding and Counselling Teacher and Deputy Principals by Gender

Respondent's Gender	Guidance & Counselling Teachers		Deputy Principals	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Male	8	22.2	16	44.4
Female	25	69.4	19	52.7
Total	33	91.6	35	97.1
Missing	3	8.3	1	2.8

The findings in Table 4 shows that there were thirty-five Deputy Principals; female = 19(54%) and male= 16(46%) who were interviewed in the study. The representation by

gender was almost equal. This indicates that there was no gender biasness in appointing teachers to administrative responsibilities. In addition, 33 guiding and counselling teacher's male = 8(24%) and female = 25 (76%) participated. The higher number of female guidance and counselling teachers could be attributed to the belief that counselling being taken as a less tasking responsibility better for females. According to Chepkong'a (2009), it could be due to the belief that female guidance and counselling teachers are more patient and understanding to the students' issues in a motherly manner therefore suitable as counsellors.

4.3 Demographic Distribution

This section provides brief background information about the respondents in the study in terms of their gender and age.

4.3.1 Gender of the Students Respondents

The gender of the respondents was analysed and the results are presented in the Figure. 2

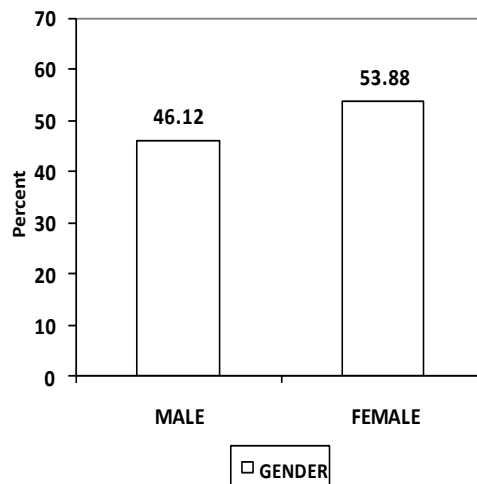


Figure 2: Respondents by Gender

Figure 2 shows that, out of the 399 secondary school students surveyed 184 (46.12 %) were males while 215(53.88 %) were females. This indicates that generally there were

more female respondents for the study than males indicating an almost balanced representation in the study sample.

4.3.2 Age of the Student Respondents

The analysis of the age profile of the respondents is reported in Table 6.

Table 6: Age of Respondents

Age-set	Frequency(n)	Percent (%)
14-17	340	85.21
18-21	58	14.54
Below 14	1	.25
Total	399	100.00

The results in Table 6 shows that 340 of the secondary school students surveyed representing 340 (85.21%) were between 14 and 17years. Fifty-eight representing 58(14.54%) were between the ages of 18 and 21 years. The remaining 1 student representing 1(25%) were below 14 years. These findings were in line with the observation made by the Ministry of Education (2008) in Kenya, which indicated that the majority of the students in Secondary school were between the ages of 14-17years.

4.4 Relationship between Forms of Bullying and Self-Esteem among Secondary School Students in Bungoma County

The first objective was to establish the Relationship between forms of bullying and self-esteem among students of Bungoma County in secondary schools. To achieve this prevalence of the forms of bullying amongst the secondary schools in Bungoma County was done using a multi-item Likert scale and the data were analysed using descriptive statistics. Correlation analysis and regression analysis were then used to establish the relationship between the forms of bullying and self-esteem.

4.4.1 Descriptive Statistics on Forms of Bullying

Prevalence of the various forms of bullying considered in the study was at an alpha level of 0.05. The ratings for each respondent on various indicators of the forms of bullying on the Likert scale were summed up to obtain an index which measured the level of the particular forms of bullying amongst students. The descriptive statistics for the various forms of bullying are presented in Table 7.

Table 7: Descriptive Statistics of the Forms of Bullying

Index	Min	Max	Mean	Std Error	Std. Deviation
Cyber	12.00	39.00	20.62	.37	7.44
Stalking	16.00	69.00	49.75	.61	12.21
Sexual	14.00	60.00	37.44	.54	10.83
Socialex	.00	34.00	16.36	.30	5.99

The descriptive statistics results displayed in Table 7 indicate that stalking was the most common form of bullying. The ratings for each respondent on the various indicators of the levels of cyber-bullying were summed up to obtain a single index which ranged from 12 to 39 hence a mean index of 20.62 with the scores deviating from the mean to the extent of 7.44. The average score was used as a cut- off point to indicate how high or low cyber-bullying was perceived by the students. Since the mean (20.62) was higher than the average score of 25.50, the result suggests that the level of cyber-bullying was high among secondary school students in Bungoma County. The skewness index of 0.87 shows that the distribution of cyber-bullying indices was positively skewed with more observation above the mean than below the mean. This implies that majority of the students considered their levels of cyber-bullying to be high.

Stalking, as a form of bullying, had a mean index of 49.75 with the scores deviating from the mean to the extent of 12.21. The average score was used as a cut-off point to indicate

how high or low stalking was perceived by the students. Since the mean (49.75) was more than the average score of 42.50, the result suggests that the level of stalking among students in secondary schools in Bungoma County was high. The skewness index of 0.07 shows that the distribution of levels of stalking indices was positively skewed with more observation above the mean than below the mean. This implied that the majority of the students considered the levels of stalking as a form of bullying to be high.

Sexual bullying as a form of bullying had a mean index of 37.44 with the scores deviating from the mean by 10.83. The average score was used as a cut-off point to indicate how high or low sexual bullying was perceived by the students. Since the mean (37.44) was more than the average score of 37, the result suggests that the level of sexual harassment among students in secondary schools in Bungoma County was high. The skewness index of 1.57 shows a positively skewed distribution of the sexual bullying data, which implies that more observation was above the mean than below the mean.

Social exclusion as a form of bullying had a mean index of 16.36 with the scores deviating from the mean by 5.99. Since the mean (16.36) was less than the average score of 37, the result suggests that the level of social exclusion among students in secondary schools in Bungoma County was low. The average score was used as a cut-off point to indicate how high or low social exclusion was perceived by the students. However, the skewness index of 0.58, which indicates positively skewed data shows that more considered levels of exclusion to be high compared to those who regarded as levels of social exclusion to below.

Guidance and counselling teachers were asked about types of bullying witnessed; they reported that some severe bullying cases went unreported and that the bullied students' minor cases were considered as jokes by the bullies. Minor forms of bullying included;

extorting money, hiding belongings, calling names, teasing, threatening others, vandalising belongings of others were reported. Severe cases of bullying, such as sexual bullying (homosexuality and lesbianism) was done in secluded areas at night and went unreported.

When asked about the most prevalent of the four forms of bullying; cyber-bullying, social exclusion, stalking and sexual bullying, the responses were as indicated in Table 8 and Figure 3.

Table 8: Forms of Bullying Reported

Forms of Bullying	Response Frequency (F)	Percentages (%)
Sexual Bullying	6	18
Social Exclusion	13	38
Stalking	2	6
Sexual & social exclusion	4	12
Sexual, social & Stalking	1	3
Sexual & stalking	1	3
Cyber Bullying	5	15

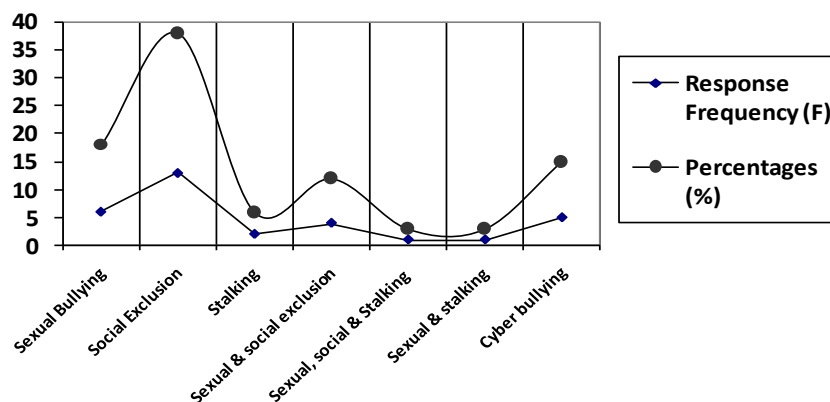


Figure 3: Line Graph of the forms of Bullying

4.4.2 Descriptive Statistics between the Forms of Bullying and Self-Esteem

Before the correlation analysis, the self-esteem levels of the students surveyed were measured using a multi-item Likert scale. The ratings for each respondent on the various indicators of the levels of self-esteem were summed up to obtain a single index which ranged from 24 to 65 hence an index of more than 44.50 implied higher levels of self-esteem. In contrast, an index of less than 44.50 implied a low level of self-esteem. The descriptive statistics for the level of self-esteem are shown in Table 9.

Table 9: Descriptive Statistics of Self Esteem

	N	Min	Max	Mean	Std. Error	SD	Skewness
Self-esteem	399	24.00	65.00	53.49	.41	8.17	-.78

Self-esteem had a mean index of 53.49 with the scores deviating from the mean by 8.17. The average score was used as a cut-off point to indicate how high or low self-esteem was perceived by the students. Since the mean (53.49) was more than the average score of 44.50, the result suggested that the level of self-esteem among students in a secondary school in Bungoma County was high. The skewness index of -.78 shows a negatively skewed distribution of self-esteem data which implies that more observations were below the mean than those above the mean.

4.4.3 Bivariate Correlation between Forms of Bullying and Self Esteem

The nature and strength of the relationship between forms of bullying and level of self-esteem among the secondary school students in Bungoma County were measured using the Pearson's correlation coefficient, and the results are shown in Table 10.

Table 10: Pearson Product Moment Correlation between Forms of Bullying and Self Esteem (N=399)

Variables	1	2	3	4	5
1.Cyber bullying	1				
2.Stalking	.65**	1			
3.Sexual bullying	.63**	.69**	1		
4.Socio Exclusion	.28**	.29**	.18**	1	
5. Self Esteem	-.22**	-.42*	-.51**	-.24**	1

* Correlation is significant at the 0.05 level (2-tailed).

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

The findings displayed in Table 10 suggests that there was a negative correlation between levels of stalking and self-esteem among the students surveyed as indicated by the negative Pearson's correlation coefficient ($r = -0.42$, $p = 0.01$). The correlation coefficient also indicated a significant negative relationship between levels of stalking and self-esteem at a 5% level of significance. The negative correlation implies that if the levels of stalking increased, levels of self-esteem of the students would be reduced significantly. These findings affirmed to the findings of Jordan, Wilcox and Pritchard (2007), which indicated a strong correlation between stalking and loss of self-esteem.

The correlation between cyber-bullying and self-esteem was established to be negative, as indicated by the negative Pearson's correlation coefficient ($r = -0.22$, $p = 0.00$). The correlation coefficient indicated a weak but significant relationship between cyber-bullying and self-esteem at a 5% level of significance. The negative correlation implies that if the levels of cyber-bullying amongst the students increased, levels of self-esteem of the students would decrease significantly hence the self-esteem of the secondary school students would be improved if their levels of cyber-bullying are reduced.

The findings of this study buttressed the findings of the previous literature by Patchin and Hinduja (2010), whose findings revealed that victims of cyber-bullying had

significantly lower self-esteem than those who had not experienced bullying. Similarly, findings of Kowalski and Limber (2013) concurred with the findings of the current study. The study found out that cyber victimisation and perpetration had a stronger association with self-esteem ($r = -.23, p = .00$) and cyber perpetration was also significantly associated with self-esteem.

The correlation between sexual bullying and self-esteem was established to be negative, as indicated by the negative Pearson's correlation coefficient ($r = -0.51, p = .00$). The correlation coefficient indicated a moderately strong and significant relationship between sexual bullying and self-esteem at a 5% level of significance. The negative correlation implies that if the levels of sexual bullying amongst the students increased, levels of self-esteem of the students would decrease significantly. This concurs with the findings of the studies by Priebe et al. (2010), which also indicated that sexual bullying was related to more emotional and behavioural problems, weaker sense of coherence and lower self-esteem. Gruber and Fineran (2007) studied the impact of sexual bullying on middle and high school girls. The study found that high school girls experienced more sexual harassment than their middle school counterparts. It was also found that they had high levels of trauma and lower levels of self-esteem.

The correlation between social exclusion as a form of bullying and self-esteem was established to be negative, as indicated by the negative Pearson's Correlation Coefficient ($r = -0.24, p = 0.00$). The correlation coefficient indicated a weak but significant relationship between social exclusion and self-esteem at a 1% level of significance. The negative correlation implies that if the levels of social exclusion amongst the students increased, levels of self-esteem would decrease significantly. The findings similar to Thomas et al. (2016) study that found social exclusion had a strong association with low

self-esteem $b = -0.36$, $p < .001$ 95% CI (-0.42, 0.30). This study implies that, when students face social exclusion, the lack of acceptance in the peer group's results in loneliness and social isolation; consequently, social withdrawal is likely to lead to low self-esteem.

4.4.4 Regression Analysis of the Relationship between Forms of Bullying and Self-Esteem among the Secondary School Students in Bungoma County

Multiple regression analyses were computed to establish whether the forms of bullying were significant predictors of self-esteem. A strategy proposed by Field (2005) was adopted. According to Field, all the predictors are entered in the model to examine the predictors that contribute substantially to the model ability to predict the outcome by examining the standardized beta (β) values which are not dependent on units of measurements of the variables they tell us the number of standard deviations the outcome will change as a result of one standard deviation change in the predictor. They are measured in standard deviations and are directly comparable and provide insight into the importance of predictor in the model.

To establish the relationship between the forms of bullying and self-esteem of students in a secondary school in Bungoma County, a multiple regression analysis was used. The regression model was of the form:

$$y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + \epsilon, \quad \epsilon \sim N(0,1)$$

Where, Y is the level of self-esteem; X_1 is the level of cyber-bullying, X_2 is the level of social exclusion, X_3 is the level of sexual bullying, X_4 is the level of stalking, and a_0 is the constant of the regression equation, a_1, a_2, a_3 and a_4 are the regression coefficients while ϵ is the error component.

4.5 Test of Statistical Assumption Analysis of Likert Type Data

There are two major diagnostic tests that were carried out before carrying out multiple regression analysis; Multicollinearity Test and Normality Test. These tests were discussed in the following sub-sections.

4.5.1 Test for Multicollinearity of Independent Variables

Before conducting statistical analysis, data were checked against the assumptions of multiple regression. According to Alin (2010), Multicollinearity exists when at least two independent variables in a statistical model are linearly related, and the correlation coefficients are greater than or less than zero. In this study, the test for Multicollinearity between the Independent Variables was done by examining the correlation coefficients between the independent variables. It is recommended that all variables should correlate with the dependent variable with a correlation coefficient of 0.3 or above, and the correlation between each of the variables should not be beyond 0.7 (Pallant,2013). The results indicated in Table 10, a correlation of $r = 0.648$ ($p = 0.00$) was between cyber-bullying and stalking, $r = 0.626$ ($p = 0.000$) was between cyber-bullying and sexual bullying, $r = 0.280$ ($p = 0.00$) was between cyber-bullying and social exclusion, $r = 0.293$ ($p = 0.00$) between stalking and social exclusion $r = 0.686$ ($p = 0.00$) between stalking and sexual bullying and $r = 0.180$ ($p = 0.00$) between social exclusion and sexual bullying were ascertained. The correlation coefficients were all less than 0.70; hence multicollinearity doesn't exist. The variance inflation values ranged from between 1 – 10. However, if the variance inflation factor (VIF) were less than 1 or greater than 10 there would be Multicollinearity. Table 11 shows the VIF of Multicollinearity test.

Table 11: Multicollinearity Test Using Variance Inflation Values

Coefficients of Multicollinearity statistics	VIF
Cyber-bullying	1.971
Stalking	2.286
Sexual bullying	2.130
Social exclusion	1.117
(a) Dependent variable:	

VIF = Variance inflation factor.

From the findings, cyber-bullying had a VIF 1.917; stalking had 2.286, sexual bullying 2.130, and social exclusion had 1.117. From the results, variance inflation values were ranging from 1 to 10, VIF was greater than 1; hence the data was not suffering from Multi-collinearity, and all variables can be retained and included in subsequent analysis.

4.5.2 Test for Normality of the Dependent Variable

Normality tests are of importance before analysis of the linear regression model. The coefficient alpha is an appropriate measure of variance attributable to the interaction between subjects and items (Keya, & Rahmatullah, 2016). It is through normal distribution that researchers can gain confidence that the assumptions used in the study were valid. Based on previous scholars (Field, 2013; Hora, & Klassen, 2013), the normality of the dependent variable (Self-esteem Index) was checked by the use of normal probability plots, i.e. Normal P-P plot and Histogram Plot. The Normal P-P plot illustrated in Figure 4, indicated that the residuals were normally distributed since the residual plots were all close to the line of best fit. This implied that there were no clear deviations from normality in the data since the points showed a relatively straight line, as per the recommendations (Pallant, 2013). It is, therefore assumed that data was suitable for analysis using multiple regression techniques.

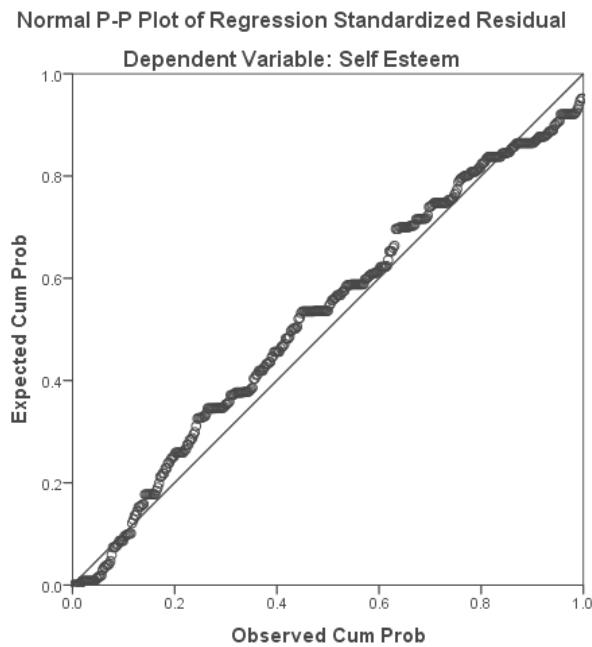


Figure 4: Normal P-P Plot for Self Esteem

Using the Histogram plot, the assumption that the residuals are normally distributed with a mean of 0 and variance of 1 was tested. From the plot shown in Figure 5, the mean value of the error variable was $9.94 \times 10^{-16} \approx 0$, and the standard deviation is $0.995 \approx 1$. It was therefore concluded that the dependent variable data were normally distributed. They were implying that through normal distribution, the researcher had confidence that the assumptions used in the study were valid.

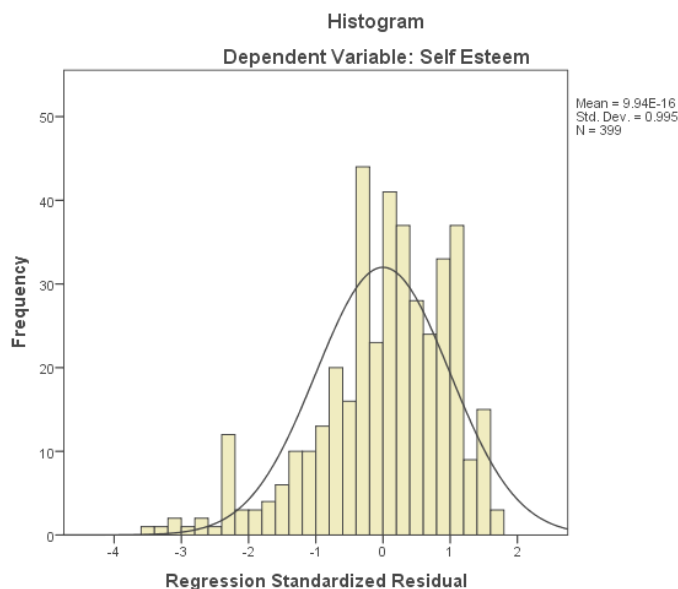


Figure 5: Histogram Plot for Self Esteem

4.5.3. Multiple Regression Results

In interpreting the results of multiple regression analysis, the major elements considered were the coefficient of multiple determination (R -square), the F -statistic in the ANOVA Table, the regression coefficients and beta values (Pallat, 2013). To assess the amount of variation in the levels of self-esteem that can be explained by forms of bullying, the coefficient of multiple correlations and the coefficient of determination were used. The results are presented in Table 12.

Table 12: Model Summary of Variation in Self Esteem explained by Forms of Bullying

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.623	.384	.35	7.99

Predictors: (Constant), Social Exclusion, Sexual Bullying, Cyber-bullying, Stalking

The results indicated that the coefficient of multiple correlations was 0.623, which suggested a strong correlation between the forms of bullying and the level of self-esteem amongst secondary school students in Bungoma County. The coefficient of determination was $R^2 = 0.384$ which implied that 38.4% of the variation in levels of self-esteem for the sample of 399 secondary school students in Bungoma County could be explained by the forms of bullying while 61.2% remains unexplained.

In assessing whether the model can significantly predict the levels of self-esteem among the secondary school students in Bungoma County, the F -statistic from the ANOVA was used, and the results are reported in Table 13.

Table 13: Summary of ANOVA tests for Self Esteem (N=399)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1320.137	4	330.034	15.157	.000
	Residual	8579.099	394	21.774		
	Total	9899.236	398			

Predictors: (Constant), Social Exclusion, Sexual bullying, Cyber-bullying, Stalking

In the findings presented in Table 13, *F*-statistics results revealed that the independent variables; Social Exclusion, Sexual Bullying, Cyber-bullying and Stalking significantly predicted the levels of self-esteem among secondary school students in Bungoma County ($F_{(4,394)} = 15.157, p < 0.05$). This implied that the results of the regression were indeed true and not the consequence of chance.

In assessing the significance of the multiple regression coefficients in the model, the *t*-test for regression coefficients and the standardized beta values were used. The unstandardized regression coefficients, the standardized beta coefficients and *t*-test values were presented in Table 14.

Table 14: Coefficients of the Relationship between Forms of Bullying and Self Esteem (N=399)

Model		Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	<i>Sig</i>
		B	Std. Error	Beta		
1	(Constant)	58.903	1.578		37.338	.00
	Cyber	-.161	.076	-.056	-1.981	.02
	Stalking	-.047	.050	-.071	-1.953	.04
	Sexual	-.181	.054	-.108	-2.503	.03
	Social	-.260	.071	-.191	-3.676	.00

Dependent Variable: Self-Esteem

Based on the unstandardized coefficients, the regression model is, therefore;

$$Y = 58.903 - 0.161X_1 - 0.047X_2 - 0.181X_3 - 0.260X_4$$

The results illustrated in Table 11 indicate that the *t*-test value for the cyber-bullying coefficient was significant at 0.05 level of significance ($|t| = 1.981, p < 0.05$). The *t*-test value for the social exclusion coefficient was significant at 0.05 level of significance ($|t| = 3.676, p < 0.05$). The *t*-test value for the sexual bullying coefficient was significant at 0.05 level of significance ($|t| = 2.503, p < 0.05$) and that of stalking were also significant at 0.05 level of significance ($|t| = 1.953, p < 0.05$). On the basis of these results, the researcher rejects the null hypothesis (H_{01}) which stated that ‘there is no significant relationship between forms of bullying and self-esteem among students in a secondary school in Bungoma County.’ The study, therefore, concludes that the forms of bullying have a statistically significant negative effect on the self-esteem of secondary school students in Bungoma County at 0.05 level of significance. The null hypothesis was rejected.

The standardized beta coefficients indicate that social exclusion as a form of bullying had the greatest effect size as shown by its largest beta value of 0.191 which indicates that for each unit increase in the level of social exclusion holding the other forms of bullying constant will result to a 19.1 decrease in the students’ level of self-esteem. Sexual bullying had the second greatest effect size of 0.108 which indicates that a unit increase in the level of sexual bullying holding the other forms of bullying constant will result to a 10.8 decline in the students’ level of self-esteem. Stalking had a beta value of 0.071, which indicates that a unit increase in the level of stalking holding the other forms of bullying constant will result to a 7.1 decline in the students’ level of self-esteem.

Cyber-bullying had the least but significant effect size of 0.056, indicating a 5.6% decline in self-esteem for a unit increase in the levels of cyber-bullying.

The findings implied that bullying behaviour which is a criterion for low self-esteem, existed among secondary school students in Bungoma County and needed to be dealt with. The findings further implied that raising the student's self-esteem was needed.

From the interview from a key informant, it was revealed that students suffer a lot as a result of bullying as it reduced their self-esteem. Guidance and counselling teachers confirmed the existence of the forms of bullying in the schools. One of the respondents had the following to say:

The subject of bullying is not new in our school. We have cases that have been going without our knowledge on senior students extorting money from the junior students, calling of names and even vandalising belongings. This has greatly affected the students concerned, and in severe cases, it affects their self-esteem. Some of the students have also dropped out of school because of bullying. Proactive people are therefore needed in handling the situation before it goes out of control.

4.6 Relationship between Forms of Bullying and Depression among the Secondary School Students in Bungoma County

The research established the relationship between forms of bullying and depression among students in Bungoma County. To achieve this, respondents were requested to rate their experiences on stalking, cyber-bullying, sexual bullying and social exclusion and their depression.

4.6.1 Descriptive Statistics on Levels of Depression

The levels of depression of the students surveyed were measured using a multi-item Likert scale. The ratings for each respondent on the various indicators of the levels of

depression were summed up to obtain a single index which ranged from 14 to 70 hence an index of more than 42 implied higher levels of depression. In contrast, an index of less than 42 implied low level of depression. The descriptive statistics for the level of depression were shown in Table 15.

Table 15: Descriptive Statistics for Depression

	N	Minimum	Maximum	Mean	Std. Deviation
Depression	399	14.00	70.00	29.86	9.73

Depression had a mean index of 29.86 with the scores deviating from the mean by 9.73. Since the mean (29.86) was less than the average score of 42, the result suggested that the level of depression among secondary school students in Bungoma County was low.

4.6.2 Correlation Analysis of the Relationship between Forms of Bullying and Depression among the Secondary School Students in Bungoma County

A bivariate Correlation (Zero-Order Correlation) was used to explore the relationship between bullying and depression. This was done by computing a Pearson Product Moment Correlation Coefficient. The strength and nature of the relationship between forms of bullying and level of depression among the secondary school students in Bungoma County were measured using Pearson's correlation coefficient, and the results are shown in Table 16.

Table 16: Correlation Analysis between Forms of Bullying and Depression

	1	2	3	4	5
1. Cyber-bullying	1				
2. Stalking	.65**	1			
3. Sexual bullying	.63**	.69**	1		
4. Social exclusion	.28**	.29**	.18**	1	
5. Depression	.38**	.40**	.28**	.46**	1

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

The findings displayed in Table 16 show a positive correlation between levels of cyber-bullying and depression among the students surveyed, as indicated by the positive Pearson's correlation coefficient ($r = 0.38, p=.00$). The correlation coefficient also indicated a moderate and significant relationship between levels of cyber-bullying and depression at 5% level of significance. The positive correlation implies that if the levels of cyber-bullying increased, levels of depression of the students would increase significantly.

The findings concur with the study of Schenk and Fremouw (2012) that examined the prevalence rate of cyber-bullying, the psychological impact and coping strategies utilised by college students in united states found that college students who were victims of cyber-bullying scored higher than matched controls on measures of depression ($n=69, M=61.3, SD=10.9$). Similarly, Bottino et al. (2015) reported that cyber-bullying was associated with moderate to severe depression symptoms. Bonanno and Hymel (2013) in a study of 399 Canadian adolescents found that involvement in cyber-bullying as either a victim or a bully, unequally contributed to the prediction of depression symptomology among students ($r= .18-.21$).

These findings were consistent with past researches; for example, Klomek et al. (2010) revealed that cyber-bullying victimisation was related to increased depression effects. Schneider et al. (2012) examined the prevalence of cyber-bullying and school bullying and their psychological distress associations. In both forms of bullying controlled analysis indicated that (depressive symptoms, self-injury, and suicidality were highest among victims of both the school bullying and the cyber-bullying (adjusted odds ratios (AOR) was from 4.38, 99% CI: 3.76-5.10) for depressive symptoms.

Fahy et al. (2016) examined longitudinal associations between cyber-bullying involvement and adolescent mental health. When comparing to the uninvolved adolescents, cyber bully-victims were likely to report symptoms of depression. Cyber-victims: OR = 1.52, 95% confidence interval (1.00, 2.06); cyber-victims: OR=1.54, 95% CI (1.13, 2.09). Wang et al. (2011) reported similar findings in the U.S. nationally representative sample of students in grade 6-10($N=7,313$). Levels of depression among bullies, victims and bully-victims of traditional (physical, verbal and relational) were compared with cyber victimisation. Results revealed that cyber victims reported higher depression than bullies or bully-victims. Campbell et al. (2012) found out that among 3,112 Australian adolescents, Victims of bullying reported significantly more social difficulties and high levels of depression.

Similarly, the study also established a positive and significant correlation between stalking and depression ($r = 0.40$, $p = 0.00$). These results were similar to Reidy et al. (2016) whose study revealed that approximately 14% of girls and 13% of boys were victims of stalking who had experienced mood disorders and hopelessness symptoms which were the precursors of depression. The study also established a significant relationship between social exclusion and depression ($r = 0.46$, $p = 0.00$). The findings implied that students who were socially excluded were likely to be depressed. During adolescent's acceptance and popularity among peer groups was an important aspect of their development as they moved away from their parents. Being deliberately left out was, therefore significantly associated with psychological distress.

These findings were inconsistent with the findings of previous researches that found that social exclusion had a negative association with mental health. Thomas et al. (2016) who found out that, adolescents showed a high prevalence of all four forms of bullying;

called names (30.6%) rumour-spreading (17.9%), social exclusion (14.3%) and physical threats or harm (10.7%) victimisation was independently associated with significantly higher levels of psychological distress. Social exclusion victims reported significantly reduced levels of emotional wellbeing.

There was also a positive and significant relationship between sexual bullying and levels of depression ($r = 0.28$, $p = 0.00$). According to Lichty and Campbell (2012), sexual bullying experiences were related to the student's emotional well-being in middle and high school. The findings indicated that the vast majority of middle school students were both targets and witnesses. Peer Sexual bullying was significantly associated with a number of psychosocial and educational problems ranging from symptoms of anxiety to depression. These similar results were reported by Dahlqvist et al. (2016). The researcher found that sexual name-calling was the dimension that had the strongest associations to all dimensions of depressive symptoms irrespective of gender. Among boys, name-calling was preceded by all dimensions of depressive symptoms. The study results indicated that if levels of sexual bullying, cyber-bullying, social exclusion and stalking were high in secondary schools. The levels of depression among the students would likewise be increased.

4.6.3 Regression Analysis of the Relationship between Forms of Bullying and Depression among Secondary School Students in Bungoma County

Multiple regression analysis was conducted to ascertain which form of bullying substantially predicted depression. In model 1, cyber-bullying, stalking, sexual bullying and social exclusion were entered. To establish the relationship between the forms of bullying and depression among secondary school students in Bungoma County, a multiple regression analysis was used. The regression model was of the form:

$$D = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon, \quad \epsilon \sim N(0,1)$$

Where, D is the level of depression; X_1 is the level of cyber-bullying, X_2 is the level of social exclusion, X_3 is the level of sexual bullying, X_4 is the level of stalking, and β_0 is the constant of the regression equation, $\beta_1, \beta_2, \beta_3$ and β_4 are the regression coefficients while ϵ is the error component.

To assess the amount of variation in depression that could be explained by the forms of bullying, the coefficient of determination and the coefficient of multiple correlations was used. The results were presented in Table 17.

Table 17: Model Summary of Predicting Depression

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
	.551	.304	.296	8.16410

Predictors: (Constant), Socio Exclusion, Sexual bullying, Cyber-bullying, stalking

The results indicated that the coefficient of determination $R^2 = 0.304$ was obtained. This implied that 30.4% of the variation in levels of depression for the sample of 399 students surveyed was explained by the changes in the levels of sexual bullying, cyber-bullying, stalking and social exclusion while 69.6% remains unexplained.

In assessing whether the model with the two independent variables could significantly predict the behaviour outcome, the F -statistic from the ANOVA was used, and the results are reported in Table 18.

Table 18: Summary of ANOVA tests for Depression Model (N=399)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11446.31	4	2861.58	42.93	.000
	Residual	26261.11	394	66.65		
	Total	37707.42	398			

Predictors: (Constant), Social Exclusion, Sexual bullying, Cyber-bullying, stalking

In the findings presented in Table 18, *F*-statistics results revealed that the independent variables; social exclusion, sexual bullying, cyber-bullying and stalking significantly predicted the levels of depression among the Secondary school students in Bungoma County ($F_{(4,394)} = 42.933$, $p < 0.05$). According to Geller (2009), ANOVA is used to test the significance of variation in the dependent variable attributed to the regression of one or more independent variables. Employment of this statistical procedure produced a calculated *F* value that is compared to a critical *F* value for a particular level of statistical probability. Obtaining a significant *F* value indicated that the results of the regression are indeed true and not the consequence of chance.

In assessing the significance of the multiple regression coefficients in the model, the *t*-test for regression coefficients and the standardized beta values were used. The unstandardized regression coefficients, the standardized beta coefficients and *t*-test values are presented in Table 19.

Table 19: Coefficients of the Relationship between Forms of Bullying and Depression. (N=399)

Model		Unstandardized Coefficients		standardized Coefficients	<i>T</i>	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.927	1.610		6.166	.000
	Cyber bullying	.202	.077	.154	2.612	.009
	Stalking	.168	.051	.211	3.320	.001
	Sexual bullying	.023	.055	.025	.411	.681
	Social exclusion	.589	.072	.363	8.165	.000

Dependent Variable: depression

Based on the unstandardized coefficients, the regression model is, therefore;

$$Y = 9.927 + 0.202X_1 + 0.168X_2 + 0.023X_3 + 0.589X_4$$

In order to test the regression coefficient statistically significantly of the *t*-test, together with the *p*-values, were used as indicated in Table 19. In testing the significance of the cyber-bullying(X_1) coefficient, *t*-value of 2.61 was obtained and since $p = 0.009$, the study concluded that there was an influence of Cyber-bullying on the levels of depression among the Secondary School Students in Bungoma County was statistically significant. In testing the significance of the social exclusion(X_2) coefficient, *t*-value of 8.165 was obtained. Since $p = 0.00$, the study concluded that the influence on the social exclusion on the levels of depression among the Secondary School Students in Bungoma County was statistically significant. Likewise, the influence of stalking on the levels of depression was established to be statistically significant ($t = 3.320$, $p = 0.000$). However, the effect of sexual bullying was not statistically significant ($t = 0.411$, $p = 0.681$).

The null hypothesis was, therefore rejected. The study findings were similar to the study findings by Williams et al. (2017), who established that females who reported being victims of cyber-bullying reported depressive symptoms.

The results presented in Table 19 indicated that social exclusion had the greatest contribution to the model as evidenced by its greater standardized beta value of 0.363 which indicates that a unit change in the levels of social exclusion, holding the other forms of bullying constant results to a 36.3% increase in the levels of depression amongst the secondary school students, whereas a 21.1% increase in the levels of depression result with every unit change in stalking levels holding the other forms of bullying constantly. The results also show that a 15.4% increase in the levels of depression will result from a unit increase in the levels of cyber-bullying holding the other forms of bullying constantly. Sexual bullying was established to have the least effect size as indicated by its beta value of 0.025 which implies that only a 2.5% increase in the levels of depression will result from a unit increase in the levels of sexual bullying holding the other forms of bullying constantly. In conclusion, there was a significant relationship between forms of bullying and depression among Secondary School students in Bungoma County. Hence rejecting the hypothesis that there was no significant relationship between forms of bullying and depression. From the interview held, the deputy principal had the same view that students who experienced bullying showed symptoms of depression, especially those that were sexually bullied and those that were socially excluded from group activities. Often these students display depressive symptoms such as sad faces, mood swings and becoming withdrawn from activities once liked and crying without cause. A key respondent said the following;

It is true bullying takes place in our schools. We have been experiencing student strikes for the last five years. Most of them have been caused by increased cases of homosexuality and other crimes committed by senior students. The cases that go unnoticed automatically lead to violence once they build up among students. Numerous work is needed to be put in place administratively to contain the situation.

4.7 Relationship between Forms of Bullying and Aggression among the Secondary School Students in Bungoma County

The research established the relationship between forms of bullying and Aggression among students in Bungoma County. To achieve this, respondents were requested to rate their experiences on stalking, cyber-bullying, sexual bullying, social exclusion and their aggression.

4.7.1. Descriptive Statistics on Levels of Aggression

The study sought to establish the relationship between forms of bullying and aggression in Bungoma County. To achieve this, the level of aggression of the students surveyed was measured using a Multi-Item Likert Scale. The ratings for each respondent on the various indicators of the levels of aggression were summed up to obtain a single index which ranged from 20 to 88 hence an index of more than 54 implied higher levels of aggression while an index of less than 54 implied low level of aggression. The descriptive statistics for the level of aggression are shown in Table 20.

Table 20: Descriptive Statistics for Aggression

	N	Minimum	Maximum	Mean	Std. Deviation
Aggression	399	20.00	88.00	49.51	14.58

The study results indicate an aggression mean index of 49.51 with the scores deviating from the mean by 14.58. Since the mean aggression index was less than the average score of 60, the result suggested a low level of aggression among students in secondary schools in Bungoma County.

4.7.2. Correlation Analysis of the Relationship between Forms of Bullying and Aggression among the Secondary School Students in Bungoma County

The nature and strength of the relationship between forms of bullying and level of aggression among the secondary school students in Bungoma County were used to measure the Pearson's correlation coefficient and the results are shown in Table 21.

Table 21: Correlation Analysis between Forms of Bullying and Aggression

Construct	1	2	3	4	5
1.Cyber bullying	1				
2.Stalking	.65**	1			
3.Sexual bullying	.63**	.69**	1		
4.Socio exclusion	.28**	.29**	.18**	1	
5.Agression	.39**	.52**	.42**	.45**	1

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

The findings displayed in Table 21 show that there was a positive correlation between levels of cyber-bullying, stalking, sexual bullying and social exclusion and aggression among the students surveyed as indicated by the positive Pearson's correlation coefficients of ($r = 0.39, p = 0.00$) between cyber-bullying and aggression ($r = 0.52, p = 0.00$) between stalking and aggression and between sexual bullying and aggression ($r = 0.42, p = 0.00$) and between social exclusion and aggression ($r = 0.45, p = 0.00$) respectively at 5% significant level of confidence.

This suggested that an increase in social exclusion of students corresponded to an increase in their aggressive behaviour. The results were similar to Dey (2018) in a study to investigate the relationship between loneliness and aggression of the adolescents in Chittagong, 120 participants were selected purposively. The results established that significant correlation ($r = 0.80, p = 0.01$) between loneliness and aggression of adolescents.

Similarly, the study also found a correlation between cyber-bullying and aggression ($r = .39, p = 0.00$). The findings denoted that students who experience cyber-bullying are likely to show aggressive behaviour. These findings were similar to Schultze – Krumbholz and Scheithauer (2009) that indicated that adolescents involved in cyber-bullying manifest high aggression levels than their peers who did not express bullying. Similarly, Mishan et al. (2010) examined the prevalence, impact and differential experiences of cyber-bullying among a large and different sample of both middle and high school students ($N=2,186$) from a large urban Centre. The findings of the study revealed that cyber-bullying behaviour had a psychosocial impact on the bullies and the bullied. About half (49.9%) of the students indicated that they had been bullied online, and (33.7%) indicated that they had bullied others online. Anger, sadness and depression were reported after being bullied online. These findings indicated that aggressive adolescents were more likely to be victimised by their peers.

Consistent with the current study, Price et al. (2013) examined psychopath and depression in 103 adolescent offenders using two well-validated assessments. Results revealed that psychopathology and depression statistically predicted higher levels of anger, aggression and interpersonal problems. Similarly, Kubiszewski et al. (2013) investigated the prevalence of adolescents that engaged in cyber-bullying and establishing whether students involved in cyber-bullying and school bullying presented the same characteristics of internalising problems (insomnia, perceived social disintegration, psychological distress) and externalising problems (general aggressiveness, antisocial behaviour). Results revealed that aggressiveness and antisocial behaviour were more prevalent in cyber-bullies and cyber-bully/victims.

Pillay (2012) investigated the behavioural and psychosocial factors associated with cyber-bullying among Grade 8 to 10 learners, in a cross-section of schools, in KwaZulu-Natal. The study found out that perpetrators of cyber-bullying rated themselves highest on being aggressive. Wang et al. (2012) also examined patterns of engagement in cyber-bullying and four types of traditional bullying: physical bullying, verbal bullying, social exclusion, spreading rumours. Results also suggested that most cyber-bullies belonged to a group of highly aggressive adolescents who were involved in all types of bullying.

The study also revealed a significant correlation between sexual bullying and aggression ($r = .42, p = .00$) There was no known study on the same findings as to the current study. Findings of the relationship between stalking and aggression was ($r = .52, p = 0.00$). These findings implied that an increase in stalking was likely to increase the level of aggressive behaviour among student. This study also concurred with the study by Smith-Darden, Reidy and Kernsmith (2018). In a study of 12, 36 youths who completed surveys in the assessment of stalking perpetration and associated risks for violence. It was established that boys reported more threatening and aggressive behaviour towards the target of the pursuit. The positive correlation coefficients indicated that increased levels of cyber-bullying, stalking, sexual bullying and social exclusion, resulted in increased aggression levels among secondary school students.

4.7.3. Regression Analysis of the Relationship between the Forms of Bullying and Levels of Aggression

The multiple regression model used to examine the relationship between forms of bullying and levels of aggression was presented as follows:

$$Y = b_0 + b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + \epsilon$$

Where: - Y is the dependent variable, which is the level of aggression

X_1 –is the cyber-bullying index

X_2 –is the stalking index

X_3 –is the sexual bullying index

X_4 –is the social exclusion index

b_0, b_1, b_2, b_3 and b_4 are the regression coefficients

ϵ is the error term

To assess the amount of variation in the levels of aggression that could be explained by changes in the independent variables (cyber-bullying, stalking, sexual bullying and social exclusion), the coefficient of determination was used. The results were presented in Table 22.

Table 22: Model Summary Predicting Aggression

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Durbin-Watson
1	.61	.375	.37	11.59	1.89

A. Predictors: (Constant), Social Exclusion, Sexual bullying, Cyber-bullying, Stalking

The results displayed in Table 22 indicated that the coefficient of determination $R^2 = 0.375$ indicated that 37.5% of the variation in the levels of aggression for the sample of 399 secondary school students could be explained by the changes in cyber-bullying, stalking, sexual bullying and social exclusion while 62.5% remains unexplained.

In assessing whether the model could significantly predict the levels of aggression of the secondary school students, the F -statistic from the ANOVA was used, and the results were presented in Table 23.

Table 23: ANOVA for Aggression

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	31693.22	4	7923.30	58.99	.000
Residual	52912.48	394	134.30		
Total	84605.70	398			

Predictors: (Constant), Social exclusion, Sexual bullying, Cyber-bullying, Stalking

The results revealed that the independent variables: (cyber-bullying, stalking, sexual bullying and social exclusion) could significantly predict the levels of aggression of the secondary school students in Bungoma County ($F(4,394) = 58.999, p = 0.00$).

In assessing the significance of the multiple regression coefficients in the model, the *t*-test for regression coefficients and the standardized beta values were used. The unstandardized beta coefficients were used as the regression model coefficients. The results were presented in Table 24.

Table 24: Coefficients of the Relationship between Forms of Bullying and Aggression (N=399)

Model	Unstandardized Coefficients		standardize coefficient Beta	<i>T</i>	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1 (Constant)	16.381	2.285		7.168	.000		
Cyber	.008	.110	.004	.073	.942	.507	1.971
Stalking	.401	.072	.336	5.572	.000	.437	2.286
Sexual	.176	.078	.130	2.244	.025	.469	2.130
Social excl	.799	.102	.328	7.796	.000	.895	1.117

Note: Dependent Variable: aggression

Based on the unstandardized coefficients the following regression equation is:

$$Y = 16.381 + 0.008X_1 + 0.401X_2 + 0.176X_3 + 0.799X_4$$

Where; Y is the level of aggression, 16.381 is the constant that is, the level of aggression without the influence of the independent variables. The results indicated a positive

relationship between levels of aggression and cyber bullying, stalking, sexual bullying and social exclusion as indicated by the positive regression coefficients of $b_1 = 0.008, b_2 = 0.401, b_3 = 0.176$ and $b_4 = 0.799$ respectively. To test for the statistical significance of the regression coefficients, the t -test was used. In testing for the statistical significance of the regression coefficient, this study rejected the hypothesis:

$H_{0_{41}}: \alpha_1 = 0$ i.e the forms of bullying have no significant relationship on the

levels of aggression among the secondary school students in Bungoma County.

According to the findings presented in Table 24 t -test value of 0.073 ($p = 0.942$) was obtained for cyber bullying implying that the effect of cyber bullying on the levels of aggression was not statistically significant. For stalking, a t -test value of 5.572 ($p = 0.000$) was obtained and this showed that stalking as a form of aggression had a statistically significant effect of the level of aggression of the secondary school students. Sexual bullying had a test value of 2.244 ($p = 0.025$) hence sexual bullying has a statistically significant effect of the levels of aggression. Finally, a t -test value of 7.796 significant at 5% level of significance ($p < 0.000$) was obtained for social exclusion. Based on the standardized betas, stalking had the greatest effect size as indicated by its highest beta value of 0.336 followed by social exclusion with a standardized beta value of 0.328. Cyber bullying had the least effect size as indicated by the least beta value of 0.004. From the interview held, it was evident that bullying affected the student's aggressive behaviour. This was observed by the number of cases of fighting that had been reported in the daily occurrences book. Fighting back which was a sign of aggressiveness was common especially among boys who had an experience of bullying.

One of the respondents had the following;

It is true bullying takes place in our schools. We have been experiencing students' strikes for the last five years. Most of them have been caused by increased cases of homo-sexuality and other crimes committed by senior students. The cases that go unnoticed automatically lead to violence once they build up among students. Sometimes when a student is advanced for sexual favours, he/she become very aggressive and they end up in fights. We have a lot of work that need to be put in place administratively to contain the situation. In this school there is a guidance and counselling programs that is held once in a week. These sessions aim at increasing students' awareness of the consequences of deviant behaviour and hence taking responsibilities. The content on the guiding and counselling programmes which includes class counselling, peer counselling sessions, mentorship programmes, academic family counselling, and group counselling. We also have pastoral programmes every Thursday. The programs aim at instilling values among students from the religious perspective. We ensure that the teacher counsellors are freely accessible to the students.

4.8 Relationship between forms of Bullying and Suicidal Ideation among the Secondary School Students in Bungoma County

The study sought to establish the relationship between forms of bullying and suicidal ideation among students in Bungoma County. To achieve this, the respondents were requested to rate on a five -point Likert scale from 1 = strongly disagree to 5 = strongly agree, on their level of agreement with the various statements measuring relationship.

4.8.1. Descriptive Statistics on Levels of Suicidal Ideation

The level of suicidal ideation of the students surveyed was measured using a multi-item Likert scale. The ratings for each respondent on the various indicators were summed up to obtain a single index which ranged from 10 to 45 hence an index of more than 27.50 implied higher levels of suicidal ideation while an index of less than 27.50 implied low

level of suicidal ideation. The descriptive statistics for the level of suicidal ideation are shown in Table 25.

Table 25: Descriptive Statistics of Suicidal Ideation (N=399)

	Minimum	Maximum	Mean	Std. Deviation	Std. Error	Skewness
Suicidal ideation	10.00	45.00	20.88	7.24	.39	.12

The study results indicate suicidal ideation mean index of 20.8797 with the scores deviating from the mean by 7.24486. Since the mean of suicidal ideation index was less than the average score of 27.50, the result suggested a low level of suicidal ideation among students in secondary schools in Bungoma County.

4.8.2. Bivariate Correlation Analysis of the Relationship between Forms of Bullying and Suicidal Ideation among the Secondary School Students in Bungoma County

The Pearson's correlation coefficient was used to measure the nature and strength of the relationship between forms of bullying and level of suicidal ideation among the secondary school students in Bungoma County and the results are shown in Table 26.

Table 26: Correlation between Forms of Bullying and Suicidal Ideation

	1	2	3	4	5
1.Social exclusion	1				
2.Cyber Bullying	.65**	1			
3.Sexual Bullying	.63**	.69**	1		
4. Stalking	.28**	.29**	.18**	1	
5. Suicidal ideation	.53**	.42**	.35**	.38**	1

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

The findings displayed in Table 26 showed that there was a positive moderate significant correlation between social exclusion and suicidal ideation ($r = .53, p = .00$). The findings

suggested that an increase in social exclusion corresponded to an increase in suicidal ideation. Courtet and Olie (2019) affirm that social exclusion was among the life events that preceded suicidal ideation. Social pain elicited by social exclusion was a precursor of suicidal ideation. Similarly, Akram et al. (2018) established a similar finding that suicidal ideation was significantly and positively related to social exclusion.

The relationship between cyber bullying and suicidal ideation was moderate, positive and significant ($r = .42$, $p = .00$). This suggested that students who are socially excluded are likely to have suicidal ideation. These results were similar to the findings of Hinduja and Patchin (2010) that examined the relationship between cyber bullying and victim or perpetrators and suicidal ideation among American middle school students. The relationship was greater or more among victims 1.9 times compared to 1.5 times for the perpetrators this confirms that both victims and perpetrators of cyber bullying were more likely to have suicidal ideation. The study revealed that the likelihood of attempting suicide was up to twice as high among victims as compared to those not involved cyber bullying (OR=1.5, OR=2.1).

The findings also corroborate Alavi et al. (2017) study which investigated the relationship between bullying and suicidal ideation. The study findings indicated that 68% of those bullied had suicidal ideation at presentation. Those who reported cyber bullying were 11.5 times likely to have suicidal ideation documented on presentation. Therefore, this study confirmed that cyber victimisation was likely to result into suicidal ideation. The present study was also consistent with previous studies such as Williams et al. (2017) who examined sex difference in bullying victimisation and the impact on depressive symptoms and depressive behaviour in 9th grade students ($N = 233$). Findings of the study established that females that had reported being victims of cyber bullying

had higher chances of reporting symptoms associated with depression, suicidal ideation and suicide attempts.

Similar findings were found by Sampasa – Kanyinga (2017) who studied the association between concurring cyber bullying and school victimisation with poor self-rated mental health, psychological distress, and suicidal ideation among 4886 Canadian students Grade 7-12. Results revealed that both victims of cyber bullying and school bullying presented the highest odds of suicidal ideation (OR= 6.17, 95% CI (4.44, 8.56) and attempts (OR=7.68, 95% CI (3.95, 14.93).

Klomek et al. (2010) reviewed a research addressing suicide and bullying from childhood to young adulthood using cross-sectional and research findings. Cross-sectional findings indicated that there was increased risk of suicidal ideation associated with bullying behaviour and cyber bullying. The few longitudinal findings available indicated that bullying and peer victimisation lead to suicidal ideation. Discrepancies between the studies available may be due to differences in the studies' participants and methods. Similarly, Schneider et al. (2012) also found a positive correlation between cyber victimisation and suicidal behaviour.

The relationship between sexual bullying and suicidal ideation was moderate, positive and significant ($r = .35$, $p = .00$). The findings suggested that an increase in sexual bullying increased suicidal ideation. These results were similar to the previous studies for example Montoro et al. (2016) investigated the association of bullying with suicidal ideation and attempts among adolescents with different dimensions of sexual orientation. Findings revealed that adolescents and non-heterosexual identity had more chances of suicidal ideation when subjected to sexual bullying. Similarly, Chiodo et al (2009) found out that sexual bullying was associated with suicidal ideation and self-harm. Results of

the study revealed significant odds ratios (ORs) ranging from 2.03 (CI: 3.5-7.2) to 5.88 (CI: 2.52 -13.72) and 5.03(CI: 3.5- 7.21) for self- harm and suicidal ideation respectively.

The relationship between Stalking and Suicidal ideation was moderate and significant ($r= .38, p=.00$). These denoted that stalking increased with an increase in suicidal ideation among student in Secondary schools in Bungoma County. The study was consistent to previous studies demonstrating that adolescents who experienced repeated stalking were more likely to have suicidal ideation. For example, Blaauw et al. (2007) investigated relationship between features of stalking and psychopathology. 78% of the stalking victims scored higher on the GHQ indicating that a large number of stalking victims had psychiatric symptoms. Several victims reported a history of attempted suicide and several inpatient admissions and no less than 31% had repeated ideation about committing suicide.

Taken together, there was a positive significant correlation between social exclusion and suicidal ideation ($r = 0.53, p = 0.0$). The positive correlation coefficient indicated that an increase of cyber bullying, stalking, sexual bullying and social exclusion lead to high levels of suicidal ideation amongst the secondary school students was reported.

4.8.3 Regression Analysis of the Relationship between Forms of Bullying and Suicidal Ideation among Secondary School Students in Bungoma County

Multiple regression analysis indicated that cyber bullying, sexual bullying and social exclusion were significant predictors of suicidal ideation.

The multiple regression model is presented as follows:

$$Y = c_0 + c_1(X_1) + c_2(X_2) + c_3(X_3) + c_4(X_4) + \epsilon$$

Where:-Y is the dependent variable, which is the level of suicidal ideation

X_1 –is the cyber bullying index

X_2 –is the stalking index

X_3 –is the sexual bullying index

X_4 –is the social exclusion index

c_0, c_1, c_2, c_3 and c_4 are the regression coefficients

To assess the amount of variation in suicidal ideation that could be explained by changes in the levels of cyber bullying, social exclusion, sexual bullying and stalking, the coefficient of multiple correlation and the coefficient of determination were used. The results are presented in Table 27.

Table 27: Model Summary Suicidal Ideation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.59	.358	.35	5.83

Predictors: (Constant), Social exclusion, Sexual bullying, Cyber bullying, Stalking

The correlation coefficient of $R= 0.59$ obtained indicated a moderate positive statistically significant correlation between the forms of bullying and levels of suicidal ideation amongst secondary school students in Bungoma County. The coefficient of determination $R^2=0.358$ indicated that the four predictors could jointly explain up to 35.8% of the levels of suicidal ideation amongst the secondary school students.

To determine whether the model could significantly predict the suicidal ideation among the secondary school students in Bungoma County, ANOVA which uses the F-test was used and the results were presented in Table 28.

Table 28: ANOVA for Suicidal Ideation

Model		Sum of squares	Df	Mean Square	F
1	Regression	7487.162	4	1871.791	55.024
	Residual	13403.063	394	34.018	
	Total	20890.226	398		

Predictors: (Constant), Social exclusion, Sexual bullying, Cyber bullying, Stalking

The results showed that the independent variables: cyber bullying, social exclusion, sexual bullying and stalking could significantly predict the level of suicidal ideation among secondary school students in Bungoma County ($F(4,394) = 55.025, p < 0.05$).

In assessing the significance of the multiple regression coefficients in the model, the *t*-test for regression coefficients and the standardized beta values were used. The unstandardized regression coefficients, the standardized beta coefficients and *t*-test values were presented in Table 29.

Table 29: Coefficients of the Relationship between Forms of Bullying and Suicidal Ideation

Model	Unstandardized Coefficients		Standardized Coefficients	<i>T</i>	Sig.
	B	Std. Error	Beta		
Cyber Bullying	.201	.055	.206	3.642	.000
Stalking	.011	.036	.018	.298	.766
Sexual bullying	.082	.039	.122	2.079	.038
Socio exclusion	.523	.052	.433	10.144	.000

a. Dependent Variable: suicide ideation

Based on the unstandardized coefficients the regression equation is:

$$Y = 5.747 + 0.201X_1 + 0.011X_2 + 0.082X_3 + 0.523X_4$$

Where; Y is the level of suicidal ideation. The results indicated a positive relationship between suicidal ideation and the forms of bullying as indicated by the positive regression coefficients of

$\alpha_1 = 0.201, \alpha_2 = 0.011, \alpha_3 = 0.082$ and $\alpha_4 = 0.523$ respectively for cyber

bullying, stalking, sexual bullying and social exclusion. To test for the statistical significance of the regression coefficient, the *t*-test was used.

In testing for the statistical significance of the cyber bullying regression coefficient, the *t*-test values were used and indicate that cyber bullying had a statistically significant influence on suicidal ideation of the secondary school students in Bungoma County ($t = 3.46, p = 0.00$). Stalking as a form of bullying was established not to have a statistically significant influence on the suicidal ideation of the secondary school students in Bungoma County ($t = 0.286, p = 0.766$). Sexual bullying was established to have a statistically significant influence on the suicidal ideation of the secondary school students in Bungoma County at 5% level of significance ($t = 2.079, p = 0.038$). Also, social exclusion was established to have a statistically significant influence on the suicidal ideation of the secondary school students in Bungoma County at 5% level of significance ($t = 10.144, p = 0.000$).

To measure the effect size of the independent variables, the standardized beta coefficients were used as presented in Table 29. Consequently, the results indicated that social exclusion had the greatest effect size of 0.433 which implied that a unit increase in the level of social exclusion, holding the other factors constant could result in a 43.3% increase in suicidal ideation amongst the secondary school students in Bungoma County. Table 28 further portrayed that stalking had the least effect size of (0.018), implying that a unit increase in level of stalking could results to a 1.8% increase in suicidal ideation. In

testing for statistical significance of the regression coefficient, this study rejected the hypothesis: the forms of bullying have no statistically significant relationship on the levels of suicidal ideation among secondary school students in Bungoma County. From the interview held, the same view was supported by the key informants who confirmed that students who had been bullied kept to themselves, harmed themselves as they find it difficult to accept the hostility they experience from peers. Similarly, suicidal ideation in most cases had root cause within the school setting.

One of the respondents had the following:

Cases of students wanting to take their own lives is not new in our school. I have handled one such a case..... We appreciate the role played by guidance and counselling department in the school for ensuring we contain the situation of our students. It is true that some of the cases involving suicidal ideation have root causes within the school setting, namely through sexual bullying and other forms of bulling. However, I thank God that none of the students have lost their lives through suicide.

4.9 Relationship between Forms of Bullying and Social Withdrawal among the Secondary School Students in Bungoma County

The study established the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County. Social withdrawal was measured using a multi-item Likert scale.

4.9.1 Descriptive Statistics of Social Withdrawal

The ratings for each respondent on the various indicators of the levels of social withdrawal were summed up to obtain a single index which ranged from 20 to 97 hence an index of more than 58.50 implied higher levels of withdrawal while an index of less than 58.50 implied low levels of social withdrawal. The descriptive statistics for the level of social withdrawal are shown in Table 30.

Table 30: Descriptive Statistics of Social Withdrawal

	N	Minimum	Maximum	Mean	Std. Deviation
Withdrawal	399	20.00	97.00	46.86	15.67

The study results indicated a mean index of 46.8622 with the scores deviating from the mean by 15.67216. Since the mean for social withdrawal index was less than the average score of 58.50, the results suggested a low level of social withdrawal among Secondary school students in Bungoma County.

4.9.2 Correlation Analysis of the Relationship between Forms of Bullying and Social Withdrawal among the Secondary School Students in Bungoma County

Pearson's correlation coefficient was used to measure the nature and strength of the relationship between forms of bullying and level of social withdrawal among the secondary school students in Bungoma County. The computation of a correlation coefficient yields a statistic that ranges from -1 to +1 which indicates the relationship between the two variables and the bigger the correlation the stronger the relationship between the two variables being compared (Mugenda & Mugenda, 2008). The results are shown in Table 31.

Table 31: Correlations of Forms of Bullying and Social Withdrawal

	1	2	3	4	5
Cyber-bullying	1				
Stalking	.65**	1			
Sexual bullying	.63**	.69**	1		
Socio exclusion	.28**	.29**	.18**	1	
Withdrawal	.32**	.35**	.22**	.54**	1

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

The results of the analysis presented in Table 30 depicts that cyber bullying had a positive significant relationship with social withdrawal ($r = 0.32, p = 0.00$). The findings

implied that students who experienced cyber bullying were likely to be socially withdrawn. These results were similar to previous studies by Coelho and Romao (2018) that investigated the relationship between social anxiety, social withdrawal and cyber bullying roles. The findings established that all students involved in bullying (victims, bullies and bully victims) had higher levels of social withdrawal. However, bully victims had the highest levels of social withdrawal. The overall results showed that cyber bullying role strongly impact on social anxiety, social withdrawal, and demonstrated the importance of including class size when analysing the ration between bullying roles and social anxiety and social withdrawal.

Stalking as a form of bullying had positive significant relationship with social withdrawal ($r = 0.35$, $p = 0.00$) at 0.05 level of significance. There was no known study to support this finding.

Sexual bullying had a positive significant relationship to social withdrawal ($r = 0.22$, $p = 0.00$) at 0.05 level of significance. These findings implied that social withdrawal increased with increase in sexual bullying among students. This study was the first study to establish that sexual bullying had a negative impact on the survivors of bullying in relation to social withdrawal.

Likewise, there was a positive and significant relationship between social exclusion and social withdrawal ($r = 0.54$, $p = 0.00$). This denoted that social withdrawal among students increased with an increase in social exclusion. The findings were concurrent to the findings of Hartberg and Hegina (2014) which examined the extent of mental health problems among adolescents. The study compared youths with and without close friends to confide in and found that there was a significantly greater proportion of those lacking a close friend reporting having depressive symptoms than those with close friends.

Similar findings were reported by Coelho and Romao (2018) who conducted a study involving 668 participants who were part of a screening for inclusion in a social and emotional learning program. Results showed all students involved in bullying (victims, bullies and bully-victims) had higher levels of social withdrawal.

From the correlation analysis, it was established that the strongest relationship between forms of bullying and social withdrawal was with social exclusion and the least being sexual bullying. These suggested that increased levels of social exclusion contributed substantially to the increase in the levels of social withdrawal among secondary school students in Bungoma County. However, since the correlation was significant for all the independent variables, it is concluded that each of the independent variables had a role to play in increasing the levels of social withdrawal among the secondary school students in Bungoma County.

4.9.3 Multiple Regression Analysis of the Relationship between Social-Withdrawal and Forms of Bullying

Before the multiple regression analysis, test for multicollinearity of the residuals was done using the correlation coefficients. The correlations between the independent variables were all less than 0.70 hence it was inferred that multicollinearity does not exist. To assess the amount of variation in social withdrawal that could be explained by the forms of bullying in terms of; cyber bullying, stalking, sexual bullying and social exclusion, the coefficient of multiple correlations and the coefficient of determination were used. The results are presented in Table 32.

Table 32: Model Summary for Social Withdrawal (N=399)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576	.332	.325	12.87430

The results indicated that the coefficient of multiple correlation was $R = 0.576$ which indicate a moderately strong correlation between the independent variables (cyber bullying, stalking, sexual bullying and social exclusion) and social withdrawal. The results also indicated that a coefficient of determination $R^2 = 0.332$ was obtained. This implied that 33.2% of the variation in social withdrawal for the sample of 399 secondary school students in Bungoma County could be explained by the changes in the forms of bullying while 66.8% remains unexplained.

In assessing whether the model with the four independent variables could significantly predict social withdrawal among secondary school students, the F -statistic from the ANOVA was used and the results reported in Table 33.

Table 33: Summary of ANOVA tests for Social Withdrawal (N=399)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32450.818	4	8112.704	48.946	.000 ^b
	Residual	65304.601	394	165.748		
	Total	97755.419	398			

Dependent Variable: Social withdrawal

In the findings presented in Table 32, F -statistics results revealed that the independent variables; cyber bullying, stalking, sexual bullying and social exclusion significantly predicts the levels of social withdrawal among secondary school students in Bungoma County ($F_{(4,394)} = 48.946, p = 0.05$).

In assessing the significance of the multiple regression coefficients in the model, t -test for regression coefficients and the standardized beta values were used. The unstandardized regression coefficients, the standardized beta coefficients and t -test values were presented in Table 34.

Table 34: Coefficients of the Relationship between Forms of Bullying and Social Withdrawal (N=399)

Model		Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.
		B	Std. Error	Beta		
1	(Constant)	15.213	2.539		5.992	.000
	Cyber	.236	.122	.112	1.936	.054
	Stalking	.216	.080	.169	2.707	.007
	Sexual	.066	.087	.046	.762	.446
	Socie	1.211	.114	.463	10.636	.000

Dependent Variable: withdrawal

Based on the unstandardized coefficients, the regression model is therefore;

$$Y = 15.213 + 0.236X_1 + 0.216X_2 + 0.066X_3 + 1.211X_4$$

To test for the statistical significance of the regression coefficients, the *t*-test together with the *p*-values were used as indicated in Table 34. In testing the significance of the cyber bullying(X_1) coefficient, the hypothesis tested was $\beta_1 = 0, vs. \beta_1 \neq 0$. A *t*-value of 1.936 was obtained and since $p > 0.05$, the null hypothesis is not rejected hence the study concludes that even though cyber bullying influences social withdrawal, the influence is not statistically significant.

In testing the significance of the stalking(X_2) coefficient, the hypothesis tested was $\beta_2 = 0, vs. \beta_2 \neq 0$. A *t*-value of 2.937076 was obtained and since $p < 0.05$, the null hypothesis was rejected hence the study concluded that stalking as a form of bullying had a statistically significant influence on social withdrawal among secondary school students in Bungoma County. To assess the statistical significance of sexual bullying(X_3) coefficient, the hypothesis tested was $\beta_3 = 0, vs. \beta_3 \neq 0$. A *t*-value of 0.762 was obtained and since $p > 0.05$, the null hypothesis was not rejected and the study concluded that the influence of sexual bullying as a form of bullying on social withdrawal among

the secondary school students in Bungoma County was not statistically significant. Finally, in assessing the statistical significance of social exclusion(X_4) coefficient, the hypothesis tested was $\beta_4 = 0, vs. \beta_4 \neq 0$. A t -value of 10.636 ($p < 0.05$) was obtained hence the null hypothesis was rejected and the study concluded that social exclusion as a form of bullying had a statistically significant effect on social withdrawal among the secondary school students in Bungoma County. From the interview, the same view was reported by the teachers, that intimidation of the affected students by bullying culminated into withdrawal. When others kept them away from group tasks given by the teacher, they withdrew and kept to themselves. Occasionally, such students dropped out of school or become truant.

One of the respondents had the following;

I thank the ministry of education for having introduced guidance and counselling in our schools. Most of the cases of junior students wanting to drop out of school have been handled by the department. The root causes have majorly been revolving around bullying by the senior students. We remain steadfast to ensure the cases are reduced for the wellbeing of our students. All in all, several cases like sexual bullying, have an impact on the victims as consequence, the victims feel withdrawn, isolated, and some show suicidal ideation behaviour. In fact, majority exhibit low self-esteem, anxiety, aggressiveness, stressed and irritable, fearful. We have had indiscipline cases drop out of school and so on.

4.9.4 Summary of Hypotheses

Table 35 presents the summary of the hypotheses of the study.

Table 35: Summary of Hypotheses Test

Objective	Hypothesis	Model for test, results and decision
1. To establish the relationship between forms of bullying and self-esteem among students of public secondary schools in Bungoma County.	H_0 1: There is no significant relationship between forms of bullying and self-esteem among students of secondary schools in Bungoma County.	<p>The regression model was of the form</p> $y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + \epsilon, \quad \epsilon \sim N(0,1)$ <p>Where, Y is the level of self-esteem; X_1 is the level of cyber bullying, X_2 is the level of social exclusion, X_3 is the level of sexual bullying, X_4 is the level of stalking and a_0 is the constant of the regression equation, a_1, a_2, a_3 and a_4 are the regression coefficients while ϵ is the error component</p> <p>The regression model was;</p> $Y = 58.903 - 0.161X_1 - 0.260X_2 - 0.181X_3 - 0.047X_4$ <p>F statistics showed ($F_{(4,394)} = 15.157$ at $p < 0.05$). The hypothesis was rejected.</p>
2. To examine the relationship between forms of bullying and depression among students in secondary schools in Bungoma County.	H_0 2: There is no significant relationship between forms of bullying and depression among students of secondary schools in Bungoma County.	<p>The regression model was of the form:</p> $D = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon, \quad \epsilon \sim N(0,1)$ <p>Where, D is the level of depression; X_1 is the level of cyber bullying, X_2 is the level of social exclusion, X_3 is the level of sexual bullying, X_4 is the level of stalking and β_0 is the constant of the regression equation, $\beta_1, \beta_2, \beta_3$ and β_4 are the regression coefficients while ϵ is the error component.</p> <p>the regression model from the study took the form;</p> $Y = 9.927 + 0.202X_1 + 0.168X_2 + 0.023X_3 + 0.589X_4$ <p>F statistics showed ($F_{(4,394)} = 42.933$ at $p < 0.05$). The hypothesis was rejected.</p>

3. To determine the relationship between forms of bullying and aggression among students in Secondary schools in Bungoma County.

H₀ 3: There is no significant relationship between forms of bullying and aggression among students of secondary schools in Bungoma County.

The multiple regression model was presented as follows:

$$Y = b_0 + b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + \epsilon$$

where:

Y is the dependent variable, which is the level of aggression

X₁ –is the cyber bullying index

X₂ –is the stalking index

X₃ –is the sexual bullying index

X₄ –is the social exclusion index

b₀, b₁, b₂, b₃ and b₄ are the regression coefficients

ε is the error term

From the results, the following regression equation was obtained:

$$Y = 16.381 + 0.008X_1 + 0.401X_2 + 0.176X_3 + 0.799X_4$$

The F statistics was (F (4,394) = 58.999, p = 0.00).

The hypothesis was rejected.

The multiple regression model was presented as follows:

$$Y = c_0 + c_1(X_1) + c_2(X_2) + c_3(X_3) + c_4(X_4) + \epsilon$$

where:- Y is the dependent variable, which is the level of suicidal ideation

X₁ –is the cyber bullying index

X₂ –is the stalking index

X₃ –is the sexual bullying index

X₄ –is the social exclusion index

c₀, c₁, c₂, c₃ and c₄ are the regression coefficients

Based on the unstandardized coefficients the regression equation was:

$$Y = 5.747 + 0.201X_1 + 0.011X_2 + 0.082X_3 + 0.523X_4$$

4. To find out the relationship between forms of bullying and suicidal ideation among secondary school students in Bungoma County.

H₀ 4: There is no significant relationship between forms of bullying and suicidal ideation among students of secondary schools in Bungoma County.

5. To find out the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County.

H₀ 5: There is no significant the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County.

Given that the F statistics was ($F(4,394) = 55.025$, at $p < 0.05$). The hypothesis was rejected.

The multiple regression was presented as follows;

$$Y = \beta_0 + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + \epsilon$$

where:- Y is the dependent variable, which is the level of social withdrawal

X_1 –is the cyber bullying index

X_2 –is the stalking index

X_3 –is the sexual bulying index

X_4 –is the social exclusion index

$\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 are the regression coefficients is the error term

Based on the unstandardized coefficients, the regression model is therefore;

$$Y = 15.213 + 0.236X_1 + 0.216X_2 + 0.066X_3 + 1.211X_4$$

Given that the F statistics was ($F_{(4,394)} = 48.946$, $p = 0.05$).

The hypothesis was rejected.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of findings in this thesis based on the research objectives and draws conclusions from the discussion of the results. The chapter also makes recommendations for future research based on the findings and limitations of the current study as well as suggestions for further study.

5.2 Summary of the Findings

The objectives of the study were to establish the relationship between forms of bullying and self-esteem; examine the relationship between forms of bullying and depression; determine the relationship between forms of bullying and aggression; find out the relationship between forms of bullying and suicidal ideation and find out the relationship between forms of bullying and social withdrawal among secondary school students in Bungoma County.

5.2.1 Relationship between Forms of Bullying on the Self-Esteem among the Secondary School Students in Bungoma County

The first objective of this study was to establish the relationship between forms of bullying and self-esteem among secondary school students in Bungoma County. The Correlation analysis findings showed that there was a significant negative correlation between social exclusion and self- esteem ($r = -.24, p = .00$), the study also observed that cyber bullying and self- esteem had negative correlation ($r = -.22, p = .00$). Further, there was a negative correlation ($r = -.42, p = .01$) between stalking and self-esteem. The relation between sexual bullying and self-esteem was also negative ($r = -.51, p = .00$). The hypothesis of this study ‘there is no significant relationship between forms of bullying

and self-esteem' was therefore rejected. The study established an R^2 of 0.388 which indicated that 38.8% of the variation in the levels of self-esteem for the sample of 399 secondary school students in Bungoma County can be explained by the forms of bullying.

Multiple Regression analysis was later computed to examine whether the forms of bullying predicted self-esteem. It was found that only social exclusion was a significant predictor of low self-esteem $\beta = -0.191, p = 0.00$ when effects of other predictors (cyber bullying, stalking and sexual bullying) were held constant. Standardized beta coefficients indicated that social exclusion as a form of bullying had the greatest effect size with a unit increase in the level of social exclusion holding the other forms of bullying constant resulting to a 19.1% decrease in the students' level of self-esteem. Sexual bullying had the second greatest effect size with a unit increase in the level of sexual bullying holding the other forms of bullying constant would result to a 10.8% decline in the students' level of self-esteem. Cyber bullying had the least but significant effect size with a 5.6% decline in self-esteem for a unit increase in the levels of cyber bullying.

This suggested that one standard deviation increase in social exclusion contributed to .21 standard deviation decrease in students' self-esteem and was therefore most substantial predictor of low self-esteem among secondary school students in Bungoma County. From these findings it was evident that there was relationship between forms of bullying and self-esteem. Regardless of the form of bullying, it had a consequential lowering of the students, self-esteem. The ANOVA results showed that the forms of bullying had a significant effect on the self-esteem of secondary school students at 0.05 level of significance. Therefore, rejecting the null hypothesis that there is no significant relationship between forms of bullying and self-esteem. One guidance and counselling

teacher confirmed that severe cases of bullying affected student's self-esteem and this had resulted to some of them dropping out of school.

5.2.2 Relationship between Forms of Bullying and Depression among the Secondary School Students in Bungoma County

The second objective of this study was to find out the relationship between forms of bullying and depression among secondary school student in Bungoma County. Forms of bullying included social exclusion, cyber bullying, sexual bullying and stalking. The results of the correlation analysis established a positive correlation between levels of forms of bullying and depression. Whereas there were significant moderate correlations between levels of cyber bullying, stalking, social exclusion and depression, the correlation between sexual bullying and levels of depression was weak but statistically significant. An $R^2 = 0.304$ indicated that 30.4% of the variation in levels of depression for the sample of 399 students surveyed can be explained by the changes in the levels of sexual bullying, cyber bullying, stalking and social exclusion.

The findings from bivariate analysis showed that there was a moderate, positive significant relationship between forms of bullying and depression. The study observed that, there was a positive, moderate correlation between cyber bullying and depression ($r = .38, p = 0.00$). It was also observed that there was a relationship between sexual bullying and depression ($r = .28, p = .00$). It was also revealed that there was a significant positive relationship between social exclusion and depression ($r = .46, p = .00$). Further there was a moderate, positive and significant correlation between stalking and depression ($r = .40, p = .00$).

When effects of other predictors; stalking, sexual bullying, cyber bullying the study findings showed that social exclusion was a major predictor of depression ($\beta = .363, p$

=.00). The other predictors; stalking was ($\beta = .21, p = .00$) cyber ($\beta = .154, p = .01$). ANOVA results revealed that the independent variables; social exclusion, sexual bullying, cyber bullying and stalking can significantly predict the levels of depression among the secondary school students in Bungoma County. However, the effect of sexual bullying was not statistically significant at 5% level of significance. Social exclusion was found to have the greatest effect size while sexual bullying was established to have the least effect size. Teachers noted that students who experienced bullying showed symptoms of depression such as withdrawal, crying without cause and mood swings. This hypothesis that there is a no significant relationship between forms of bullying and depression was rejected.

5.2.3 Relationship between the Forms of Bullying on the Levels of Aggression among the Secondary School Students in Bungoma County

The Third objective was to establish the relationship between forms of bullying and levels of aggression among secondary school students in Bungoma County. The results of the correlation analysis established a positive correlation between levels of forms of bullying and aggression among the students surveyed significant at 1% level of significance. The positive correlation coefficients indicate increased levels of cyber bullying, stalking, sexual bullying and social exclusion would result to increased levels of aggression amongst the secondary school students. The bivariate analysis showed that there was a positive, significant relation between social exclusion and aggression. ($r = .45, p = 0.00$). The findings further showed a moderate, positive correlation between cyber bullying and aggression. ($r = .39, p = 0.00$) indicating that students experiencing cyber bullying were likely to show aggressive.

The study also revealed moderate, positive and significant correlation between sexual bullying and aggression ($r = .42, p = .00$). Finally, it was also found that there was a relationship between stalking and aggression ($r = .52, p = .00$).

Further analysis by multiple regression showed an R^2 value of 0.375 obtained indicates that 37.5% of the variation in the levels of aggression for the sample of 399 secondary school students can be explained by the forms of bullying. In particular that social exclusion was a predictor of aggression ($\beta = .328, p = .00$), sexual bullying was also a predictor ($\beta = .130, p = .01$) stalking was also a significant predictor of aggression ($\beta = .336, p = .00$). Based on the standardized betas, stalking has the greatest effect size, followed by social exclusion and the sexual bullying. Cyber bullying had the least effect size. This indicated that social exclusion substantially contributed to aggressive compared to sexual bullying and cyber bullying. While the F-test value indicates that the four forms of bullying can significantly predict the levels of aggression of the secondary school students in Bungoma County. The t -test results indicate that the effect of cyber bullying on the levels of aggression was not statistically significant but the effect of stalking, sexual bullying and social exclusion were statistically significant. Based on the findings the study hypothesis that there is no significant relationship between forms of bullying and aggressive among secondary school students in Bungoma County was rejected. Findings from the student's questionnaire corroborated guiding and counselling teachers and deputy principal's reports on bullying in schools. The guiding and counselling teachers reported that fighting back which is a sign of aggression was common especially amongst boys who experienced bullying. Deputy Principals noted that bullying takes place in schools. They reported that cases of homosexuality went unnoticed and led to violence once they build up among students and when advanced for sexual favours, some became very aggressive.

5.2.4 Relationship between Forms of Bullying on the Levels of Suicidal Ideation among Secondary School Students in Bungoma County

The fourth objective was to determine the relationship between the forms of bullying on the levels of suicidal ideation among the secondary school students in Bungoma County. The correlation analysis results showed that there was a positive significant correlation between the forms of bullying and suicidal ideation all at 5% level of significance. The positive correlation coefficients indicated that where there were high levels of cyber bullying, stalking, sexual bullying and social exclusion experience high levels suicidal ideation amongst the secondary school students. An R^2 value of 0.358 significant at 5% level of significance indicated that the four predictors can jointly explain up to 35.8% of the levels of suicidal ideation amongst the secondary school students.

The study revealed that there was a significant relationship between forms of bullying and suicidal ideation. Results indicated that there was a positive moderate significant correlation between social exclusion and suicidal ideation ($r = .53, p = .00$). Further cyber bullying had a positive and moderate relationship with suicidal ideation ($r = .42, p = .00$). The results also indicated that there was a relationship between stalking and suicidal ideation ($r = .38, p = .00$). The study found that sexual bullying was associated with suicidal ideation ($r = .35, p = .00$). This implies that increase in cyber bullying, sexual bullying, social exclusion and stalking increased with increase in suicidal ideation among secondary school students in Bungoma County.

Further analysis using standardized beta coefficients indicated that social exclusion was a predictor of suicidal ideation ($\beta = .435, p = .00$), cyber bullying also predicted suicidal ideation ($\beta = .206, p = .00$) and sexual bullying was a predictor of suicidal ideation ($\beta = .122, p = .04$). Based on the standardized beta coefficients, social exclusion had the

greatest effect size on suicidal ideation amongst the secondary school students in Bungoma County while stalking had the least effect size on suicidal ideation among the secondary students in Bungoma County. It can be concluded that the findings of this study rejected the hypothesis that there is no significant relationship.

This denoted that social exclusion had a substantial effect of suicidal ideation compared to cyber and sexual bullying. The ANOVA results showed that cyber bullying, social exclusion, sexual bullying and stalking do significantly predict the suicidal ideation of the secondary school students in Bungoma County ($F(4,394) = 55.025, p < 0.05$). The t-test results of the statistical significance of the independent variables in the regression model established that cyber bullying, sexual bullying and social exclusion were established to have a statistically significant influence on the suicidal ideation of the secondary school students in Bungoma County at 5% level of significance while stalking as an form of bullying was established not to have a statistically significant influence on the suicidal ideation of the secondary school students. The association between the forms of bullying and suicidal thoughts was also mentioned by teachers during the interviews. The study therefore rejected the null hypothesis that there is no significant relationship between forms of bullying and suicidal ideation. This was supported by interview by teachers. A guidance and counselling teacher in one of the schools noted that some of the cases involving suicidal ideation have root causes within the school settings. However, due to availability of guidance and counselling programs some cases had been reported in the schools where this study was carried out.

5.2.5 Relationship between Forms of Bullying and Social Withdrawal among the Secondary School Students in Bungoma County

The fifth objective was to determine the effect of the forms of bullying on the levels of social withdrawal among the secondary school students in Bungoma County. The correlational analysis results showed that the form of bullying had positive significant relationship with social withdrawal at 0.01 level of significance. An R^2 of 0.332 indicated that 33.2% of the variation in social withdrawal for the sample of 399 secondary school students in Bungoma County can be explained by the changes in the forms of bullying. This study established a positive, moderate and significant between forms of bullying and social withdrawal.

There was a positive, moderate and significant relationship between social exclusion and social withdrawal among students ($r = .54, p = .00$). The findings indicated that cyber bullying had a positive, moderate and significant correlation with social withdrawal ($r = .32, p=.00$). The findings further established that sexual bullying was significantly associated with social withdrawal ($r =.22, p=.00$). Finally, the results indicated that stalking was associated to social withdrawal ($r =.35, p =.00$).

Further standard beta coefficient showed that social exclusion largely predicted social withdrawal when all other forms of bullying were kept constant. That is social exclusion predicted social withdrawal $\beta = .463, p=.00$ and stalking $\beta =.169, p =.00$. Based on the standardized beta coefficients, social exclusion had the greatest effect size on suicidal ideation amongst the secondary school students in Bungoma County while stalking had the least effect size on suicidal ideation among the secondary school students in Bungoma County.

The ANOVA results showed that cyber bullying, social exclusion, sexual bullying and stalking do significantly predict the suicidal ideation of the students in secondary school in Bungoma County ($F(4,394) = 55.025, p < 0.05$). The t-test results of the statistical significance of the independent variables in the regression model established that cyber bullying, Sexual bullying and social exclusion were established to have a statistically significant influence on the suicidal ideation of the secondary school students in Bungoma County at 5% level of significance while stalking as a form of bullying was established not to have a statistically significant influence on the suicidal ideation of the secondary school students. Teachers who were interviewed reported that students who experience bullying become timid and withdrawn. Interview with the Deputy Principals indicated that guidance and counselling programs introduced by the Ministry of Education are important in schools. Most of the cases of junior students wanting to drop out of school have been handled by the department. They pointed out that root causes were majorly been revolving around bullying by the senior students. They noted that bullying has an impact on the victims who may feel withdrawn, isolated, and some show suicidal ideation behaviour.

5.3 Conclusions of the Study

Based on the findings of the study, it was concluded that;

- i. There was a statistically significant negative relationship between forms of bullying and self-esteem. An increase in levels of cyber bullying, sexual bullying, stalking and social withdrawal significantly reduce the levels of self-esteem of the secondary school students. Hence efforts should be made to lower their prevalence in the secondary schools so as to increase the levels of self-esteem of the students.

- ii. There was a statistically significant positive relationship between the forms of bullying and depression among students in Bungoma County with the effect of sexual bullying not statistically significant at 5% level of significance and social exclusion having the greatest effect size. Specifically, the study showed that the more the students experienced any of the four forms of bullying, the more they were likely to be depressed. Based on these findings, the study concludes that the effective ways of reducing levels of depression amongst students in secondary schools in Bungoma County is by reducing levels of cyber bullying, stalking, sexual bullying and social exclusion.
- iii. There was a statistically significant relationship between forms of bullying and aggressive behaviour among students in secondary schools. The study found out that the more the students experienced any of the four forms of bullying the more likely they would display aggressive behaviour. The study indicated that stalking and social exclusion substantially contribute to aggressive behaviour compared to sexual bullying. The study concludes that the forms of bullying have a significant influence on aggression among the secondary school students in Bungoma County. This implies that if the schools' management ensured reduced levels of these bullying tendencies, they could significantly reduce the levels of aggression amongst the secondary school students in Bungoma County.
- iv. There was a statistically significant relationship between forms of bullying and suicidal ideation among secondary school students. The study revealed that the more the students experienced bullying, the more likely they display suicidal ideation behaviour. Based on the standardized Beta values, social exclusion substantially contributed to the development of aggressive behaviour. This is because social exclusion was a predictor of suicidal ideation to a large extent

compared to sexual and cyber bullying. The study concludes that suicidal ideation amongst the students could significantly be reduced by reducing the levels of cyber bullying, stalking, sexual bullying and social exclusion since the four forms of were established to jointly influence the levels of suicidal ideation amongst the secondary school students.

- v. There was a statistically significant and positive correlation between forms of bullying and social withdrawal. The study concludes that social exclusion is a predictor of social withdrawal to a larger extent compared to sexual and cyber bullying. The findings imply that students, who are socially rejected by their peers, were likely to experience social withdrawal. The study also noted that cyber bullying and sexual bullying were not significant predictors of social withdrawal when effects of other predictors are held constant. Stalking and social exclusionary the only forms of bullying that can significantly predict the levels of social withdrawal when effect of other predictors area held constant among the secondary school students in Bungoma County.

5.4. Recommendations

The findings generated by the study have important policy implications and lessons as far as guidance and counselling, general administration and management is concerned.

Based on the findings and conclusions, the study recommends that;

- i. The management in the secondary schools should embrace guidance and counselling in order to eliminate instances of cyber-bullying, sexual bullying, stalking and social exclusion amongst the students and provide remedial measures for those students who are victims of the same. It is recommended that those in charge of the guidance and counselling programs embrace favourable

counselling practices to minimise the effects of the forms of bullying on the students.

- ii. The Ministry of Education in conjunction with Teachers Service Commission, provide training programmes through conferences and workshop to the teachers so as to equip them with the knowledge on the current research findings on the forms of bullying and techniques of tackling them.
- iii. The Ministry of Education should come up with clear policies on bullying and train teachers on how to implement the policies. Consequently, School attention to bullying problems and openness in communication among teachers and students are essential for implementation of the policy on bullying.
- iv. Life skill teachers, guidance and counselling teachers as well as the deputy principals should come up with forums where students can express their experiences freely and this may reduce incidences of suicidal ideation. There is also a strong need to have routine screening techniques developed to assist in uncovering the harm endured through forms of bullying to help support recovering from associated suicidal ideation.
- v. The introduction of stringent laws barring the use the cyber space in bullying. This could forestall the use of such avenues by students to bully each other. Also, anti-stalking laws should be enacted to minimise its effect on the self-esteem, levels of depression, aggression, suicidal ideation and social withdrawal amongst the secondary school students.
- vi. Peer support programs be introduced in schools where youths can address interpersonal issues such as empathy, conflict resolutions and non-violent problem solving. In return this would enhance networking where students would help each other in building positive self- perception which defines self- worth.

5.5 Suggestions for Further Studies

Based on the study findings and recommendations, the study suggests that;

- i. The current study was cross sectional in nature, it is recommended that other studies embracing the longitudinal design could be carried out to corroborate the study findings. In the longitudinal study, it is recommended that the logistic regression method be applied instead of the standard regression procedure. This would help develop a model that could be used to estimate the likelihood of a particular student suffering from the effects of the forms of bullying.
- ii. This study confined itself to the secondary schools in Bungoma County among students in public secondary schools. A wider study should be carried out to find out whether the findings also apply to other Counties and in private schools in Kenya in order to validate the generalisability of the study findings to the education sector in Kenya.
- iii. The current study results showed significant correlations between cyber bullying, stalking, sexual bullying and social exclusion, the study suggests a similar study that would include the interaction effect of these variables in the analysis of the effect of the bullying on performance of students.

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APPENDICES

Appendix I: Introductory Letter

Dear respondent,

I am a student of Doctor of Philosophy in Counselling Psychology in the School of Education at Kabarak University. I am doing a study on the relationship between selected forms of bullying and psychosocial adjustment among students of public secondary school students in Bungoma County, Kenya. With me is a questionnaire and/or interview schedule that I am using to collect data for my research. I humbly request for your support of my research by filling the questionnaire and respond appropriately to questions. Kindly use the space provided to fill in the information required as objectively and honestly as possible. The information provided will be treated with strict confidentiality for the purpose of this study only.

Thank you

Yours faithfully,

Jane IngadoMisigo

Appendix II: Teachers Consent

You are invited to participate in this an interview session which is part of my survey on forms of bullying and psychosocial adjustment of students in your school. The purpose of this interview is to acquire some information that will define the level and degree of forms of bullying behaviour among students in your school. You are selected because you are capable of giving the information. This survey is confidential and the records of this interview will be kept private. The research records will be stored secretly and only I and my supervisor will have access to the records. You are making a decision whether or not to participate. Your signature indicates that you have decided to participate.

Date.....

Name.....

Signature.....

Appendix III: Copy of Student Assent Form

Dear Students,

You are invited to participate in a study entitled **Relationship between emerging forms of bullying and psychosocial adjustments among secondary school students in Bungoma County, Kenya**. Please read this form carefully and you will ask any questions you have. The purpose of this research is to study views, experiences and behaviours of F3 students in schools in Bungoma County in regards to bullying. The study will require you to fill out a bullying questionnaire which will take approximately 40 min. to complete. Your participation is voluntary and you are not required to answer any of the questions that you are uneasy with.

Strict confidentiality will be maintained throughout the research. Nobody will be able to get what answers you may have given. The information will be used to help improve and increase own understanding of the feelings and experience of young people in regard to bullying.

Signature 

Appendix IV: Students Questionnaire

The questionnaire will investigate the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County, Kenya. Read the instructions carefully and answer the questions. You are assured of confidentiality; therefore, do not write your name. Tick where appropriate.

Section A: Demographic Information

A 1. Please indicate your age bracket:

14-17 years

18-21 years

Above 21 years

A2. Please indicate your gender:

Male

Female

A3. What type of school do you attend?

Boys school () Girls school () Co-educational ()

Section B: Forms of Bullying

(i) Cyber bullying

For each question, choose the **one** answer that best describes you. You are free to give your honest opinion. To do this, tick (✓) against one of the answers under each statement. **1= Never, 2= Once or twice, 3= a few times, 4= Many times, 5=Everyday**

How often in the last 4months have you experienced the following?

	Item	1	2	3	4	5
1	In the last,4months have you been made fun of in a class room?					
2	In the last, 4months have you received anSMS from someone you know that made you really angry?					
3	In the last, 4 months have you received an email from someone you didn't know that made you really angry?					
4	In the last, 4months has someone posted something on another web page that made you upset or uncomfortable?					
5	In the last, 4months have you received an instant message that made you upset or uncomfortable?					
6	In the last,4 months have you been bullied by another person while online?					
7	In the last, 4 months has anyone posted anything about you online that you didn't want others to see?					
8	In the last, 4 months has anyone emailed or text messaged you and asked questions about sex that made you uncomfortable?					
9	In the last, 4months has someone posted something online about you to make others laugh?					
10	In the last, 4 months has someone sent you a message to make you angry or to make fun of you?					
11	In the last, 4 months has someone posted something on Facebook or WhatsApp page to make you angry or to make fun of you?					
12	In the last,4 months has someone taken a picture of you and posted it online without your permission?					

(ii) Stalking

You have been asked some questions about any unwanted contacts or harassing behaviour you may have experienced that frightened, concerned, angered, or annoyed you. To do this, tick (✓) to indicate the number of times this has happened to you.

1= Never, 2= Once or twice, 3= a few times, 4= Many times, 5=Everyday

	Item	1	2	3	4	5
1	Has someone left you unwanted messages (e.g. voicemails, texts)?					
2	Has someone said “I love you” after only a short time together?					
3	Has someone done favours you didn’t ask for?					
4	Has someone been following you around?					
5	Has someone been watching you (e.g. following you to school, church, watching where you go)?					
6	Has someone gotten too close to you physically, touching you when you don’t want to be touched?					
7	Has someone invaded your personal property (e.g. breaking into home, your room/car)?					
8	Has someone tried to be friends with your friends, get to know your family without invitation?					
9	Has someone checked up on you constantly (e.g. calling all the time)?					
10	Has someone showed up at places they knew you’d be without being invited?					
11	Has someone listened to your messages, reading your e-mail?					
12	Has someone left hang-up calls; notes, letters, voicemail, e-mail messages, where they imply, they’ll harm you?					
13	Has someone spread false rumours about you?					
14	Has someone stolen or damaged personal things?					
15	Has someone threatened to hurt you?					
16	Has someone taken photographs of you without your knowledge?					
17	Has someone physically hurt you?					
18	Has someone restrained you or not let you leave?					

(iii) Sexual bullying

During the last year, how often, if at all, has anyone (students) done the following things to you during school related times *when you did not want them to?* The school related time include when you are on your way to or home from school; when you are on school grounds, including before, during, or after school hours and when you are on a school trip. Make a tick [√]

Never (2)1- 2 times,(3)3-4 times, (4)4-5 times,(5)Over 5 times

	Item	1	2	3	4	5
1	Has some made sexual comments, jokes, gestures, or looks					
2	Has some showed, gave, or left you sexual pictures, photographs, illustrations, messages, or notes					
3	Has some wrote sexual message/obscene things about you on bathroom walls, in locker rooms, etc					
4	Has some spread sexual rumours about you					
5	Has some said you were gay or lesbian					
6	Has some spied on you as you dressed or showered at school					
7	Has some wanted to share a bed with					
8	Has some touched, grabbed or pinched you in a sexual way					
9	Has some pulled at your clothing in a sexual way					
10	Has some intentionally brushed against you in a sexual way					
11	Has some pulled your clothing off or down					
12	Has some blocked your way or cornered you in a sexual way					
13	Has some forced you to kiss him/her					
14	Has some forced you to do something sexual, other than kissing					

(iv) Social exclusion

For each statement, choose the one that describes how you feel about yourself. There are no right or wrong answers – just give your honest opinion.

1 = strongly disagree, 2= disagree, 3= Not sure, 4= Agree 5= Strongly Agree

	Item	1	2	3	4	5
1	I experience a general sense of emptiness					
2	There is no one I can talk to about my day to day problems					
3	There are no people I can lean on when I have a problem					
4	I miss the pleasure of the company of others					
5	I often feel rejected					
6	I miss having people around me					
7	There are no people I feel close to					

Section C: Psychosocial Adjustment

I) Self Esteem

For each question, choose the **one** answer that best describes how **you feel about yourself**. There are no right or wrong answers - just give your honest opinion.

1=strongly disagree, 2=disagree, 3= Not sure, 4=Agree, 5=Strongly Agree

	Item	1	2	3	4	5
1	I am happy about the things I do					
2	I am as good a student as I would like to be					
3	I am happy with the way I look					
4	I am as good at sports/physical act as I want to be					
5	I am as good as I want to be at making new friends					
6	I am doing as well on school work as I would like to be					
7	I like my body just the way it is					
8	I like being just the way I am					
9	I feel OK about how well I do when I participate in sports/physical activities					
10	I feel good about my height and weight					
12	I am happy about how many different kind of sports and physical activities I am good at					
13	I am well liked by other people of my age as I want to be					
14	I feel OK about how good student I am					
15	I am kind of a person I want to be.					

II) Depression

Below is a list of ways you might have **felt or behaved**. Please tell me how often you have felt for the past few days. Each item is answered on a 5 – point scale.

(1 = none of the item; 2 = a little of the time; 3 = some of the time; 4 = most of the time; 5 = all of the time)

	Item	1	2	3	4	5
1	I have not been happy					
2	I have been talking less than usual					
3	I have been feeling lonely					
4	People have been unfriendly					
5	I have not been enjoying life					
6	I have been crying most of the times					
7	I have been feeling sad					
8	I have been feeling that people disliked me					
9	People have been unfriendly					
10	My sleep has been restless					
11	I have been feeling fearful					
12	I have been feeling depressed					
13	I have not been feeling like eating, my appetite was poor					
14	I have been bothered by things that usually don't bother me					

iii) Aggression

This section consists of items. Please respond to the items by circling a letter that corresponds to how much, how often you experience the issue presented or how much you have been affected emotionally by your state. (1=Never, 2=Rarely, 3=Occasionally, 4 = Frequently, 5= Always

	Item	1	2	3	4	5
1	I have trouble controlling my temper					
2	I let my irritation show when frustrated					
3	Given enough provocation, I may hit another person.					
4	If somebody hits me, I hit back					
5	If I have to resort to violence to protect my rights, I will					
6	Once in a while, I can't control the urge to strike another person					
7	I have threatened people I know					
8	My friends say that I am somewhat argumentative					
9	I find myself disagreeing with people.					
10	I get into fights a little more than the average person does.					
11	Some of my friends think that I am hot-headed.					
12	I tell my friends openly when I disagree with them.					
13	I wonder why sometime I feel so bitter about things.					
14	At times, I feel I have gotten a raw deal out of life.					
15	I am sometimes eaten up with jealousy.					
16	I have become so mad that I have broken things					
17	When people are especially nice, I wonder what they want.					
18	I am suspicious of overly friendly strangers.					
19	I know that 'friends' talk about me behind my back.					
20	I sometimes feel that people are laughing at me.					

iv) Suicidal ideation

For each question, choose the **one** answer that best describes how **you feel about yourself**. There are no right or wrong answers - just give your honest opinion.

1=strongly disagree, 2=disagree, 3= Not sure, 4=Agree, 5=strongly Agree

	Item	1	2	3	4	5
1	I feel there is no way out					
2	I'd be better off dead					
3	Life isn't worth living					
4	I won't be around to deal with that					
5	My family will be better off without me					
6	Next time I will take enough pills to do the job					
7	I can't just deal with everything life is too hard					
8	Nobody understands me-nobody feels the way I do					
9	I won't be in your way much longer					
10	There is nothing I can do to make life better					

v) Social Withdrawal

This section consists of items. Please respond to the items by ticking (√) how much, how often you experience the issue presented or how much you have been affected emotionally by your state. (1=Never, 2=Rarely, 3=Sometimes, 4 = Often)

<i>Statement</i>	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>
1. I don't feel in tune with the people around me.				
2. I lack companionship.				
3. There is no one I can turn to.				
4. I do not feel alone.				
5. I feel part of a group of friends.				
6. I don't have a lot in common with the people around me.				
7. I am no longer close to anyone.				
8. I have no interest by those around me.				
9. I am not outgoing person.				
10. There are no people I feel close to.				
11. I feel left out.				
12. My social relationships are temporal.				
13. No one really knows me well.				
14. I feel isolated from others.				
15. I cannot find companionship when I want it.				
16. There are people who do not really understand me.				
17. I am unhappy being so withdrawn.				
18. People are around me but not with me.				
19. There are no people I can talk to.				
20. There are no people I can turn to.				
21. I feel that I lack companionship				
22. I feel left out				

Appendix V: Interview Guide with Guidance and Counselling Teachers

This interview aims at establishing the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County.

This interview is a follow up survey after the survey which was using questionnaires to students. This interview is aimed to get your point of views and feelings about the phenomenon of forms of bullying in this school.

The purpose this is so that I can get all dealt but at the same time be able to carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all your comments without any reference to individuals.

- i. What is your gender?
- ii. State the category of your school.
- iii. For how long have you been in-charge of guidance and counselling department?
- iv. Does bullying really take place in your school? What are some of the forms of bullying?
- v. Are you aware of any problems with bullying behaviour among the students?
- vi. What have the problems been?
- vii. Which types of bullying have you witnessed lately?
- viii. Have you handled any cases of bullying that might have led to students wanting to commit suicide, drop out of school or experience any negative feelings?
- ix. What do you think is the most harmful types of bullying that the students have done?
- x. Have you seen any of these phenomena escalated into violence?
- xi. Do you think the Ministry of education has put in place proper measures to handle the cases of bullying? Kindly elaborate further.
- xii. What remedial programmes do you have to minimise or to deal with these effects related to bullying?
- xiii. Do you have any referral services to those cases of students affected by bullying?

Appendix VI: Interview Guide with Deputy Principals

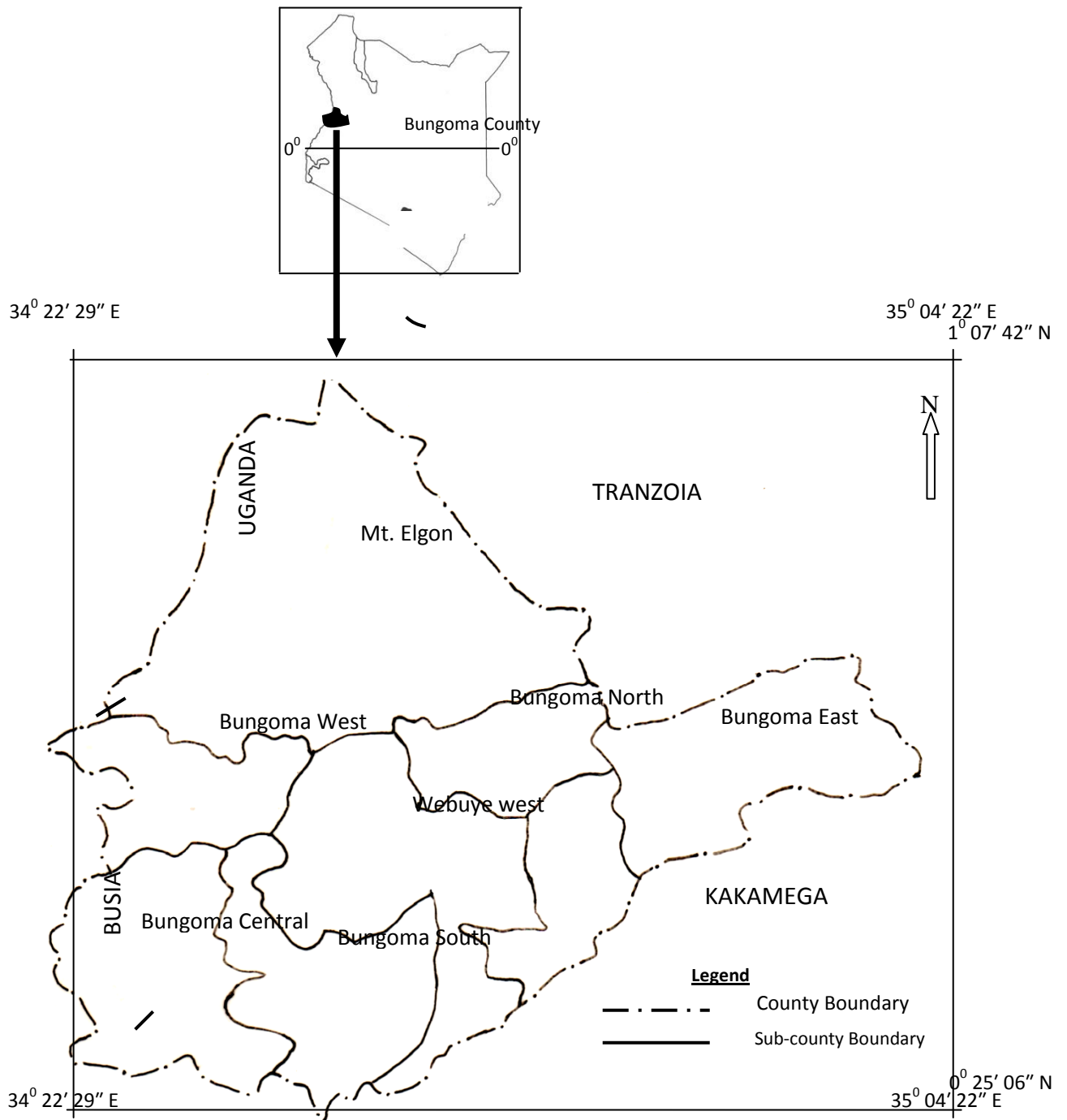
This interview aims at establishing the relationship between forms of bullying and psychosocial adjustment among secondary school students in Bungoma County.

This interview is a follow up survey after the survey which was using questionnaires to students. This interview is aimed to get your point of views and feelings about the phenomenon forms of bullying in this school.

The purpose this is so that I can get all dealt but at the same time be able to carry on an attentive conversation with you. I assure you that all your comments will remain confidential. I will be compiling a report which will contain all your comments without any reference to individuals.

- i. What is your gender?
- ii. State the category of your school.
- iii. For how long have you been in-charge of discipline in the current school?
- iv. I'd like to start by asking you to briefly describe your understanding of bullying.
- v. Are you aware of any cases of bullying behaviour among the students?
- vi. What have these cases been?
- vii. Which types of bullying have you witnessed lately?
- viii. How serious have these problems- threatened students' wellbeing?
- ix. What do you think is the most harmful effects of bullying that the students have done?
- x. Have you seen any of these phenomena escalated into violence?
- xi. Do you know why bully occurs?
- xii.** Is there any other information about bullying or other school violence issues that you think would be useful for me to know?

Appendix VII: The Research Area Map



Map of Bungoma County, Kenya

Appendix VIII: Research Authorisation from Kabarak University



INSTITUTE OF POST GRADUATE STUDIES

Private Bag - 20157
KABARAK, KENYA
E-mail: directorpostgraduate@kabarak.ac.ke

Tel: 0203511275
Fax: 254-51-343012
www.kabarak.ac.ke

17th Jan, 2018

The Director General
National Commission for Science, Technology & Innovation (NACOSTI)
P.O. Box 30623 – 00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH BY JANE INDAGO MISIGO - REG. NO. GDE/M/0796/9/12

The above named is a Doctor of Philosophy student at Kabarak University in the School Education. She is carrying out research entitled “**Relationship between selected emerging forms of bullying and psychosocial adjustment among secondary school students in Bungoma County, Kenya**”. She has defended her proposal and has been authorized to proceed with field research.

The information obtained in the course of this research will be used for academic purposes only and will be treated with utmost confidentiality.

Please provide the necessary assistance.

Thank you.

Yours faithfully

Dr. Betty Tikoko
DIRECTOR - (POST-GRADUATE STUDIES)



Kabarak University Moral Code

As members of Kabarak University family, we purpose at all times and in all places, to set apart in one's heart, Jesus as Lord. (1 Peter 3:15)



Appendix IX: Research Authorisation from NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/98849/28098**

Date: **12th April, 2019**

Jane Ingado Misigo
Kabarak University
Private Bag - 20157
KABARAK.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Relationship between selected emerging forms of bullying and psychosocial adjustment among students of public secondary schools in Bungoma County, Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **12th April, 2020**.

You are advised to report to **the County Commissioner and the County Director of Education, Bungoma County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

**GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner
Bungoma County.

The County Director of Education
Bungoma County.

Appendix X: Research permit from NACOSTI

THIS IS TO CERTIFY THAT:

MS. JANE INGADO MISIGO
of KABARAK UNIVERSITY, 0-50204

KIMILILI, has been permitted to conduct
research in Bungoma County

on the topic: RELATIONSHIP BETWEEN
SELECTED EMERGING FORMS OF
BULLYING AND PSYCHOSOCIAL
ADJUSTMENT AMONG STUDENTS OF
PUBLIC SECONDARY SCHOOLS IN
BUNGOMA COUNTY, KENYA.

for the period ending:
12th April, 2020.

Permit No : NACOSTI/P/19/98849/28098

Date Of Issue : 12th April, 2019

Fee Received :Ksh 2000




.....
Applicant's
Signature


.....
Director General
National Commission for Science,
Technology & Innovation

Appendix XI: Research Authorisation Permit; County Director, Bungoma



REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
State Department of Education – Bungoma County

When Replying please quote
e-mail: bungomacdc@gmail.com

County Director Education
P.O. Box 1620-50200
BUNGOMA

Ref NO: BCE/DE/19/VOL.1/237

Date: 6th February, 2019

All Sub – County Directors of Education
BUNGOMA COUNTY

RE: AUTHORITY TO CARRY OUT RESEARCH – JANE INDAGO MISIGO
REG NO. GDE/M/0796/9/12

The bearer of this letter **Jane Indago Misigo** of Kabarak University, School Education, has been authorized to carry out research entitled “*Relationship between selected emerging forms of bullying and psychosocial adjustment among secondary schools in Bungoma County, Kenya*”

Kindly accord her the necessary assistance.

A handwritten signature in black ink, appearing to read 'Elizabeth J. Mukonye', with a long horizontal line extending to the right.

Elizabeth J. Mukonye
FOR: COUNTY DIRECTOR OF EDUCATION
BUNGOMA

