THE PREVALENCE OF CYBERBULLYING AND CYBER-VICTIMIZATION BEHAVIOURS IN INTERNET USAGE AMONG ADOLESCENTS IN SECONDARY SCHOOLS OF WESTLANDS SUB-COUNTY, NAIROBI.

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Declaration

I, the undersigned, declare that this thesis is a product of my own work and is not the result of anything done in collaboration. It has not been previously presented to any other institution. All sources have been appropriately cited and duly acknowledged in full.

I agree that this thesis may be available for reference and photocopying at the discretion of the University.

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Dedication

This work is dedicated to my dear mother Teresa, my husband Prince Mathew and my two children Kevin and Mariam. Your continued support and endurance has strengthened me, broadened my horizons and made me believe in myself.

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I first would like to thank the almighty God most sincerely through whose grace I am able to realize this long cherished dream. I would also like to thank my mother who instilled in me the desire and drive to do my best in everything. Thank you for your constant Christian example and showing me the love of Christ. I would not be the same person I am today without my relationship with god.

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List of Acronyms

CB:	Cyber-bullying
CV:	Cyber-victimization
ICT:	Information and Communication Technologies
PDA:	Personal Digital Assistant
SPSS:	Statistical Package for the Social Sciences
WWW:	World Wide Web
VoIP:	Voice over Internet Protocols

Abstract

In the global world, with the increasing convenience of technology and its augmentation in the interconnectedness with human interaction, it is becoming possible that verbal and image bullying have turned digital, making cyberbullying a form of bullying that is novel and challenging. Despite this growing concern, there is a paucity of studies investigating this phenomenon therefore this study was undertaken to establish the prevalence of cyberbullying behaviors in internet usage among the adolescents in the sampled schools of Westland's Sub-County, Nairobi County. Furthermore information for this study adopted a descriptive survey design. The study used a quantitative research approach in the form of self-reported questionnaires. Moreover the present study used probability sampling techniques and targeted a sample size of 228 students aged between 13 and 18 years. The quantitative data was analyzed using SPSS version 22 and the data was analyzed using both descriptive and inferential statistics methods. The data analysis was based on Chi-square test, Pearson's Correlation, Linear regression analysis and one way ANOVA. The results show that participation in cyberbullying behaviors was 14% and cyber-victimization behaviors among students was 23%. The Pearson's Correlation results found no association between cyberbullying behaviors ($r = -.007$, $p > .05$) and cyber-victimization behaviors ($r = -.005$, $p > .05$) with the compulsive internet usage but revealed positive significant correlation between cyberbullying perpetration and cyber-victimization behaviors ($r = .367$, $p < .01$) indicating that students exhibiting cyber-victimization behaviors end up becoming perpetrators themselves. Linear regression analysis further indicated that not age but gender had significant impact on the relationship between internet use and cyberbullying and cyber-victimization behaviors. The study revealed more of female adolescents (19%) engaged in cyberbullying perpetration and male adolescents (24%) as being cyber-victimized. One way ANOVA found no significant difference between the three different grades of students and internet usage, cyberbullying and cyber-victimization behaviors. On the whole this study assisted in gaining deeper insight indicating a noteworthy prevalence of cyberbullying and cyber-victimization behaviors among the teens in the schools of Westland Sub-county, Nairobi County. In conclusion the study underscores the need for providing active prevention plans and intervention strategies in raising awareness by promoting healthy attitudes and behaviors among the adolescents in family as well as educational settings.

Definition of Operational Terms

Adolescents: It is best understood as the transitional stage from childhood dependence to adulthood independence. Also can be described as the young people between the ages of 10-24 years (UNICEF, 2013).

Students: They are learners who attend institutions of learning to receive knowledge for their holistic development.

Bullying: There are several kinds of bullying. Bullying can be carried out through physical contact (eg; hitting, kicking, pushing or pinching). Bullying can also be verbal (using mean words or threats, name calling or saying mean things behind one's back). Bullying can also occur without the use of words or physical contact such as making faces or dirty gestures or deliberately excluding or isolating someone from a group.

Cyberbullying: This is a form of bullying that occurs when students or several students use information and communication technologies such as e-mail, instant messaging, social networking sites, online gaming to perpetrate repeated unfriendly behavior to inflict harm or cause discomfort on others.

Cyber-victimization: the student's experiences that exposes him or her to a variety of harassment, ridicule and stalking behaviors in a cyber context.

CHAPTER ONE

INTRODUCTION

This research investigated the prevalence of cyberbullying and victimization behaviors of adolescents in schools which is becoming a relevant problem among the in-school students in regards to their psychological well-being. There has been much action and research on the traditional forms of bullying in schools, with a lot of success, however cyberbullying through the use of technology have put today's youngsters to a much more high potential risk content (Hinduja & Patchin, 2014). This chapter presents the background of the study, stated the statement of the problem and also the purpose of the study. Followed by the objectives of the study, the hypotheses of the study and the significance of the study. Then the chapter finalizes with the scope of the study and its delimitations.

1.1 Background to the Study

The exponential development of Information and communication technologies have increased the access to unlimited information sharing and in the midst of recent decade has drastically changed individuals' social communications, learning techniques and entertainment choices. Most notably, technology innovation has created new specialized communication instruments. The devices are especially prioritized by youngsters, who extensively utilize websites, web cams, chat rooms, emails, instant messaging, social networking sites and texting (Boyd, 2008).

Adolescence is the period of identity formation, self-exploration and experimentation and also is most often associated with their social environment for the growth of their personality (Hinduja & Patchin, 2013). Adolescents yearn for opportunities to project behaviors and

tendencies which gain prominence in valuing themselves positively. Moreover, nowadays they have greater access than ever before to the internet, which is seen as a normal and necessary part of their day to day lives to interact with the social world (Kowalski, Limber, & Agatston, 2012). The internet gives countless potential outcomes towards development of children and youth, including benefits such as social support and acceptance, identity exploration, and development of interpersonal and critical thinking skills, as well as educational and instructive advantages produced from far reaching access information, scholastic support, and worldwide multifaceted communications (Blais, Craig, Pepler, & Connolly, 2008). However, they come with certain drawbacks of concurrently being a potential site for abuse and victimization.

The very nature of cyber environment due to its frequent uncensored and unmonitored usage have potent adversaries and has paved the way for new types of aggression, hostility, exploitation and victimization of being bullied online henceforth perpetrating against the nation's youngster and youth populace. Cyberbullying comprises of "any behavior performed through electronic or digital media by individuals or groups that repeatedly communicates hostile, or aggressive messages intended to inflict harm or discomfort on others" (Tokunaga, 2010, p. 278).

Most of the researchers take an extensive approach to the electronic devices used through which most of the cyber bullying occurs. Li (2008) states that cyberbullying is "bullying through the usage of electronic communication tools such as email, mobile phones, personal digital assistant (PDA), instant messaging or the World Wide Web" (p. 224). The aim of such behavior is to threaten, intimidate or embarrass a victim who cannot very easily defend himself or herself by sending threatening or insulting e-mails, sending or uploading images or starting rumors that are cruel, harmful or by ridiculing the victim, or "happy slapping," in which recorded images of a person who is attacked or bullied are taken and circulated most of the time without the victim's

knowledge (Kiriakidis & Kavoura, 2010).

Intentionality, repetitiveness, aggression and power imbalance are the main components in the universal definition of cyberbullying (Patchin & Hinduja, 2015). Intentional because the behavior tends to be deliberate, willful and not accidental. Moreover, one among the important domains of cyberbullying encompasses repetition, due to the fact that the bully or perpetrator can initiate the act of distributing or passing materials such as videos, texts, photos repeatedly or can be viewed many times by others who have the access to such materials. The important measure in the operational definition of labeling the act of cyberbullying is repetition because this act normally differentiates between a joke and an intentional attack, and is used to characterize the relentlessness of this continued action (Nocentini, Calmaestra, Scheithauer, Ortega & Menseni, 2010). This is a piece of the reason because cyberbullying can be emotionally or psychologically damaging as repetitive harm due to an act of dull mischief can happen in recurring or persistent embarrassing humiliation and disgrace to the victim.

Aggressive conduct involves maliciousness on the part of the bully in which they impersonate others online or create fake profiles with which they perpetrate cyber aggression and victimize their target. The power imbalance may be social or may stem from the victim's inability to stop the cyberbullying behavior or control its consequences in the form of rumor spreading through hurtful emails and messages, dissemination of a demeaning photo, videos and calls (Dooley, Pyzalski & Cross, 2009) which causes the feelings of excessive distress due to such behaviors.

In order to understand the phenomenon of cyberbullying in the cyber environment, it is necessary to differentiate distinctly between direct and indirect cyberbullying. Direct cyberbullying occurs where the cyberbully "directs the electronic communications directly at the

victim. It encompasses a cyber-bully's use of instant messaging, text or multimedia messaging, or email intended to have a direct, immediate effect on the victim" (Brenner & Rehberg, 2009, p.10). Furthermore according to Brenner and Rehberg (2009), the act of indirect cyberbullying occurs where the cyber-bully or the offender ''does not perpetrate the technology- based harassment or bullying directly at his/her victim. Instead, the bully posts them on Facebook, Instagram or other social media, or in specially created Website or blog, or some other reasonably public area of cyberspace" (p.11). As a result of these forms of cyberbullying acts, individuals most of the time may not realize the effect that they have on others, whether they have taken the social exchange too far as consequences of such actions are usually difficult to control and avert (Piazza & Bering, 2009). Subsequently believing that they will not get caught means that the fear of discovery, which generally acts as a behavioral control in people is absent in the cyber world.

The continuous usage of internet by the youngsters have now evolved their life in a huge way as they engage in activities leading to perpetration of violence which varies in prevalence giving rise to potentially dangerous behaviors. The seriousness of bullying act has been identified as a widespread and persistent problem leading to the accumulation of an extensive body of research and raising numerous interventions throughout the world (Tokunaga, 2010). It is known through a wide range of growing evidence that school functioning in the school environment or setting is greatly affected due to the negative experiences of cyber violence in general. Hence one can imagine the behavioral consequences of cyberbullying experiences having been linked to truancy, school misconduct, absenteeism, weapon-carrying at school, traditional bullying, substance abuse and low caregiver–adolescent connectedness (Tokunaga, 2010). Cyber bullying among students have caused immense distress and many have reported having detrimental effects of extreme anxiety, fear, feelings of sadness and hopelessness which in turn affects their grades

and the ability to concentrate (Brewer & Kerslake, 2015). Another study by the researchers Hinduja and Patchin (2010) found that one among the risk factors linked to cyberbullying among the youth was suicide which is termed as cyberbullicide, and that twice as much as victims of cyber bullying were liable to have attempted suicide as compared to the students who have not experienced or played a role in cyber-bullying (Hinduja & Patchin, 2010). Meanwhile researchers have reported additional evidence stating that adolescents across the globe who suffer from cyber aggression and the youngsters vulnerable in exhibiting social conduct problems against other targets are more likely to be the ones who engage in cyberbullying incidents (Brewer & Kerslake, 2015). Furthermore research has shown that more the astringency of bullying the more preponderant adolescents being bullied will experience mental health distress and psychosocial difficulties (Tokunaga, 2010).

Globally a huge proportion of current literature on cyberbullying studies have showed enormous changes with the changing new technology and many studies have indicated increased prevalence rates in the adolescents involvement as perpetrators or victims with varying sample ranges involving homogeneous ethnicity participants (Kowalski, Limber & Agatston, 2012). Furthermore from an African perspective empirical studies among the Nigerian and South African secondary school students have established that the young adolescents have experienced significant cyber bullying behaviors considering their increased access to internet usage (Odara & Matoti, 2015; Olumide, Adams & Amodu, 2015). In order to gain a greater understanding of the prevalence and impact of cyber bullying among the students in the sampled Nairobian schools it is vital to explore this phenomenon thoroughly. The statistical reports from Communications Authority of Kenya at November 2015 showed internet penetration in Africa to be 28.6% penetration and the focus on Kenya puts us at the third position in the number of internet users

with 32 million users after Nigeria and Egypt. Most Kenyans use the internet largely for social media and digital content with majority of them being in the age bracket of 12-17 years old (UNICEF, 2013). In a study commissioned by UNICEF (2013) among 152 adolescents in Kenya, about their digital and social media access and use habits, revealed that such behaviors are prevalent. Receiving hateful messages online or inappropriate posts or texts on one's social media platforms is ubiquitous and is referred to as 'cyberbullying' with a view as an inevitable behavior.

Furthermore studies conducted by Ochura (2014) among students in Kisumu County on their perceptions on bullying, have revealed that the use of technological visual messages is one among the most prevalent form of cyberbullying among adolescents. Studies in Nairobi County have not focused, till date, on cyberbullying exclusively and therefore have not examined this phenomenon in depth. There is a lack of valuable information available on studies done in the areas of cyber bullying and cyber victimization especially with a large and varied sample of high school students in Nairobi. This study findings set's precedence for similar studies on the areas and provides valuable information on the extent to which the phenomenon currently exists.

1.2 Statement of the Problem

The increase of technology in today's society, bullying extends beyond the classrooms, play grounds, toilets and hallways of schools. Today, students can become a cyberbully via electronic communication and social networking sites through the use of technological devices aimed at attacking other's reputations, friendships through rumors, gossip and social exclusions. This series of recurring, intentional aggressive behaviors will have grave effects for the bully as well as the victim, both of whom are at risk of psychiatric and psychosomatic problems that may persist into adulthood (Sahin, 2012). Furthermore in the face of this new phenomenon of

cyberbullying behaviors associated with the rise of internet users has caused significant changes in the emotional, psychosocial and physical well-being of the adolescents and also have put the society at the risk of moral and ethical defragmentation (Mesch, 2009).

Henceforth, an informal pilot study was conducted by the researcher with four students studying in different private schools in Westlands Sub-county on their awareness and existence of cyberbullying behaviors in their schools. The students revealed that they are aware of cyberbullying behaviors impacting substantial number of adolescents in the school community. Moreover they commonly felt that the booming technology has allowed threats and taunts that previously had thrived in school hallways to move into spaces wherever internet is accessed which not only affects them individually but also has ripple effects as they can be bullied at all hours.

It is in this regard that the study becomes quite relevant at this point in time since it seeks to argue that adolescents increased internet usage can influence psychologically and emotionally draining CB/CV acts leading to negative and unhealthy behavioral choices. Therefore such a study would give a better perspective to comprehend the extent and identify the nature of CB/CV behaviors among our in-school adolescents. Moreover this study aids in increasing the body of knowledge to gain a better understanding of this growing cyberbullying phenomenon extending to the learner collective and the school environment. Furthermore the data collected from this study can be used to evaluate intervention strategies at school, community levels and informing policy makers for a more proactive preventive efforts.

1.3 Purpose of the Study

The purpose of this study was to establish the extent of CB/CV behaviors with internet usage in secondary schools of Westlands Sub-county, Nairobi County. This was helpful as the

adolescents view internet usage as part and parcel of their independent exploration and pathway to the developmental transition into emerging adulthood. Despite many studies on bullying behaviors among students there are no known prevalence studies in Kenya recognizing solely the phenomenon of cyberbullying and cyber-victimization behaviors in internet usage. The study was aimed to fill this gap and contributed to the knowledge on the extent and nature of CB/CV behaviors having grave negative effects on the adolescent development among the in-school learners. The outcome of the study helped us understand the prevalence of CB/CV behaviors creating an important exposure for further investigation as well as for prevention plans for the consequences of such behaviors that would help the student, parent and the school environment.

1.4 Objectives of the Study

The objectives of the study were divided into general objectives and specific objectives.

1.4.1 General Objective

To establish the prevalence of cyberbullying and cyber-victimization behaviors in internet usage among adolescent's in the secondary schools of Westland's Sub-county, Nairobi County.

1.4.2 Specific Objectives

More specifically, the objectives of the present study were:

1) To investigate if the internet usage among in-school adolescents is associated with the participation in cyberbullying and victimization behaviors.
2) To examine in terms of age and gender among the in-school adolescents, the tendency to participate in internet usage and cyberbullying and cyber-victimization behaviors.

1.5 Hypotheses

Based on the objectives of the current study, two null hypotheses were framed as follows:

H_0: There will be no statistically significant difference found in participation of cyberbullying and cyber victimization behaviors with internet usage amongst the in-school adolescents.

H_0: There will be no statistically significant difference in terms of gender and age influencing the internet usage and the cyber bullying behaviors among the adolescents in the secondary schools.

1.6 Justification of the Study

It is hoped that the findings of the study would bridge the gap of lack of sufficient information in the literature relating to the prevalence of cyberbullying and cyber-victimization in relation to internet usage among the adolescents in schools of Westland's Sub-County, Nairobi County. Studying both bullying and victimization behaviors provided a more diversified and complete assessment of bullying and victimhood along with their greater level of internet access as there is an increase of this phenomenon worldwide in all countries and the students in our schools are not far behind as their social roles evolve. This project provides the potential important empirical data to increase cyberbullying awareness among young people, parents, teachers and the communities to devise appropriate assessment to identify adolescents participating in cyberbullying and cyber victimization incidents. Moreover, it helps to identify recommendations for future efforts in prevention and management of cyberbullying. It would help school counselors dealing with youth to know which tools to use effectively while communicating with the youth and assist in modifying such behaviors. In brief the results of the study is likely to influence further scholarly research by other researchers who may be interested in this field of knowledge and

initiate appropriate mitigation. This view made the present study very necessary.

1.7 Scope and Delimitations of the Study

The scope of this study was to identify the prevalence of cyberbullying and cyber victimization behaviors in internet usage among the adolescents in the sampled secondary schools of Westland Sub-county. While the study recognizes that internet usage and cyberbullying behaviors may have impact in the youth bracket, and as such the study was limited only to the youths in the Kenyan context. The study focused itself only among students of three different grades of sampled schools that are based around Westland's Sub-county in Nairobi County which is also a central business district.

Furthermore in the adolescents life, schools play a major role and they also would serve as an important entry point in cyber bullying prevention because the results of the study takes into consideration teen's everyday lived experiences in their use of internet to safe-guard themagainst online dangers. The results will lead us to underline the need for prevention and intervention programs in the schools and also provide a useful framework to reduce cyberbullying and its negative effects which would not hinder their holistic development.

Since the study involved only students from the 2 schools of Westland's sub-county one of the major delimitations of the study is that it did not include other stake holders such as parents and teachers. The study was limited by time and financial resources and as a result the researcher had to source for more financial resources and use alternative means. Time was a very important challenge that the researcher had to face in the data collection as the schools needed to agree on the availability of the participant's as well as the parental consent needed to be obtained from the students prior to the study.

1.8 Assumptions

The researcher basically proceeded with the assumption that she will be able to locate the respondents involved in cyberbullying behaviors in Westland's sub-county. And then respondents will be willing to co-operate and give truthful and sincere answers to the questions listed in the questionnaires regarding their internet usage and cyberbullying behaviors.

1.9 Conclusion

This chapter provides a short introduction to the research study since cyberbullying behaviors is a relative new phenomenon that is gaining attention among the in-school learners. The chapter begins with the background to the study, stated the problem statement and also the purpose of the study. This chapter goes on to state the objectives, hypotheses and justification of the study followed by the scope and delimitations of the study. The next chapter will review the available current peer- reviewed literature in relation to the study and will aid in understanding the gap to be addressed in this study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The present chapter of the study aimed to bring out various literatures available in connection to the study. “Literature review is referred to as the work of the researcher consulted so as to understand the research problem and investigate it through analysis” (Kombo & Tromp, 2006, p.62). Furthermore literature has another significant role to play in regard to the study, “literature sharpens and deepens the theoretical foundation of the research and helps in identifying a gap to be addressed by the study” (Kombo & Tromp, 2006, p.62). This chapter presents review of literature related to the topic under study. It was based on the following sections: Conceptualization of constructs, Current literature trends on cyberbullying, and understanding of the possible knowledge gaps. This is followed by the theoretical framework and the conceptual framework. In addition the review was based on the areas drawn from the research objectives. The review sheds light on the variables and how they are understood and how they inform the study.

2.2 Conceptualization of Constructs

Conceptualization of constructs in this research is compounded by the fact that in this digital age, there has been a rapid development in the fields of ICT at an astonishing rate; all attracting the youth and children in great number and subjecting them to unfavorable anti-social and aggressive behavioral outcomes. This risk factor poses them to become a subject of cyberbullying in the virtual space. As the digital age perpetuates to unfold, the advancement of internet technological use along with the newness of cyberbullying presents the adolescents with tools which primarily was used as means for communication purposes to be now utilized for

malignant purposes such as harassing, perturbing, threatening, or mortifying others (Çivilidağ & Cooper, 2013). Hinduja and Patchin (2014) have stated that "cyberbullying is a growing problem because increasing numbers of kids are using and have completely embraced online interactivity" (p. 3). Cyberbullying behaviors are usually observed among adolescents as adolescence is the critical period of psychosocial development, identity formation, peer acceptance, cognitive thinking of invincibility fable, egocentrism which makes them act without thinking logically about the consequences and the teens very easily become a part of such dangerous experiences (Bhat, 2008).

2.2.1 Internet use and behavior

One cannot undermine the fact that for the past decade there has been rapid increase in the field of Internet and related technologies and this has transformed our everyday lives. At first glance, this might be of boundless benefits but then it may be responsible for a host of negative outcomes as well (Holfied & Grabe, 2012). Most radically, the change due to the internet popularity is being noticed in the youth especially among the school going children and adolescents. Although we typically associate Internet-based communication with relatively anonymous communication spaces, such as chat rooms, newsgroups and online games, most of today's youth communicate via the prime applications like messengers, email, chats, online-phone calls and online confers. Amongst youth who venture online there are some that spend an average of about 17 hours per week on the Internet, with some spending more than 40 hours per week online (Center for Digital Future at the USC Annenberg School, 2010). Although majority of youth use internet as a medium of communication with friends to spend time almost a third have reported being contacted by people not known to them and many have reported this online interpersonal

activity as being uncomfortable (Kowalski, Giumetti, Schroeder, & Ressee, 2012).

Once youngsters develop a preference for online internet communication over face to face interactions, they spend increasingly more time and becomes emotionally connected with online interactions which may lead to compulsive internet usage and negative outcomes. Evidently many researchers have found the duration of internet usage as a determinant to psychological changes some even reporting longer internet usage as an influence on experiencing anxiety, depression and obsessive compulsion (Kelleci & Inal, 2010). Furthermore, Internet usage have provided the youth with opportunities to become engaged in specific types of aggressive behaviors, such as cyber-hacking (using Internet to gain access to information or resources illegally), cyber- stalking (using Internet to spy, to harass or frighten someone) and most importantly cyber-bullying, which according to Tokunaga (2010) is "repeated communication of hostile or aggressive messages intended to inflict harm or discomfort by individuals or groups on others" (p.278).

Internet usage involves special factors which together create a unique psychological environment for the user. Srinivas and Bethimeedi (2017) suggests certain features of internet interaction that makes it more likely for online misbehavior:

Perceived uncontrollability – The unique setting of the internet do not have a moderator to intervene when the exploration, experimentation and interaction starts to become aggressive by the users. Moreover, this behavior becomes aggravated when the user finds it difficult to stop the time spent online. Whereas in a face-to- face context interactions creates platforms for people to step in as mediators.

Lack of emotional reactivity – Communication over the internet lacks emotional reactivity as compared to face-to –face encounter because users are oblivious to verbal and nonverbal cues and might easily offend others.

Reproducibility – The core concept of thought and review process is existent which causes deviant users to easily copy and forward the messages or mails with the intention to harm others and repeat the act over and over again.

Relative permanence – The internet users may experience difficulty because online communication and messages may remain indefinitely permanent until someone terminates or erases the interaction, perhaps after downloading them.

The accessibility of internet 24 hours a day, seven days a week, along with the anonymity and other ephemeral qualities leads to myriad consequences of persistent usage leading to behavior changes (Kowalski et al, 2012). The utopian vision of internet usage empowering, democratizing and being a progressive potential may have been blind to some of the sober realities which paves way towards unregulated aggressive behaviors of today's youth. Consequently a large body of researchers emphasize that majority of today's youth are using ICTs to bully or harass their peers and reports of malicious incidents linked to cyber-bullying are mounting (Li, 2010).

In contrast lack of awareness among internet usage by the youth through their careless conducts or daily activities can unexpectedly lead them to be attractive targets of innumerable observers thereby increasing the opportunities of risky cyber-victimization. Heirman (2009) in his studies have revealed that victims and even perpetrators are also involved in compulsive internet usage leading to aggravated psychosocial and emotional problems affecting their personal wellbeing. Following these findings in the literatures it would be conclusive that the user behavior and the amount of time spent on the internet is regarded as a catalyst towards the cyberbullying involvement of the adolescents both as a perpetrator and as a victim. Therefore this study was of great significance to fulfil the gap in particular on internet usage by the adolescent's coinciding with their enhanced risk in engaging in CB/CV behaviors.

2.2.2 Understanding cyberbullying behaviors

Bullying among youth in their operational school environment has been identified as a persistent problem and emerging concern on their psycho-educational development. With the continuous development and increased connectedness of ICT and proliferating usage of computers, laptops, mobile phones and other accessory devices, bullying has taken on a novel and more sinister facet surfacing from the physical in-person encounters to the virtual environment in the form of cyber bullying. According to Patchin and Hinduja (2008) cyberbullying is a kind of behavior in the virtual environment which contains deliberate repetitive violence and insult. Roberto and Eden (2010) defines the term cyberbullying as "the deliberate and repeated misuse of communication technology by an individual or group to threaten or harm others" (p.199).

The core descriptive criteria of cyberbullying encapsulated are repetition, intentionality and power imbalance. The element of repetition is established as the prime criterion of cyberbullying and a single act could be considered repetitive when materials like e-mails, texts, videos, tweets, and photos once sent has the unique ability to be distributed, archived, forwarded, accessed and viewed not only by the perpetrator but by anyone who gains access (Slonje & Smith, 2008). The cyberbullying act not only involves sending of messages and e-mails but also comprises of direct calls from the perpetrators phones, computers and Voice over Internet Protocol (VoIP) services to the victim's computers, cell phones or analog phone lines, which nowadays are facing extermination (Langos, 2012).

Slonje and Smith (2008) illustrated that cyberbullying using the relative permanence mode of pictures/video clips being posted online by a bully was perceived by students as the worst form of cyberbullying because of its reach to a large potential audience (due to faster rate of information sharing) and continued widespread humiliation for the victim. Conceptualization of imbalance of

power can be related to the advanced technological skills which creates a power differential between a perpetrator and a victim in the virtual world (Vandabosch & Cleemput, 2008). Features of internet communication provides the perceived anonymity (cyberbullies are often not known to their victim) in the cyberspace which allows cyber bullies to create pseudonyms, provisional user names and multiple e-mail accounts to conceal their identity and in turn provide feelings of powerlessness in the person being bullied. The bully is never aware of the effect of his behavior on the victim. In order to avoid social consequences and the fear of disciplinary actions associated with the traditional bullying the children and adolescents are enticed by cyber bullying due to its anonymity (Tokunaga, 2010). In the cyberbullying context the acts of aggression and intentionality are intertwined. The acts of cyberbullying have an element of aggressive intention because the behavior suggests a clear willful, deliberate attempt to cause a harm to the victim.

According to Bauman and Bauman (2015) the different types of cyberbullying are:

Flaming - Online fighting using anger or violent vulgar messages often using profanity.

Slandering – A method of online denigration by sending cruel images or malicious rumors concerning another whereby injury results to (his or her) reputation or social relationships.

Outing - An act to embarrass or publicly humiliate someone or a group through online communication by revealing or sharing private information without one's consent.

Social Exclusion – The deliberate and purposeful act of rejecting someone from an online group.

Masquerading – This involves the impersonation (hacking) of someone's account to send malicious messages or posts that will cause danger, embarrassment or damage to the person's reputation and affect the person's reputation and social life.

Cyber harassment – It is a constant and intentional form of sending abusive, cruel and

threatening messages to someone personally or into a group to cause extreme fear and pain.

Sexting is yet another type of cyberbullying profoundly seen to be on a rise among the youth today. This is described as a combination of texting and sex, involving sending of nude or semi-nude images or videos and/or text messages of a sexually charged theme without the consent of the target which is highly embarrassing and humiliating (Badenhorst, 2011, p. 2). These modalities are specific to cyberbullying and increasingly large number of adolescents are embracing these behaviors. In connection to this many researchers have documented that cyberbulliers are people who need constant social support, have unhappy feelings (emotional difficulty), strained relationship with parents, conduct problems and substance use (Srabstein & Piazza, 2008). Yet another contributing factor towards cyberbullying would be the impulsivity during adolescence which makes the teen resort to such acts without prior thinking and the possible harm they would inflict on their victims. The elements of impulsivity such as urgency, lack of premeditation, lack of perseverance and sensation seeking as being the dynamics to cyber bullies involvement during the adolescent period is a way of social interaction to expand their social networks (Brewer & Kerslake, 2013). Therefore this study is particularly significant in the sense that it will put into perspective the extent to which the adolescents have embraced the cyberbullying behavior among the sample population as no known studies have been conducted exclusively among the school population in Nairobi county.

2.2.3. Understanding cyber-victimization behavior

Cyber-victimization in simpler terms are referred to the student's experience of being bullied. According to Tokunaga (2010) during childhood and preceding adolescence approximately 20% to 40% school going students will be victims of cyberbullying. One of the

reason would be that adolescents who are subjected to cyber-victimization are spending significant amount of time in internet usage through computers and mobile phones (Lathouwers, Moor & Diden, 2009). Henceforth cyber-victimization prevalence rates among the youth are booming as the different types of technology is developing increasing the bully's accessibility to victims and the ability to reach them outside of the traditional schoolyard (Slonje and Smith, 2008). Furthermore, half of the victims of cyberbullying did not know who their perpetrators were but when victims did know, 58% of bullies were pupils from the same school involved in the act of cyberbullying (Smith et al, 2008).

Anonymity, offered by the technology works for the bully but against the victims. The bully's anonymity leads the victim to feel all the more hopeless and powerless as it becomes very challenging to put an end to the harassment and offers protection to the bullies by hiding their identity. The element of repetition through cyberbullying is a pronounced feature of victimization as harmful material (messages, photos, videos) can be easily copied without the victim's consent and shared through many channels, reaching a wider audience contributing to significant and long –lasting social and emotional harm (Slonje & Smith, 2008). Furthermore, the cyber space creates incipient arenas that give rise to exploitation of power whereby victim feels defenseless to protect himself or herself from a potentially boundless and abysmal cyber audience (Langos, 2012). Cyber-victimization and certain psychological features are strongly affiliated as per studies conducted by researchers although these features can be both cause and result of cyberbullying behaviors. For example Tokunaga (2010) found that cyber victimization is highly associated with a number of psychosocial difficulties, low self-esteem, higher depression levels, unique variance of social anxiety and academic problems (poor academic performance, truancy, tardiness and school absenteeism). Victims of cyber-bullying reported a variety of negative emotional

consequences including anger, frustration, sadness, embarrassment and being scared (Hinduja & Patchin, 2009). This has also led to 'gradual amplification' of sadistic behavior and have resulted in 'suicidal thoughts' and 'suicide' amongst school learners (Belnap, 2011, p.501). More than depression and suicide cases cyber victims are more prone to the usage of addictive drugs (Goebert, Else, Matsu, Chung-Do & Chang, 2011).

The phenomenon of bullying that takes place in the school environment or in the social life are more likely to find an extension in the virtual world with the retention of their unique traits-victim remains victim. However, some of the studies suggest that cyberbullying may lead to the traditional forms of bullying interfering in the school climate and functioning amongst the learners. As articulated by Adams and Lawerence (2011) in their studies, the negative effects of cyber-victimization of school students would extend into their college years which detracts them to perform poorly in academics. In addition some of the studies have further revealed that victimization were more likely to be the reason behind cyberbullying (Hoff & Mitchell, 2009). Apparently literatures have shown adolescents engaging in cyberbullying behaviors as cyber-victims can have grave negative implications on their behavioral outcomes and since presently there is no data available to assess if such behaviors are affecting the adolescents in schools, the main interest of the study was to fill the existing knowledge gap.

2.2.4. Gender

Adolescence is the developmental period of learning, exploring and of increased divergence between male and female in behavior and continuous adaptation to the fluctuating environments. The adolescent males and females react to various situations differently and make their own decisions regarding how to behave in the major social role transitions (Sawyer,

Azzpoardi, Wickremaranthne & Patton, 2018). One of the most interesting aspect of cyberbullying and victimization behaviors related to gender differences has been described by Tokunaga (2010) as "fraught with inconsistent findings" (p. 280).

In terms of gender some of the studies have revealed that male students are more likely to get involved in CB incidents and have more chances to pretend to be someone else in the cyber space than the female students (Calvete, Orue, Este'vez, Villardon & Padilla, 2010: O' Moore, 2012). Contrastingly studies of Gofin and Avitzour (2012) have discussed boys more likely than girls to be victims of cyberbullying.

However, in a sample of 242 Jewish Israeli adolescents, aged 13 to 16, more girls were reported to be victims of cyber bulling than boys and most of victimization was through offensive text messages (Olenik-Shemesh, Heiman, & Eden, 2012). Other studies by researchers have supported this phenomenon showing significant differences in girls experiencing cyberbullying as both victims as well as perpetrators than the boys (Kowalski et al., 2007; Pornari & Wood, 2010; Moore, Huebner, & Hills, 2012) and girls opted for internet usage relatively more, whereby disclosing personal information and details much more than the boys (Navarro, 2016).

In addition some researchers have reported comparable prevalence rates for male and female students with few or no significant differences in cyberbullying experiences (Smith, Mahdavi, Carvalho, Fisher, Russell & Tippett, 2008; MacDonald & Roberts-Pittmann, 2010). Currently these findings in the literature has implications that gender differences may vary by different media of cyberbullying behaviors and rates of internet usage therefore the current studies confirmed the concerns in regards to gender influencing the cyberbullying behaviors and internet usage pattern among the adolescents in the secondary schools.

2.2.5. Age

Although the term bullying conjures up the thought of the traditional schoolyard and young students, much of the literature on cyberbullying emphasizes that the boundaries are not restricted by age and is prevalent from middle or secondary/high school age ranges to college students and beyond (Kowalski, Limber & Agatston, 2012). Age ranges and samples studied have explained certain developmental variations being reported among pupils of various grades. For instance studies by Williams and Guerra (2007) argued that the relationship with cyberbullying behaviors, increases after fifth grade (4.5%), peaks during eighth graders (12.9%).

In addition studies by Tokunaga (2010) explained similar findings whereby greater incidences occurred at seventh or eighth graders (around 13 to 15 years). Studies from South Africa, in 2011, found that 36% of learners in primary and secondary schools between the ages of 13 and 17 showed positive association with frequency of cyberbullying and cyber victimization behaviors (Smit, 2015). Whereas studies over a larger range sample of 12 to 20 years old by Slonje and Smith (2008), explained a conflicting finding of negative inverse relationship between age and victimization. However, more recently researchers have reported that the age factors depend on the method and mode of technology by which the cyberbullying occurs in and out of schools. Whereby bullying through frequent use of internet particularly social media activities and instant messaging was reported to be commonly handled by the older students than the younger ones (Smith et al, 2008). This consideration of age being a relevant risk factor of adolescent's involvement in the CB/CV behaviors in the school setting is predominant in the literatures with varying results. Henceforth this study was able to clarify and fulfil the gap on the involvement in cyberbullying behaviors both as a bully and as a victim along with the constant internet usage is associated significantly by the age of the teens.

2.2.6. Other socio-demographic factors

Children and adolescents are susceptible to maturational change (either for better or worse) and are constantly transforming through their experiences with close interaction from parents, peers and school environment (Brewer & Kerslake, 2015). Likewise, home environment and family structure play an important role in closely associating with the adolescent's behavior either as a bully or as a victim. In some studies youth from single parent families exhibited signs of greater cyber victimization in comparison with the teens belonging from intact families (both biological parents living together) (Turner, Finkelhor, & Ormrod, 2007).

Moreover parenting by single mothers showed significant changes among the adolescents becoming cyber victims than the ones having single father parenting (Jansen, Veenstra Rene', Ormel, Verhulst & Reijneveld, 2011). Family structure have special effects on the way the adolescents regulate emotions, resolve conflicts and inevitably express aggressive behaviors to others. Apparently literatures have shown adolescents engaging in cyberbullying behaviors have family structures playing a major role in their increased internet usage whereby there is a risk of CB/CV behaviors (Shetgiri, Lin, Avila & Flores, 2012). Similarly studies conducted on different grades of adolescents in school have suggested little knowledge on when the exposure to cyberbullying begins among school going adolescents (Smith, 2012). However, some studies indicate that cyber-victimization behaviors are reported at much lower grades in high schools (Sampasa-Kanyinga, Roumeliotis & Xu, 2014). This consideration of different grades of students in the literatures being a relevant factor in their CB/CV behaviors with internet usage may be due to the vulnerability of the younger grade students to be less psychologically prepared or equipped to deal with online risk behaviors. Henceforth this study was of great significance to fulfill the gap on socio-demographic variables on involvement of adolescents in CB/CV behaviors.

2.3 Current Trends on Cyberbullying

Researchers all over the world are investigating the different aspects of cyber bullying world-wide. According to Hinduja and Patchin (2014), the increased technological advancement have exposed increasing number of youth towards the scourge of cyberbullying, “to be malicious or menacing towards one another” (p. 4). Many of the literature exhibits agreement regarding the involvement and usage of internet and other technological devices reaching widely the audience of cyberbullying, extending beyond the school grounds (Heimen & Olenik- Shemesh, 2015; Hinduja & Patchin, 2012). The ratio of adolescents using the internet has increased rapidly and among all the ways cyberbullying through social networking sites, chat rooms and Instant messaging applications are gaining popularity. Furthermore studies by Palladino, Nocentini and Menesini (2015) reports the usage of such applications gives a sense of solidarity and identity among the teens. In a study of cyberbullying among Taiwanese adolescence (ages 9-17) with a sample size of 1959 students, 5.8% have been cyber-victims and 8.3% have pretested bullying online with the students using social media as a common forum of preference. (Chau & Yu, 2017). In a worldwide review of studies analyzing the prevalence of cyberbullying published between 2011 and 2013 (Garaigordobil, 2015) displayed that bullying or harassment through ICTs and within it the phenomenon of cyberbullying among the school student population in all developed countries revealed considerable prevalence. Furthermore the review exhibited the prevalence of cyber-victims ranging between 3.2% - 33% (Allen, 2012; Fenaughty & Harre’, 2013) and cyber-aggressors range between 1% and 29.7% (Allen, 2012; Wade & Beran, 2011) among students in the developed countries.

The rate of information sharing online is faster coupled with postings done anonymously along with the elimination of disconnection from face to face confrontation have made the cyber

bullies to engender terror, harm, humiliation and helplessness among others. A series of studies have shown that as youngster grow older the cyber-victimization rates increases (Kowalski, Limber & Agatston, 2012) where as some other studies have found lower cyberbullying rates for older students (15-18 year olds) than younger students (12-15 year olds) (Yilmaz, 2011; Chang, Lee, Chiu, His, Huang & Pan, 2013). Studies regarding significant differences between cyberbullying incidences and genders of adolescents have revealed inconclusive findings. However some researchers argue that bullying behavior is associated with aggressive behavior and it varies greatly depending on the gender, revealing male students to be perpetrators than female students (Lee & Shin, 2017: Chang et al, 2015). Whereas few other studies have found no significant differences between both the genders and cyberbullying incidences (Kowalski & Limber, 2007; Patchin & Hinduja 2015).

There is an abundance of studies and literature regarding the phenomenon of cyberbullying based on studies conducted abroad. Studies conducted in South Africa among High School learners of 346 students 62% of the students using internet frequently with about a third (34.7%) perpetrating bullying behavior online and female students (48.3%) showing significant involvement than boys (Odora & Matoti, 2015). Similarly studies conducted in Nigeria on the prevalence and co-relates of cyberbullying among students have shown a quarter among the sample of students involved in cyberbullying with 40% of students having regular internet access (Olumide et al, 2015).

To date, with the exclusion of study commissioned by UNICEF (2013) on attitudes and behaviors concerning digital media use, study on challenges faced while utilization of digital communication technologies among children aged 12 – 14 years in schools in Kenya (Ong'ong'a, Mukhonga & Chebii, 2017) and also the study on students perceptions on bullying behavior among

secondary school students in Kisumu County (Okoth, 2014), there has been no known academic research carried out in Kenya relating to cyberbullying and cyber-victimization behaviors with the inclusion of internet usage and behavior. There is a great requirement for studies in order to establish a further clarification and understanding of this growing issue with a Kenyan sample and high school students for that matter. Consequently the research evidences cited in other studies offers the impetus for this current study particularly due to the grave implications cyber bullying behaviors can have on today's adolescents and ultimately to discover the extent of the problem.

The main research gap that this study wants to fill is that no known scientific study to identify the prevalence of cyberbullying and cyber-victimization behaviors facilitating interventions has been done within the Nairobian context. The present research studied the children in their normal school environments of learning, in order to better understand the roles that students involve in through cyberbullying and cyber-victimization along with their internet usage. The evidence from this study suggests the needs for active intervention and prevention strategies for high school students within Nairobi County in Kenya.

2.4 Understanding the Knowledge Gap

The technological advancements in the twenty first century have given rise to the phenomenon of cyberbullying in the recent years. The use of internet among the adolescent has increased the act of bullying to extend beyond the face to face communication to online exposure as in the case of cyberbullying. Among the adolescents due to the high frequency and intensity of internet usage coupled with the developmental stage of identity formation along with their levels of immaturity make the teens more vulnerable to cyberbullying. Cyberbullying involves unfriendly behaviors like threatening, humiliating, intimidating or harassing the victims who are usually physically distant.

Even though cyberbullying does not involve face to face communication between the bully and the victim, the adolescent's will experience real pain that can be psychologically, emotionally and relationally damaging for their general well-being. These changes among the adolescents may give rise to aggression, anxiety and depression among various other psychosocial factors creating a pathway for the youngsters to engage in negative idiosyncratic behavioral choices. Therefore this implies that in-school adolescents who experiences strain in their emotional and interpersonal relationship due to bullying in the virtual world are more likely to engage in deviant behaviors and negative coping mechanisms.

Previous studies conducted in other countries have reported higher internet usage being linked to cyberbullying behaviors which impacts negatively the learning in the school environment and constantly puts the adolescents at risk of perpetual victimization and perpetration (Yilmaz, 2011) which is threat to the adolescent's health and well-being. Although previous empirical studies have recognized cyberbullying as a risk factor and its association with the adolescent's health and well-being have been established, the research studies performed among the Kenyan adolescents are few.

There are many research studies conducted on bullying behaviors in Secondary schools in Kenya but specifically on cyberbullying are limited. One population based study conducted by UNICEF (2013) on the digital media use of the Kenyan youth reported the youngsters agreeing to the involvement in cyberbullying behaviors. Moreover yet another study conducted in Kisumu County on teacher' and student's perception on bullying behaviors revealed that the prevalence of cyber bullying was generally low (6%) as compared to other forms of bullying behaviors in schools (Ochura, 2014). In contrast an equally extensive qualitative study on children aged 12 – 14 years on utilization of online digital communication technologies in Kenya have revealed that the safety

of internet usage has not been taken with the seriousness that it deserves in the country and there is likelihood of increase in facing such challenges due to cyberbullying by the school going children (Ong'ong'a et al., 2017). It was necessary therefore to venture solely into the scientific study of the cyberbullying and cyber-victimization behaviors with the internet usage within the Kenyan context as a part of discovering the extent of the problem on today's adolescents. Moreover, this study was carefully planned to fulfill these gaps on cyberbullying amongst our adolescent community with their internet usage in relation to the psychosocial and behavioral effects on the victims and the bullies.

2.5 Theoretical Framework

A theoretical basis is crucial for describing and interpreting the influential factors for effective clarification of the cyberbullying phenomenon. In addition it aids in identifying the factors that can contribute to improve planning and for designing appropriate practical prevention and interventions that can be effective in minimizing the personal and environmental factors surrounding the CB/CV events. There are several potential theoretical frameworks suggesting explanations for the differences in prevalence of cyber bullying and victimization behaviors among the youth: Social cognitive theory, Social Dominance Theory, Ecological Systems theory and Theory of planned behavior.

Bandura's Social Cognitive theory of moral disengagement provides a useful framework for this study in understanding CB/CV behaviors among the youth. According to Albert Bandura's Social Cognitive theory moral behaviors of an individual are guided by his or her own standards of right and wrong developed as a part of one's identity formation (Bandura, 2002). When individual's actions are at odds with their own moral standards, moral disengagement (deactivation

of internal controls) occurs allowing them to detach themselves cognitively and avoid emotional empathy towards other individuals (Bandura, 2002).

In addition the major mechanism of moral disengagement was argued by Bandura (2002) as that which:

> ….may center on redefining harmful conduct as honorable by moral justification, exonerating social comparison and sanitizing language. It may focus on agency of action so that the perpetrators can minimize their role in causing harm by diffusion and displacement of responsibility. It may involve minimizing or distorting the harm that flows from detrimental actions; and the disengagement may include dehumanizing and blaming the victims of the maltreatment (p. 102).

As Bandura postulated moral disengagement occurs in a social context and that social circumstances can weaken the internal self-regulatory mechanisms. Following this line of thinking "the virtual world in which today's youth socialize may be a social context that promotes moral disengagement" (Bauman, 2010, p.808). The online context provides specific structural and functional features that can increase the use of moral disengagement mechanisms thereby engaging in cyberbullying behaviors.

The distinct feature of why moral disengagement is one possible reason why cyber bullying behaviors are proliferating may arise from the fact that the cyber bullies have a physical as well as a temporal gap offered by the ICT usage creating less emotional empathy towards the victims. Cyberbullies are much likely to be less sensitized to feel any empathy and remorse for any of their aggressive actions through sending cruel and threatening messages, comments or even by sharing photos, images and videos to someone they know. Posting online at social networking sites for public uses would make the situation even worse by inviting a larger audience and much more

humiliating feedback.

Runions (2013) have further explained that lack of social cues in ICT usages block the cyberbullies from having an accurate estimation of the harm and the consequences of their act experienced by the cyber victims thereby hindering the activation of affective empathetic responses. Because of the lack of empathy cyberbullying behaviors has been easier for the bully who acts immorally without feeling guilty (Slonje & Smith, 2008) and to displace oneself from moral responsibilities by applying cognitive strategies (Almeida, Marinho, Esteves, Gomes and Correia, 2008).

Another feature of ICT mode of communication promoting moral disengagement is the fact that data are potentially permanent in the virtual environment (White-Ajmani & Bursik, 2014). Messages or images shared or posted online in the virtual environment can remain accessible, can be repeatedly copied and reposted on other sites whereby the process of repetition continues. Given this situation the moral disengagement of the cyber bully appears to feel rewarded whenever his or her messages, comments, photos and videos of victims are viewed by others and feel a lot of satisfaction when such aggressive postings outperforms in terms of hits (through the process of likes, comments and sharing) (Menesini, Nocentini & Camodeca, 2013). The moral disengagement evident here also fuels rumination among the cyber victims due to the repetitiveness as they are compelled to revisit such posts and derogatory comments making them susceptible to an assortment of psychosocial adjustment difficulties (Wilkowaski & Robinson, 2010).

Several studies regarding the bullying behaviors have shown that adolescents with higher levels of moral disengagement were most likely to be participating in cyber bullying as well as in the traditional form of bullying either as a bully or as a victim and even exhibiting behaviors of both forms (Bauman & Pero, 2011; Perren & Gutzwiller-Helfenfinger, 2012; Pornari & Wood,

2010). Moreover research on cyberbullying in schools have observed cyberbullying of students by students (Kowalski, Morgan, & Limber, 2012) and the cyberbullying by pupils of teachers (Kyriacou & Zuin, 2015; Vogl-Bauer, 2014) indicating moral disengagement being the concern of those who bully due to less remorse and lack of empathy towards victims.

Henceforth in this study, the Social Cognitive theory of moral disengagement would provide a collective understanding to conceptualize the variations in online moral disengagement through the Internet usage leading to CB/CV experiences. Cyber bullying and cyber victimization is better explained as a part of today's youth's social behavior which are influenced by their personal and environmental factors (Xiao & Wong, 2013). Drawing from the earlier descriptions we focus on demographics (age, gender and grade) as the personal factors and internet usage of the young people on how they interact with the technology with one another as the environmental factors determining the students' likelihood of engaging in CB/CV behaviors and to avert the moral disengagement which commonly underpins these behaviors. Understanding how the online interactions provide differential setting for moral disengagement would be a key step in planning prevention programs and for testing interventions to combat cyber bullying and to plan user friendly cyber safety approaches.

2.6 Conceptual Framework

A conceptual framework generates a set of hypotheses that attempt "to identify something that is going on" in the phenomenon under study (Maxwell, 2005, p.34).

The conceptual framework of this study is shown by a way of presentation using the diagram (Fig 2.1) based on the notion that dependent variable relies upon the independent variable. The conceptual framework of the study is presented by the use of the consideration of the

association between 3 key variables used in the study. The interactions between the key variables in the study is represented in the Figure 2.1. Based on the objectives of the current study, two hypotheses on the relationship between the constructs were framed as follows:

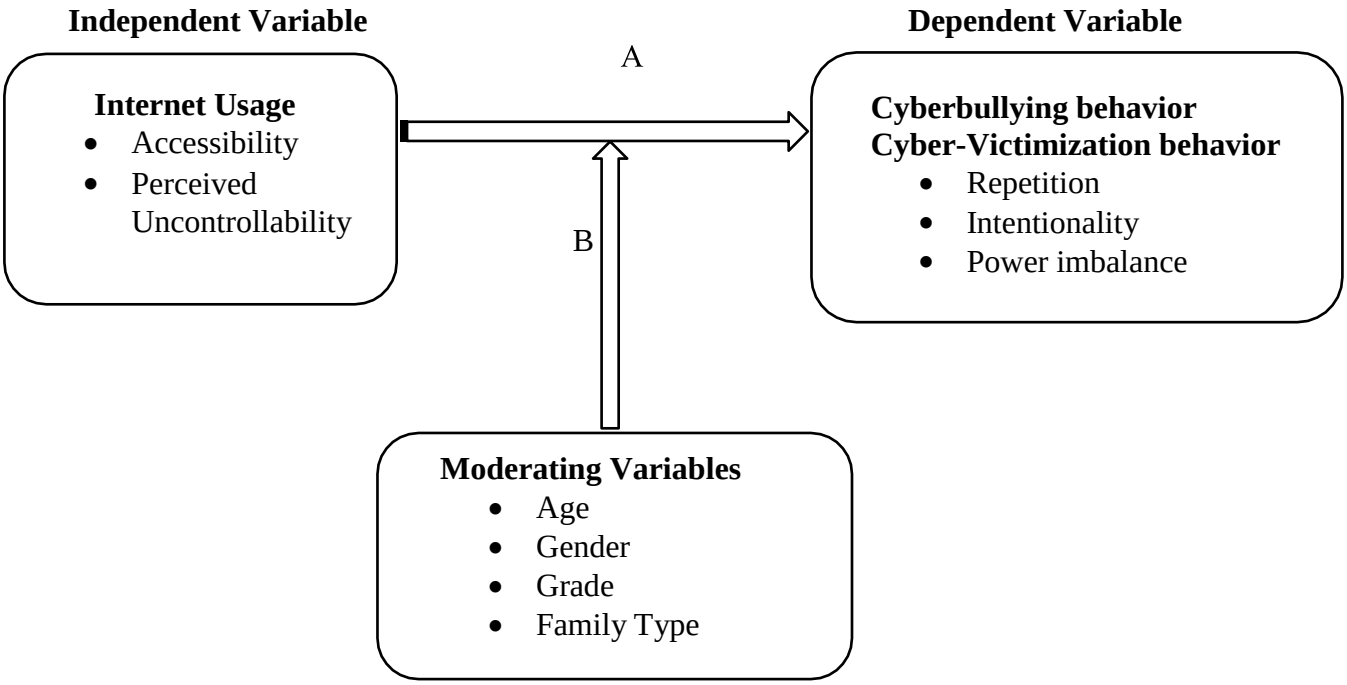

Figure 2.1 Conceptual Framework

The conceptual framework of this study is based on the notion that the dependent variable depends upon the independent variable. In case of this study the dependent variable is conceptualized as the cyberbullying and cyber-victimization behavior and the independent variable is the internet usage among adolescents. This independent variable directly or indirectly affects the outcome variable or the dependent variable i.e. Cyberbullying behaviors (Direction A). The pervasiveness of internet usage and activities by adolescents may have impact on their cyberbullying behavior as well as their cyber-victimization behaviors leading to difficulty in

psychosocial adjustment (Blais, 2008).

As it has been conceptualized, there is an interlinking relationship between the age and gender on the internet usage along with the cyberbullying and cyber-victimization behaviors among adolescents. Pertaining to age and gender in terms of prevalence is the second hypothesis of the study which will be of significant influence on the adolescent's cyber bullying behaviors and internet usage (Direction B). With the internet usage becoming more common, and teens spending more time online cyberbullying among the students would show variance as age increases and the effect of gender still remains ambiguous.

Family type and different grades of in-school students can also have a mediating effect of the internet usage by the teens and on their cyberbullying behaviors. Examining these relationship is vital to the exploration of the connection between variables and to inform the study for effective way to plan intervention strategies to decrease cyberbullying from taking place among the teens.

2.7 Conclusion

This current chapter focused on the various research conducted on the different forms and aspects of internet usage and behaviors as well as CB/CV behaviors among the youth. Current trends on cyberbullying behaviors have indicated that schools are faced with challenging times when it comes to cyberbullying as methods and mode are constantly altered with increasing new technology and therefore risk factors perpetrate. The research evidence cited through-out this chapter gives impetus to this study in identifying the prevalence of CB/CV behaviors among in-school learners. This chapter essentially outlined the theoretical framework followed by the conceptual framework which aided in examining the phenomenon under study. The next chapter gives a detailed description of the research design and methodology that guided the study.

CHAPTER THREE

METHOD

3.1 Introduction

The purpose of this chapter is to describe and justify a research design aimed at identifying prevalence of cyberbullying behaviors in internet usage among the students of various grades in Secondary schools of Westland's Sub-county, Nairobi County. Research methodology refers to the approach by which data is collected and clearly analyzed. Hence in this chapter it presents the research design and methodology that will be used in the study. The chapter covers the following sections: research design, data collection instruments, sampling procedures, data collection procedure, data analysis and ethical issues.

3.2 Research Design

A research design according to Welman, Kruger and Mitchell (2009) is developed along the four dimensions namely purpose of the research, theoretical paradigm informing the research, situational context within which research is carried out and finally techniques employed to collect and analyze the data. There are two general methods in the world of research to gather and report information's: Quantitative and qualitative research approaches. This study took the positivist perspective to focus on the quantitative approach. According to positivist approach, the world is a real entity which is perceived as external and objective which can be accessed through the scientific method based purely on facts (Wilson, 2010). The purpose of the quantitative approach, during this particular study, was to identify the student's opinions on the prevalence of their frequent internet usage increasing the cyberbullying and cyber-victimization behaviors.

This study has adopted a descriptive survey design as its structured design is preplanned

so that the data collected can be, statistically inferred on a population (Fluid Survey University, 2017). According to Johnson and Christensen (2008) the operational specificity of concepts, hypotheses and methods are the most common differences in objectives of studies which involves a qualitative and/or quantitative research approach. The present study used a quantitative research approach in the form of questionnaires to collect numerical data which was thereafter analyzed using SPSS Version 22.

In quantitative approach, the aim typically is to either support or contest an existing hypothesis where the emphasis is on data collection and analyzing information that which is usually numerical and measurable enabling communication of the findings (Patel, 2009). Instruments such as questionnaires which is used in the current study allows to collect data from a substantial number of participants, normally representative of a larger population. Greener (2013) suggested that using an established tool like questionnaire helps the researcher to have a straight forward comparison with previous work.

Data was collected at a single point in time generally termed as a cross-sectional study which would provide a snapshot of the sample studied and can describe the current behaviors and attitudes of the participants which allows for the easier implementation of the survey (Fink, 2009). Therefore this study employed cross-sectional survey design to examine the extent of cyberbullying behaviors in internet usage among students in grades 8, 9 and 10, attending the sampled secondary schools. The analysis of data is then accomplished through well-established statistical procedures with the intention to communicate the findings.

3.3 Location of the Study

The study was carried out in Westlands Sub-County which is one among the 17

Constituencies of Nairobi Province and also consists of western and north western areas of Nairobi City County as indicated in the map of Nairobi County (Appendix 10). This area has been nicknamed Westie by the youth of Nairobi. The Westlands Sub-county has two divisions Highridge and Kangemi, four locations and eleven sub-locations (Westlands Constituency, 2013). This district is well known for its largely youthful population which constitutes 41.43% of the total population in the Nairobi County whereby school going population constitutes 35.68% (KNHPC, 2009).

3.4 Target Population

According to Orodho (2008) specifying the target population is important for the study as it helps researchers to make decisions on sampling whether sampled cases are eligible or not and resources to use from which to draw inferences. The study was carried out in Westlands Sub-County, Nairobi County. Westlands Sub-County is one among the nine administrative district in Nairobi County. This Sub-County houses some of the best equipped private secondary schools with international curriculums offering well-structured ICT learning and e-learning facilities, promoting teaching and learning both in school and home environments (Westlands Constituency, 2013). Westlands Sub-county has 24 mixed secondary schools with day schooling and student population of 16, 618 students. Out of which 10 are public secondary schools, 14 private secondary schools and 11 private international secondary schools (DEOs Westland's Office, 2018). The target population will be limited to private international mixed secondary schools within these subdivisions due to its structured e-learning and ICT learning facilities and all learners from grade 8 to 10 from these schools offering day learning facilities were enlisted.

3.5 Study Population

The study population included all available in-school learners of the 3 grades from grade 8 to grade 10 from the sampled schools. The student participants, both male and female, were aged with the youngest learner being 13 years and the oldest of being 18 years. The study population is representative of a cross-section from the middle class, socio-economic backgrounds. Moreover, the selected study population had in-school learners from a diverse range of racial and ethnic groups.

3.6 Sample and Sampling Design

A sample is the representation of the population that is used to make conclusion of the whole population. Sampling therefore is the process of systematically selecting certain number of individuals for the study to represent the larger group from which they were selected, making it easier to process (Gay, 2011).

The area of the study were students from grades 8, 9 and 10 respectively from the student population from the International schools because the researcher believes that the students have characteristics and experiences related to the continued usage of internet because of the structured e-learning and ICT facilities in the school. From grades 11 onwards students were not be included as they were exam candidates and the schools did not want to involve them in any research based studies. To select a representative sample of students from the school population, the study used simple random sampling technique.

3.6.1 Sample size determination

This proposed study would be using probability sampling method and as the name

suggested, is that method in which every item, element or each study unit in the entire population have a 'equal and independent chance' of being included in the study sample (Ranjit, 2011, p.181). Out of ten international schools five schools were sampled through simple random sampling technique. Names of all 10 schools were written on papers and put in a box and then 5 names were drawn randomly from the box containing the names of all the ten international schools. In this way each school had equal chances to be selected. From the 5 selected international schools of co-educational system permission for the study was granted by only two schools representing the main population group of the study. The schools cited reasons for refusal's was because of the sensitivity of the topic and henceforth school management refused to grant permission to participate in the study. All the available grade 8, 9 and 10 learners from the two secondary schools were enlisted and the total population from School one (n = 200) and from School two (n = 360) representing the total population in this study as N = 560, as shown in Table 3.1.

Table 3.1 ***The total population from the two schools***

Year	Year 8	Year 9	Year 10	Total
School 1	71	63	66	200
School 2	130	119	111	360
Total				560

The sample size was determined N=560, S=228 according to Krejcie and Morgan (1970) formula which enabled to calculate directly the sample size:

$$S = \frac{xx^2 NNNN\ (1 - NN)}{d^2(N\text{-}1) + x^2 P\ (1\text{-}P)}$$

Where:

S = the required sampling size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size

P = the population proportion (.50 is used to provide the maximum sample size)

1-P = estimated proportion of failures

d^2 = square of the maximum allowance for error between the true proportion and sample proportion (in this study it is set at 5%).

Applying a 95% confidence interval with an approximate error of 0.05 the results were processed in the calculation below:

$$S = \frac{1.96^2 \times 560 \times 0.5\,(1-0.5)}{0.05^2\,(560-1) + 1.96^2 \times 0.5\,(1-0.5)} = \frac{537.824}{2.3604} = 227.8$$

Henceforth using Krecie and Morgan (1970) formula the sample size of this study was determined to be 228.

3.6.2 Sampling technique and distribution of participants

Systematic random sampling technique was used to so that each element in the population has a known and equal probability of being selected (Ranjit, 2011). The sample for data collection was selected by systematic random sampling involving a 1 in 2 ratio whereby 280 students out of 560 students was selected for the study involving both male and female students so as to ensure gender equality. Furthermore since the permission was obtained only from 2 schools the sampling size of this study was increased from 228 to 280 by the researcher hoping to increase the quality of findings and enhance generalization. The researcher requested for the class attendance register

and using 1: 2 ratio selected every second student from the existing list. Examination Year candidates were exempted from participating and participants from both the schools from the 3 grades were selected for even distribution.

3.7 Data Collection Instruments

A single survey questionnaire was used as the instrument to obtain information from the study participants. The questionnaire consisted of three sections (See Appendix 4). The first 4 items in the questionnaire has general questions on the demographic variables. The second part of it has general information regarding student's internet usage and behavior along with the compulsive internet usage scale. This is followed by the Cyber- Bullying and Cyber-Victimization Experiences Questionnaire.

3.7.1 Demographics

The first part of the questionnaire was intended to collect participants' demographic characteristics or background information such as age, gender and also the grade in which the participant is studying. The questions related to the participant's family patterns are also included in the student's questionnaire.

3.7.2 Internet use and behavior

The second part of the questionnaire was about internet use and behavior and was divided into two sections. In the first section the following items were included to measure: how often the internet is used; on an average how long is internet accessed in a week; what activities internet is used for and location of computer used most often by the student participants. Other items included

the frequency with which online activities such as communicating with friends, playing online games and sharing of pictures/videos with friends were included. And also the question if passwords were shared among friends. The second part involves the compulsive internet usage scale (Meerkerk, Van Den Eijneden, Vermulst & Garretsen, 2009) which consists of 14 items, and for this study 8 questions were adapted to be used with the sample population. The questionnaire measures using the 5-point Likert scale format ranging from 0 to 4, where 0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often and 4 = Very Often. The summary score ranges from 0 - 32 and since the scale does not have a predetermined cutoff scores, higher value ranges indicates higher internet usage and behavior as preferred or favorite private activity.

3.7.3 Cyberbullying and online aggression survey instrument

In order to measure the cyber bullying and cyber victimization behaviors this study is adopting the Cyber-bullying and Online Aggression Survey Instrument (Hinduja & Patchin, 2015). Since 2007, this particular instrument have been administered to over 15,000 students among middle and high schoolers between the ages of 11- 18 years, attending over 100 different schools in different variety of school settings. The Cyber bullying and Online Aggression Survey Instrument was developed in a manner consistent to assess the student's involvement either as a cyber-bully or as a cyber-victim. This self-assessment instrument was preferred, due to its ability to measure the perpetrator's intention to cause harm and the victim's perception of repetition, among other representative CB/CV behaviors. Moreover the questions deemed representative to experiences associated with the cyber bullying and cyber victimization.

The survey instrument consisted of two parts, the cyber-victimization scale and the cyber-bullying scale each consisting of nine questions each. The questionnaire measured using the five-

point Likert scale format ranging from 0 to 4, where 0 = Never, 1 = Once, 2 = A Few times, 3 = Several times, 4 = Many times, and is used to measure effectively the various levels of involvement of the participants. The summary scale can range from 0 to 36 with higher values representing greater involvement in both cyber-victimization and cyber-bullying. In order to gain a more comprehensive understanding, the participants would be asked if they had experienced or perpetuated the following incidents in the past 30 days prior to the administration of the questionnaire. The shorter time frame was endorsed by the participants in the description of the CB/CV behaviors 'due to the participant's difficulty in recalling the incidents accurately' (Antoniadou, Kokkinos, & Markos, 2016, p.382).

3.8 Reliability and Validity of the Research Instruments

The psychometric properties of the survey instrument used in this study focuses on three specific areas: internal reliability, factor analysis and inter-item correlations. The psychometric properties of the Compulsive Internet Usage Scale has good reliability scores of $\alpha = .89$ and very high internal consistency of RMSEA= .053 - .084 and CFI = .966 - .984 (Meerkerk, Franken, Garretsen & van den Eijnden, 2009). The scale showed high internal consistency and test re-test validity when used in a study conducted among 186 participants within the age range of 15-25 years, among Arabic countries due to the popularity of using the Internet and related applications (Khazaal, Chatton, Atwi, Khan, Billieux & Zullino, 2011) with Cronbach's $\alpha = .91$. RMSEA = .08 and CFI = .92.

The psychometric properties focused primarily on 18 questions divided equally between the Cyberbullying Victimization Scale and Cyber Bullying Offending Scale. Studies conducted across the United States among adolescents between 11- 18 years with the survey instrument

showed exemplary ratings with good internal consistency reliability results with Cronbach's alpha coefficient for the CV scale ranging from .892-.935 and the cyberbullying offending scale with Cronbach's alpha range from .935- .939 (Hinduja & Patchin, 2015). The scale has been used on a sample group consisting of 160 students selected from different secondary schools in Chidambaram (Mohammad, Sankar & Anicham, 2017) and the questionnaire was reported to be valid and reliable. Cronbach's alpha (α) represented .74 in victimization dimension and .76 in offending dimension.

The factor analysis showed loading values for each individual question followed by an Eigenvalue range representing statistical significance supporting each item adequately tapping into one component. The Cyber-victimization Eigenvalue ranges from 5.51-6.40 with 61.22-71.52% of variance and the Cyber Bullying Offending scale exhibited a higher Eigenvalue range of 5.13-7.34 having a variance range of 57.08-81.57% in the same study conducted by Hinduja and Patchin (2015) among middle and high school students in the United States. The Inter items Correlations for victimization scale shows correlations ranging from the low end of .30 – .58 to .83 – .92, while the offending scale shows similar correlations ranging from .45 – .70 to .90 – .94 (Hinduja & Patchin, 2015).

3.9 Pre-test of the Study Instrument

In the current study validity was established by the ability of the test instruments to measure and examine what it is intended to measure. The validity of the instruments was established through a pre-test. A pre-test of the tools was done with a group of students from a different school that was not included in the sample population. The pilot project was also directed through close consultation and expert judgement from lecturers and colleagues. The students group who took

part in the pilot project were excluded from the major project. The pilot project was conducted to make sure and confirm that the questions being asked were understood by the participants and also to test if the questions were in line with the objective. The comments and observations were integrated and adjustments were made accordingly in the researcher generated demographic questionnaires before the instruments were used to collect the data from the sampled schools.

3.10 Data Collection Procedure

A good research usually involves various methods for gathering data and these rely heavily upon the reason and aims of the research. This research study used questionnaires to collect data from the student participants. In order to conduct this research the researcher had attained permission from the Directorate of Post Graduate Studies and Research of Tangaza University College (See Appendix 5) and then research permit was obtained from National Commission for Science, Technology and Innovation (NACOSTI) (See Appendix 6). The principals/head teacher of the schools was approached with the letter of invitation where the research was being aimed to be conducted (See Appendix 1) and the permission was obtained by the researcher from the school heads (The head teacher/ principal). The study focused only on all available students of Grade 8, Grade 9 and Grade 10 from the selected secondary schools, which offered a greater breadth than just one single case-study school, and allowed some initial differences to be highlighted.

The student participants from 3 different grades were given the parental consent form to participate in this study, one week prior to the selected survey dates, as most of them were under 18 years of age (See Appendix 2). Students whose parents had given consent were allowed to participate in the study and the consent form was collected by the class teachers and the school authorities. The participation of the students were voluntary and anonymous. Arrangements were

made to conduct the study at a time convenient and suitable to the school authorities. The students were given a short rationalization concerning the aim and purpose of the study. Administration of the questionnaire was conducted without the involvement of teachers but the school counselors were present.

3.11 Data Management

The questionnaires after being filled in by the students at school was collected, securely sealed in a clear bag and transported to a safe place for data analysis. The data collected in the form of questionnaires was safely opened from the sealed bag, cleaned and then cross checked once again to remove any error if so any. Half-filled questionnaire was removed from the dataset that was to be used for analysis. Apparently in this study only one questionnaire was found to be void and the rest was used for data analysis.

3.12 Data Analysis

The data for the current study was analyzed using the 22nd edition of the IBM Statistical Package for the Social Sciences (SPSS) for both the descriptive and inferential statistical analysis. Each item on the survey instrument was coded and coding is usually done to organize question responses of research data into specific manageable categories. The researcher ensured accuracy for all data entries.

Both descriptive and inferential statistical procedures were utilized to answer the research questions. Simple descriptive analysis would make the survey data more comprehensible whereas inferential statistical analysis helps to reach predictions or inferences from the sample analyses of data (Kaushik & Mathur, 2018). Due to the categorical nature of the questionnaire which investigates relationship between variables, descriptive analysis was used to determine the

frequency distribution related to student's involvement in CB/CV behaviors with the independent variables.

Chi- Square statistics (χ) was used to compute the contrast of the distribution by gender, other demographic characteristics and internet usage by the students. The Pearson's product-moment correlation (r) assisted in testing the association between internet usage and cyber bullying and cyber-victimization behaviors among the in-school adolescents. Linear regression analysis showed the influence of age and gender on the relationship between internet usage and participation in CB/CV behaviors of the adolescents. Analysis of Variance (ANOVA) was able to examine significant differences between students of different grades and their internet usage and CB/CV behaviors.

3.13 Ethical Considerations

The objective of ethics is to guarantee that nobody is hurt or experience antagonistic results due to the inquiry from research activities. Since this research involves students, it was important to pay attention to ethics. Hence, the participants were treated with dignity and not just as mere objects of study but rather treated them with special precautions and also with respect as human beings (Resnik & Shamoo, 2015). Due to the age of the participants being critical and therefore the nature of the study, the approval of National Commission for Science, Technology and Innovation along with the Tangaza University College Ethics committee was acquired. The principals of the two schools were served with formal letters asking for their permission for the study to be conducted in their schools (Appendix 1). Parents were given the student's consent form (Appendix 2) and given the opportunity to decline their child's participation in the study if they felt so. Names of the students were not used or mentioned in this study and the data that the

researcher collected amid the time of this study was dealt within certainty and only for research purposes.

The researcher requested the services of the school counsellor to be available for the students who experiences distress during the course of the study. The financial needs of the counsellor were taken care of by the researcher. Confidentiality was well maintained and no teachers were unduly involved or present at any stage of the study in order to also give freedom to the participating students. Ethical issues of the data collection was handled along the Tangaza directives of research ethical issues. Interviewee's were made aware of the informed consent (Appendix 3), freedom to withdraw, deception, protection from physical and psychological harm, confidentiality, anonymity and academic integrity.

3.14 Conclusion

This chapter provided an overview of the research methodology that was used to collect the data for the study. Essential to this chapter was describing the participants (sampling procedure, size, location and study population) and the instruments used to gather data was presented. The reliability and validity of the research instruments, pre-test of the study instrument and its administration was discussed. The data management, its analysis and research ethical considerations that was maintained were explained. The next chapter will deal with the results that was generated from the analysis of the data that was collected. The findings of the study are further discussed in chapter four.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the study findings whose main objective was to establish the prevalence of cyber-bullying and cyber-victimization behaviours in internet usage among adolescent's in the secondary schools of Westland's Sub-county, Nairobi County. The two specific objectives were: to investigate if the internet usage among in-school adolescents is associated with the participation in cyber-bullying and victimization behaviors; and to examine in terms of age and gender among the in-school adolescents, the tendency to participate in internet usage and cyber-bullying and cyber-victimization behaviors.

This chapter highlights the findings of the study and provides the discussions that align the findings with the literature to explain the occurrences.

4.2 Response Rate

The study targeted a sample size of 228 respondents. Since the students with parental consents were only permitted for the study, 233 students participated than the expected 280 students. The increase in sample size was to enhance generalization and increase the quality of the findings. Therefore, a total of 233 questionnaires were filled and returned. The additional 5 interviews were to replace void interviews. Apparently only one interview was void and was discarded from the dataset used for analysis. The overall sample size for the data used for analysis was N = 232 where N is the indicator of total population.

4. 3. Reliability of the Scales used in the Study

In the present study, Cronbach's alpha was used to measure internal consistency of the data collected through The Compulsive Internet Usage Scale (CIUS), Cyber-bullying Victimization Scale and Cyber-bullying Offending Scale. The Cronbach's alpha (α) generated from SPSS 22 for the Compulsive Internet Use Scale (CIUS) was .903, Cyber-bullying Victimization Scale was 0.730, Cyber-bullying Offending Scale was .801. Since all the scales had Cronbach's alpha more than 0.7, the scales had above acceptable levels of internal reliability. According to Cronbach (1951), an alpha (α) in the range $0.7 \leq \alpha < 0.9$ indicates good internal consistency of the data collection instrument.

Table 4.1 ***Reliability of questionnaire scales***

Scale	Number of items	Cronbach's Alpha
The Compulsive Internet Use Scale (CIUS)	8	0.903
Cyber-bullying Victimization Scale	9	0.730
Cyber-bullying Offending Scale	9	0.801

Note[1]: According to Cronbach (1951), an alpha (α) in the range $0.7 \leq \alpha < 0.9$ indicates good internal consistency of the data collection instrument.

4. 4. Socio-demographic Characteristics of the Respondents

The demographic profiles of the respondents were analysed using descriptive method across four variables: Gender, age group, class/grade and who the participants lived with as

summarised in Table 4.2.

Table 4.2 ***Breakdown of the socio-demographic characteristics of the respondents***

Demographic variables		Frequency (n)	Percent %
Gender	Male	124	53.4
	Female	108	46.6
Age (M= 14.8, SD=1.3)			
Class/Grade	8	78	33.6
	9	69	29.7
	10	85	36.6
Who they live with	Both parents (mother & father)	194	83.6
	Single parent (Either mother or father)	22	9.5
	Grandparents	11	4.7
	Others	3	1.3
	Not mentioned	2	0.9
	Total	232	100

Note: M-Mean, SD= Standard deviation

This indicates that among 232 participants, 53.4% (n =124) of the respondents were males compared to 46.6% (n =108) who were females. The mean age of the participants was 14.8 ± (SD: 1.3). The study also revealed that 83.6% (n =194) of the participants lived with both parents while 9.5% (n = 22) lived with single parents. Lastly, 33.6% (n = 78) of the participants were in Grade 8, 29.7% (n = 69) were in Grade 9 and 36.6% (n = 85) were in Grade 10 were n is an indicator of the fraction of the sample. This discovery indicates that there is a minimum error due to sampling hence the distribution of the respondents' socio-demographic characteristics does not affect the

results of the objectives examined.

4.5 Association between Internet Usage and Participation in CB/CV Behaviors

The first objective of the current study was to investigate the prevalence of the internet usage among in-school adolescents is associated with the participation in cyber-bullying and victimization behaviours. To understand this objective, the current study applied both descriptive analysis (frequencies and percentages) and Chi-square analysis to check for incidences and associations between variables.

4.5.1 Internet usage among in-school adolescents

The results on internet usage behavior are summarized in Table 4.3. The results indicate that 38.8% (n = 90) of the participants used internet several times a day, 13.8% (n = 32) using internet once a day while 39.7% (n = 92) using internet several times a week. However, there was no significant association between frequency of using internet and gender ($\chi^2_{(6)} = 11.5$, $p > .05$). Majority of the participants, 33.6% (n = 78), indicated that they spend 10-15 hours on internet weekly. 40.7% (n = 44) of the female participants claimed to use 10-15 hours on internet weekly compared to their male counterparts that had 27.4% (n = 34) claiming to use internet 10-15 hours weekly. Duration of spending on internet is however not associated to gender ($\chi^2_{(4)} = 7.4$, $p > .05$). The results of Table 4.3 indicate that most participants, 41.8% (n = 97) use internet in public space at home. There was significant association between location of computer used most often by the participants and gender ($\chi^2_{(6)} = 13.6$, $p < .05$); more females (46.3%; n = 50) than males (37.9%; n = 47) stated that the computers they use most often are located in public space at home.

Table 4.3 ***Internet usage behavior***

Internet behavior		Overall		Male		Female	
		F	*%*	*F*	*%*	*F*	*%*
Frequency of using internet	Several times a day	90	38.8	44	35.5	46	42.6
	Once a day	32	13.8	22	17.7	10	9.3
($\chi^2_{(6)} = 11.5$, p =.07)	Several times a week	92	39.7	48	38.7	44	40.7
	Once a week	8	3.4	7	5.6	1	0.9
	Once a month	3	1.3	1	0.8	2	1.9
	Do not use internet	4	1.7	2	1.6	2	1.9
	Not mentioned	3	1.3			3	2.8
Duration of spending on internet weekly	0-5 hrs.	57	24.6	33	26.6	24	22.2
	5-10 hrs.	37	15.9	20	16.1	17	15.7
($\chi^2_{(4)} = 7.4$, p =.12)	10-15 hrs.	78	33.6	34	27.4	44	40.7
	15-20 hrs.	29	12.5	15	12.1	14	13
	20 or more hrs.	31	13.4	22	17.7	9	8.3
Location of computer used most often	In my bedroom	70	30.2	37	29.8	33	30.6
	Home office or study	16	6.9	15	12.1	1	0.9
	School or library	21	9.1	13	10.5	8	7.4
($\chi^2_{(6)} = 13.6$, p = .03)	In public space at home	97	41.8	47	37.9	50	46.3
	At a friend's house	10	4.3	4	3.2	6	5.6
	Other	8	3.4	3	2.4	5	4.6
	Not mentioned	10	4.3	5	4.0	5	4.6
Activities internet is used for	Communicating with friends	56	24.1	21	16.9	35	32.4
	Internet games	27	11.6	23	18.5	4	3.7
($\chi^2_{(4)} = 19.5$, p = .002)	Send pictures	9	3.9	5	4.0	4	3.7
	Homework/school work	67	28.9	31	25.0	36	33.3
	Downloading music, films or programs	24	10.3	15	12.1	9	8.3
	Not mentioned	49	21.1	29	23.4	20	18.5
Sharing online password with friends	Yes	54	23.3	19	15.3	35	32.4
($\chi^2_{(1)} = 9.4$, p =.002)	No	178	76.7	105	84.7	73	67.6
TOTAL		**232**		**124**		**108**	

Note: F = Frequency

Interestingly, a significant proportion of the participants (24.6%; n = 70) stated that the

computer used most often is located in the participants' bedrooms; 30.6% (n = 33) of the female and 29.8% (n = 37) of the male participants. When asked about the activities that participants use internet for, 28.9% (n = 67) stated that they use internet to do their homework/schoolwork. The activities that internet is used for is significantly associated with gender ($\chi^2_{(4)} = 19.5$, $p < .05$). For female participants, 32.4% (n = 35) use internet to communicate with friends compared to male participants 16.9% (n = 21) of the male participants. On the other hand, 18.5% (n = 23) of the male participants use internet to play games compared to 3.7% (n = 4) of the female participants. Lastly, 23.3% (n = 54) have shared online passwords with their friends. Sharing online password with friends is significantly associated with gender ($\chi^2_{(1)} = 9.4$, $p = .002$) with more female participants (32.4%; n = 35) than male participants (15.3%; n = 19) stating to have shared online passwords with friends.

4.5.2 Participation in cyberbullying and cyber-victimization behaviors

The results of participation in cyberbullying and victimization behaviours were summarized in Table 4.4.

Table 4.4 ***Participation in cyberbullying and cyber-victimization behaviours***

		Total		Male		Female	
		F	*%*	*F*	*%*	*F*	*%*
Ever bullied another student online	Yes	33	14%	13	11%	20	19%
($\chi^2_{(1)} = 3.054$, $p = .08$)	No	199	86%	111	90%	88	82%
Victim of cyberbullying	Yes	54	23%	30	24%	24	22%
($\chi^2_{(1)} = 0.126$, $p = .72$)	No	178	77%	94	76%	84	78%
Sample sizes		232		124		108	

Note: F = Frequency

Overall, 14% (n = 33) indicated that they have ever bullied another student online. Whilst cyberbullying has no significant association with gender ($\chi^2_{(1)} = 3.054$, p = .08), common incidences were witnessed among the females where 19% (n = 20) of the female participants indicating that they have ever bullied another student online compared to 11% (n =13) of the male participants.

Similarly, Table 4.4 indicated that 23% (n = 54) of the participants have ever been victims of cyberbullying. The incidence of cyberbullying has no association with gender ($\chi^2_{(1)} = 0.126$, p = .72). However, more male participants, 24% (n = 30), claimed to have been victims of cyberbullying compared to 22% (n = 24) of the female participants.

4.5.3 Association between internet usage and participation in CB/CV behaviors

To understand the association between internet usage and participation in cyberbullying and victimization behaviours, Pearson's correlation was used. The results were summarized in Table 4.5.

Table 4.5 ***Pearson's correlation showing association between internet usage and participation in cyberbullying and cyber-victimization behaviors***

	Internet usage and behaviour	Cyberbullying victimization	Cyberbullying perpetration
Internet usage and behaviour	1		
Cyberbullying victimization	-0.005	1	
Cyberbullying perpetration	-0.007	.367**	1

Note: n=232, ** significant at α=0.01 level.

The results indicated that there was no association between internet usage and behaviour with cyberbullying victimization (r = -.005, p >.05) and cyberbullying perpetration (r = -.007, p

>.05). Moreover, the study found positive significant association between cyberbullying victimization and cyberbullying perpetration ($r = .367$, $p < .01$). This is an indication that most of the participants who were victims of cyberbullying end up becoming perpetrators.

4.6 Influence of Age and Gender on the Relationship between Internet Usage and Participation in CB/CV Behaviors

The second objective of the study was to check for the influence of gender and age on the relationship between internet usage on participation in cyberbullying and victimization behaviours among in-school adolescents. Linear regression analysis was used to check for the relationships between age and gender on the variables of the study as in Table 4.6.

Table 4.6 ***Linear regression analysis showing the influence of gender and age on the internet usage and participation in cyberbullying perpetration and victimization***

Parameters		Participation in cyberbullying perpetration		Participation in cyberbullying victimization	
		β	p-value	β	p-value
Intercept		0.811	0.559	-1.431	0.604
Internet usage and behaviour		-0.005	0.747	-0.011	0.712
Age		0.016	0.862	0.25	0.173
Gender	Males	-0.483	0.047	-0.783	0.11
	Females	Reference		Reference	

Note: β is the regression coefficient; Reference is the value of the comparison group; LSD- Least Significant Difference

The results of Table 4.6 indicate that internet usage has no relationship with participation in cyberbullying perpetration ($\beta = -.005$, $p > .05$) and participation in cyberbullying victimization ($\beta = -.011$, $p > .05$). Age had no significant impact on the relationship between internet usage and behaviour and participation in cyberbullying perpetration and victimization, $p > .05$. The results

also show that gender has significant effect on the relationship between internet usage and behaviour and cyberbullying perpetration (β = -.483, p < .05). Post-hoc analysis using LSD found the female participants to significantly have higher internet usage and behaviour (M =13.95, SD = 7.68) than male participants (M = 12.30, SD = 8.19, p < .05). Similarly, female participants had significantly higher participation in cyberbullying perpetration (M = .98, SD = .18) compared to their male counterparts (M = .50, SD = .17, p < .05). However, age and gender do not have significant impact on the relationship between internet use behaviours and cyberbullying victimization, p >.05. This indicates that female in-school adolescents with high internet use and behaviour end up being cyberbullying perpetrators which is contrary to what male in-school adolescents do.

47 Association between Grade of students and Internet Usage, CB/CV behaviors

The study used One-Way ANOVA to check for the differences with students' grades and internet use, CB/CV behaviors as summarized in Table 4.7.

Table 4.7 ***One way ANOVA showing differences in Grades of students and internet use, cyberbullying victimization and cyberbullying perpetration***

Dependent variables	Grade	Mean	Std. Dev	F-Statistic	p-value
Compulsive Internet Use	8	13.82	7.85		
	9	12.42	8.37	0.578	0.562
	10	12.93	7.83		
Cyberbullying Victimization	8	1.24	2.57		
	9	2.03	4.29	1.034	0.357
	10	1.93	3.99		
Cyberbullying Perpetration	8	0.68	1.79		
	9	0.62	1.53	0.312	0.732
	10	0.85	2.12		

Note: n = 232, significance at α = .05

Using compulsive internet use as the dependent variable, the results revealed that internet use was common among Grade 8 students (M = 13.82, SD = 7.85) and lowest among Grade 9 students (M = 12.42, SD = 8.37). However, the difference is not significant at $\alpha = .05$ ($F_{2, 229} = .578$, $p > .05$).

In terms of cyberbullying victimization, the results of Table 4.7 revealed that whilst Grade 9 students having higher rate of victimization (M = 2.03, SD = 4.29), there is no significant difference in cyberbullying victimization among the participants at $\alpha = .05$ ($F_{2, 229} = 1.034$, $p > .05$). Similarly, in terms of cyberbullying perpetration, the results of Table 4.8 revealed that the rate is higher among Grade 10 students (M = .85, SD = 2.12) and lowest among Grade 9 students (M = .62, SD = 1.53). However, the difference in cyberbullying perpetration is not significant different by Grades of the students at $\alpha = .05$ ($F_{2, 229} = .321$, $p > .05$).

In conclusion therefore, it can be alluded that student Grade is not a determinant for internet use, cyberbullying victimization and cyberbullying perpetration.

4.8 Summary of the Findings

The first objective of the study was to establish if the internet usage among the in-school adolescents is associated with the participation in cyberbullying and victimization behaviors. The study found out that 39% (n = 90) of in-school adolescents are heavy internet users especially female adolescents whose majority spends 10-15 hours weekly on internet. Most computers used often by the adolescents to access internet are placed in public places at home. Other than doing homework, the female adolescents use internet to communicate with friends while the male adolescents use internet to play games. The study also realized that female in-school adolescents

share their online passwords more often than their male counterparts. The lack of awareness of using the internet logically and safely can increase the chances of becoming a potential attractive target.

In understanding cyberbullying, 19% (n = 20) of the female adolescents compared to 11% (n = 13) of the male adolescents have engaged in cyberbullying perpetration whereas 24% (n = 30) of the male adolescents compared to 22% (n = 24) of the females have suffered cyberbullying victimization. Generally, heavy internet usage does not result to increased levels of cyberbullying perpetration or victimization. However, those who suffer cyberbullying victimization have high likelihood of becoming perpetrators. Therefore, the hypothesis that internet usage among in-school adolescents is associated with the participation in cyberbullying and victimization behaviors is rejected at $\alpha = .05$.

The second objective was to examine in terms of age and gender among the in-school adolescents, the tendency to participate in internet usage and cyberbullying and cyber-victimization behaviors. The study found that age had no significant impact on the relationship between internet use and behavior and cyberbullying perpetration and victimization. However, gender was found to have significant influence internet usage and cyberbullying perpetration; with female in-school adolescents showing higher level of internet use behaviors and high levels of cyberbullying victimization.

The hypothesis that age and gender have significant impact on the relationship between the tendency of internet usage and cyberbullying and cyber-victimization behaviors is partially supported at $\alpha = .05$. The association between the three different grades of in-school adolescents had no significant impact on the internet use, cyberbullying victimization and cyberbullying

perpetration. However grade 10 students exhibited higher cyberbullying perpetration, grade 9 students exhibited more of cyber victimization behaviors and compulsive heavy internet usage was found at grade 8 though the difference is not significant at $\alpha = .05$.

49 Discussions

The advent of CB/CV behaviors are most often linked to the increasing access to the newer forms of internet usage. However, few studies have examined this phenomenon in Nairobi County among the in-school adolescents. To that end, this current study had two objectives.

4.9.1 Association between in -school adolescent's internet usage and CB/CV behaviors

The first objective was to establish if the internet usage among the in-school adolescents is associated with the participation in cyberbullying and victimization behaviors. The fact that 23% of the participants experienced at least one instant of cyber-victimization behaviors maintained that the problem may be more serious in online social utilities than reported as 5.8% by Chao and colleagues (2017) in a study of cyberbullying among adolescents in Taiwan.

Studies by Patchin and Hinduja (2013) on youth engaging in online harassment, the incidences of cyberbullying victimization rates ranged from 5.5 to 72%. Looking at the British context, a study by Li (2008) that looked at the adolescents' experiences with cyberbullying, the incidences of those who had experienced cyberbullying victimization was 25%. These findings corroborated with the previous arguments that bullying and harassment occurring through the internet usage are serious problems amongst the adolescents and meaningful proportion of the adolescents are involved in cyberbullying. As the findings indicate no correlation between the internet usage and CB/CV behaviors one cannot undermine the various risk factors such as social

norm, motivation, self-efficacy and various interpersonal reasons (envy, tolerance) can influence the cyberbullying behaviors of the adolescents.

This study indicated that 87 (37%) of the total sample population indicated that they were either victims or perpetrators of cyberbullying behaviors. The study revealed that 33 (14%) have been involved in cyber bullying behaviors whereas 54 (23%) admitted to have been cyber-victims. The results of this study exhibits higher percentage than the study done among students in the Kisumu County (Okoth, 2014) which revealed the prevalence of cyberbullying experiences to be lower than 6%. This shows that the trend of cyberbullying behaviors is increasing steadily in our country. The study indicated that majority of the adolescents spend 10-15 hours weekly on internet and also one third of them were sharing passwords with their friends. These risk factors underscore the need for more interventional plans to empower the adolescents' knowledge on the risk of using the internet in ways that are not safe for them and in the process become a cyber bully, victim or both.

Yet another issue related to the adolescent's heavy internet usage with their cyberbullying experiences is the location at which their computers are most often used which is either in public spaces at home or in their private spaces like the bedroom. Undeniably the findings of this study about the location of the computers most often used did not significantly differentiate between the in-school adolescents involvement in CB/CV behaviors. However, in contrast studies by Sengupta and Chaudari (2011) found that using internet in private spaces at home rather than public spaces increased the possibility of young adolescents' involvement with CB/CV behaviors. Henceforth the surroundings and circumstances of ICT use by the teen's matters as a portion of youth might use the forum for bullying or harassing their peers. Therefore results of this study highlights the

need for parental involvement in the supervision and monitoring of the potential internet misuse of the adolescents making them vulnerable to CB/CV behaviors.

Furthermore the study's revelation that the victims of cyber bullying indicated higher association towards becoming cyberbullying perpetrators provides precise information on adolescent's greater involvement in cyberbullying. This finding was consistent with studies conducted in Basque Country among 3026 adolescents between the age range of 12-18 years indicating about one third of the cyber-victims were also more likely to carry out cyberbullying behaviors with others (Garaigorodobil, 2015). Similar studies conducted in South Africa by Centre for Justice and Crime prevention (2012) indicated that seven out of ten (69.7%) cyber victims had likelihood of perpetrating such behaviors against other adolescents. A survey conducted in U.K among the young people in schools and colleges between the age ranges of 12-20 years showed that the young people who are bullied are almost twice as likely to bully others (Ditch the label, 2016). Anonymity offered by the technology can provide the platform for role reversals and cyber-victims can become cyber bully by externalizing their aggression and can intentionally retaliate (Garaigorodobil, 2015). Becoming a cyberbully makes a cyber-victim feel more powerful and superior and makes them to relieve the feelings of helplessness and suffering and this evolution of bullying behavior deserves more attention and can cause greater harm. Henceforth this role reversals among the in-school adolescents reveal that there is a dire need for the phenomenon to be thoroughly addressed to recognize their vulnerabilities and identify protective factors for both bullies and victims of cyberbullying experiences.

4.9.2 Age and gender on the relationship between internet usage and CB/CV behavior

The second objective of the study was to examine in terms of age and gender the tendency

of in-school adolescent's to participate in CB/CV behaviors and the finding of this study reported gender but not age having significant impact on the internet usage and CB/CV behaviors. This pattern is consistent with the findings illuminated by precedent studies claiming gender patterns exhibiting more participation in cyberbullying behaviors than age. Chadwick (2014) in his studies have revealed that females than males prefer engaging in cyberbullying in a major way through indirect aggression and forms of cyberbullying. Gender differences in relation to cyberbullying behaviors is more skewed towards female adolescents as being more dominant as cyberbullying perpetrators is consistent in studies whereby indirect types of bullying behavior such as exclusion, gossiping and name calling was exhibited predominantly by female in-school learners (Dehue, Bolman & Vollink, 2008) This gender disparity was also reported in a study on cyberbullying among 269 Turkish secondary school students where boy participants displayed more victim behaviors than girl participants (Siyahhan, Uzunhasanoglu, Saribeyoglu, Ciplak, Yilmaz & Memmedov, 2008).

The term indirect cyberbullying will help in understanding how students stereotype gender. Studies reveal that generally males are more inclined to stir and publicize quarrels online directly and respond immediately, henceforth the results are short termed and they suffer less (Miller, 2016). On the other hand for females being benign find it very difficult to confront directly henceforth resort to unfair revengeful means and bouts of hatred online causing psychological and emotional harassment (Miller, 2016).Though there is clearer gender differences in CB/CV behaviors, however, these differences are also majorly due to the activities that the girls and boys most prefer, as the research conveys.

The focus on gender differences must focus on the different techniques that the adolescents use internet for. As the study illustrated girls tend to use internet more often for communicating with their friends (32.4%, n = 35) and boys for internet games (18.5%, n = 23). Studies are congruent with these findings with more female student spending considerable amount of time in communication

based sedentary activities which also places them at a greater risk of getting involved in cyberbullying behaviors either as a victim or as a perpetrator (Sampasa- Kanyinga & Hamilton, 2015).

Goddard (2008) on the other hand suggests that girls are more enticed by cyber bullying behavior more than before and the communication through gossiping, spreading private intimate information, manipulation as well as the social platform provided by anonymity elicits such behaviors from them. Moreover among girls the desire for social acceptability and the shifting friendship dynamics from inclusion to exclusion from groups and cliques prompt them to use different forms of such bullying behaviors that in turn will make them gain acceptance and popularity (Radliff & Joseph, 2011).Whereas males may be more evoked by the internet online gaming becoming a prominent area for cyberbullying through use of aggressive language, name calling, threats and social exclusion. Studies corroborating this finding had exhibited that males experiencing cyberbullying behavior either as a perpetrator or as a victim had tendencies to create a vicious cycle of victim perpetrating bullying and vice versa, additionally males compared to females preferred online games and this was exhibited as aggressive behaviors in their daily lives as well (Li, 2015). This also points out that gender is a strong contributor to the complex phenomenon of CB/CV behavior. Knowledge on meaningful distinction on the role of gender differences in the internet usage and CB/CV behaviors can be used to enhance prevention strategies especially for cyberbully perpetrators by training them in their pro-social skills and positive moral reasoning.

Several studies have indicated age ranges and subsequently samples studied among pupils of various grades have explained the developmental variations exhibited by the student. This study found no significant impact of age on the in-school adolescents internet use and CB/CV behaviors and the fact that studies by Smith et al (2008) reported a negative association between age and the

cyber-victimization and cyberbullying behaviors among studies of a larger sample size in the United Kingdom between the age of 12 to 20 years indicated that age may not be predominant risk factor in cyberbullying experiences. One of the reasons for such a difference would be due to the factor that as age increases there is an increase as possibly victims or as perpetrators the different modes and methods of internet usage influences the nature of cyberbullying (Smith et al, 2008). Due to the rapid development of newer communication technologies and also due to the familiarity with the up-to-date technology the age trends may influence internet usage and all the arenas of cyberbullying and cyber-victimization behaviors.

The goal behind examining the moderator variable was to understand if there existed patterns of relationships between heavy internet usage, CB/CV behaviors and the three different grades of the in-school adolescents and if the variables were stronger or weaker as progression was made in schools by the students. The study revealed that grade 8 students showed higher levels of internet usage, grade 9 exhibited higher rate of victimization and grade 10 presented greater cyber bullying perpetration, however since the study findings revealed no statistically significant difference, grades of in-school learners was not alluded to be a detriment for the variables. As several studies had speculated similar to the age, studies have not found differences in grades of the in-school students with their internet usage and cyberbullying behaviors (Slonje, 2011). This consistency with other findings would suggest more school typologies to be taken into consideration that can influence the different behaviors of the in-school adolescents.

4.10 Conceptual Framework Revisited

The conceptualization of this study is presented based on a diagram as in Fig 4.1 which indicates the result of the study finding.

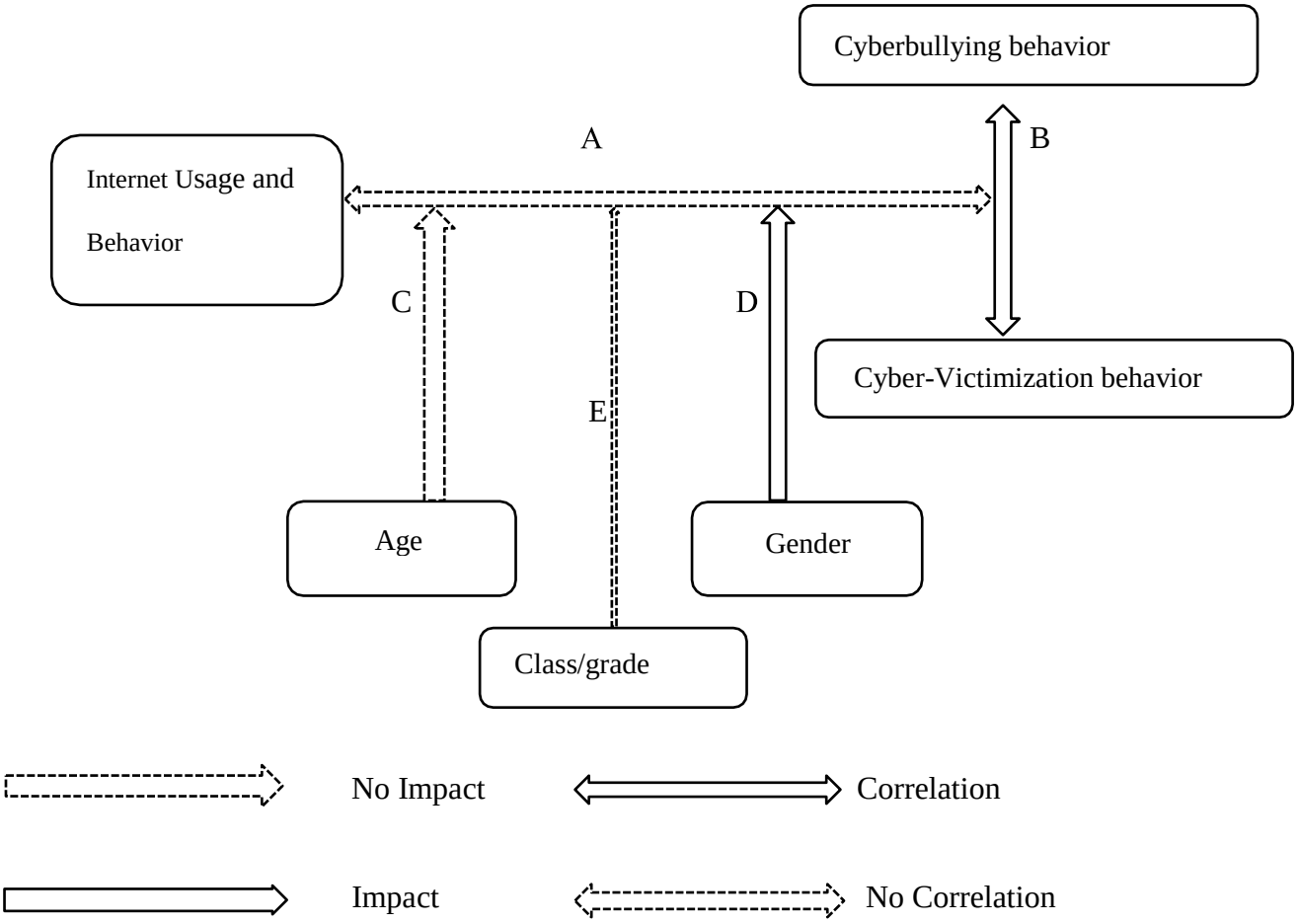

Figure 4.1 Conceptual Framework Revisited

Based on the objectives of the current study and the two hypothesis on the relationship between the constructs, the study finding revealed the following where direction A & B indicated the results of the first hypothesis and direction C & D of the second hypothesis based on the conceptualization of the interlinking relationships between the variables (Independent, dependent and the moderating variables). *Direction A* indicates the first objective of the study between the internet usage among the in-school adolescents have no association with their cyberbullying and cyber-victimization behaviors.

In the online context, apart from internet usage being a catalyst, personal factors (empathy, narcissim, hyperactivity) and situational factors (media violence, gaming, behavior modeling of parents, peers) by the in-school adolescents can also be a reason for the large number of in-school adolescents in the bully-victim category.

Direction B, surprisingly indicates stronger positive association between cyberbullying perpetration and cyberbullying victimization between the in-school adolescents indicating a creation of vicious cycle. Although it is not clear which precedes the other, the participation in either of these behaviors increase the chances of an overlap (Mishna et al, 2012).

Direction C: Age of the in-school adolescents did not have an impact on the internet usage and CB/CV behaviors.

Direction D: Gender had a partial significant impact on the relationship between the tendency of internet usage and CB/CV behaviors. Study informs the need for effective intervention strategies to decrease CB/CV behaviors and a stronger need for gender-specific prevention programs.

Direction E: Students of the three different grades did not exhibit a significant impact on the internet usage and the CB/CV behaviors.

4.11 Suggestion for the Improvement of the Theory

The theory that was adapted in this study was Bandura's Social Cognitive theory of moral disengagement for understanding the CB/CV behaviors of the in-school adolescents. As Bandura (2002) had postulated the internal self-regulatory mechanism governing moral conducts come into play in the social context. The online interaction of the teens by their internet usage provides a forum that promotes moral disengagement. From the findings of this study there is no association between the internet usage and their CB/CV behaviors but a stronger association between cyber-victimization and perpetration.

There are both inhibitive and proactive aspects of moral agency that contribute to the adolescent's behavior and during this phase of development it is regulated externally and by social sanctions. Mature empathetic responses requires perspective taking of others in a social context and since children and youth are still developing in their perspective taking abilities the demands may be too high and they are more likely to fail in experiencing empathy (Decety, 2011) and displace themselves by applying cognitive strategies. On the other hand one cannot undermine that cognitive strategies for rationalization arises from observational learning and learnt behavior, thoughts or feelings can also be unlearnt or changed. The reinforcement of consequences in potential misuse of technology and increased awareness of unacceptable behaviors of cyberbullying through internet usage can warrant sanctions and could be taught.

The findings in the study unfolds that such unacceptable behaviors among the teens are controlled in a minimal manner but through a positive education approach through learning and teaching can lead them to a more compassionate behavior. On the whole these findings can improve the social cognitive theory of disengaging the moral controls by emphasizing that the environment and techniques of supportive networks in safe guarding the social systems cannot be completely ignored in molding the adolescents with proactive power of humanely behavior.

4.6 Conclusion

The results of this study are presented in chapter four. A comprehensive analysis and interpretation of the data analysis is presented. The hypothesis of the study was tested and important inferences were drawn. Conceptual framework was revisited which indicated the result of the study findings. The findings in this chapter shows that CB/CV behaviors is prevalent among secondary school in-school learners of Westland's Sub-county.

Furthermore the study indicated no association between internet usage and CB/CV behaviors among in-school learners. However a strong positive association was indicated between cyberbullying perpetration and cyberbullying victimization. Gender had a significant impact on the internet usage and CB/CV behaviors of the teens. The next chapter will provide conclusion of the study and look at the recommendations for students, parents, school community, policy makers and researchers.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary and conclusion of the study. Moreover some suggestions for future orientations on cyber bullying and cyber-victimization behaviors for the Kenyan context will be emphasized. It is critical that new and significant research is attempted in this field to create an assemblage of information to enable us to comprehend the behavioral and psycho-social parts of cyberbullying phenomenon all the more extensively.

5.2 Summary of the Study

The findings of this study sheds some light on the 21st century profile of adolescent's CB/CV behaviors in the light of the reality where internet usage is an integral part in students' daily lives. The contribution of this study to the literature is that no other study has investigated the prevalence in Westland's Sub-county, Nairobi County.

The total sample size of the data used for analysis was 232. The socio demographic characteristics of respondents indicated male participants to be 53.4% as compared to females 46.6%. The mean age range was 14.8 and most participants lived with both the parents (83.6%) while students living with single parents were 9.5%.

This study was guided by two objectives as specified in chapter one. The first study objective was if there was an association between internet usage among the in-school adolescents and participation in CB/CV behaviors. The study indicated that the frequency and duration of the adolescent's weekly internet usage was high leading to increased internet usage and the negative outcomes related to it. Most of the adolescents used public spaces at home for internet usage however 30.2% (n = 70) of them used in their private rooms in bedrooms. The activities that they

generally used internet was for mostly school purposes, followed by communication with friends and for internet games. Majority of the adolescents did not share their passwords but among the ones who shared majority of them were female in-school adolescents. This indicates that most of students are not knowledgeable about the methods to remain safe online and parental monitoring is needed to refine the adolescent's cyber-safety strategies.

Participation of the in-school adolescents in CB/CV behaviors indicated cyberbullying perpetration lower than cyberbullying victimization. However, there was no association between compulsive internet usage and CB/CV behaviors nevertheless there was strong positive association between the cyberbullying and cyber-victimization behaviors. Internet usage along with its frequency of use and type are factors combined to understand the chances of likelihood of the adolescent's cyberbullying involvements. Personal factors (empathy, narcissism, hyperactivity) and situational factors (media violence, behavioral modeling of parents, sibling or peers) can also be the reason behind cyberbullying behaviors of the adolescents.

The second objective of the study was to examine how the demographic variables most importantly age and gender among the in-school adolescents, the tendency to participate in internet usage and CB/CV behaviors. Gender was a significant predictor for the CB/CV behaviors and compulsive internet usage and surprisingly females were more involved in cyber-bullying behaviors and heavy internet usage than males. Furthermore age and other moderating variable of different grades of students did not impact their internet usage and CB/CV behaviors. Unquestionably significant impact of gender in the study exerts higher involvement of gender-specific prevention plans and strategies. On the whole the findings of this research implies that there is a greater need to unite all the stake holders to provide a framework for the possible ramifications of CB/CV behaviors among the in-school adolescents.

5.3 Conclusion

The envisaged outcome of the study reveals that CB/CV behaviors is prevalent in Westlands Sub-county, Nairobi County among adolescents from secondary schools of grades 8, 9 and 10 in-school learners. It further supports the evidence of the prevalence of CB/CV behaviors with internet usage indicating a majority of in-school students are heavy internet users whereby apart from homework the adolescents use the internet for communication with friends and for internet games. Consequently no association was exhibited between heavy internet usage and CB/CV behaviors but undeniably there was a positive association between cyberbullying behavior and cyber-victimization behaviors of the adolescents.

Such dynamics of the youth indicated possible role shifts to be examined and addressed with interesting awareness building programs. Furthermore it is evident that females were more engaging in cyberbullying perpetration and males were highly cyber–victimized. Stronger impact of gender disparity in CB/CV behaviors than age invoke the need for protective factors in understanding the experiences of the adolescents.

In conclusion, the results of the study are promising for several reasons. This deleterious impact of CB/CV behaviors with internet usage on the teen's development indicates for prevention efforts to intervene from school settings. Simultaneously, the study demonstrated that parents have a great responsibility in preventing CB/CV behaviors, since education first begins from home. On the whole parental guidance through empathy, open communication and direct supervision, is important to raise better digital citizens.

5.4 Limitations of the Study

There are several limitations that are inherent to the study that must be noted.

- The results of this study were based on self-reports of adolescents by the use of questionnaires with no inputs from parents or teachers. Henceforth there are chances of

social desirability bias in the information provided by the adolescents thus may not be very reliable as adolescents must have answered in the way they felt they should have.

- One of the prominent limitation of this research is that the cross sectional nature of the study provided data at a single point in time. Consequently, a snapshot of cross sectional data does not provide a complete understanding of this complex phenomenon that is most likely to change over time.
- Additionally this prevalence study provided results from both the schools in the Westlands Sub-county, therefore the needs of each individual school may not have been addressed.
- Lastly the most important limitation of the study is that the students from both the schools have education about cyberbullying and both the schools have provisions in their policies about on and off-campus cyberbullying behaviors. Henceforth, it is possible that the students may or may not have reported their CB/CV experiences. And also because the students who participated are the ones with parental consent may be different from their school mates, which could have also significantly affected the study.
- The desired number of 280 students through the sampling technique was not achieved due to the requirement of obtaining parental consent prior to participation in the study. Hence the low response rate limits the generalizability of the study findings.

5.5 Recommendations

Since to the knowledge of the researcher this is the first quantitative study to establish the prevalence of cyber bullying behaviors among adolescents in secondary schools in Westland's Sub-County, Nairobi County and the first study conducted among Grade 8, Grade 9, Grade 10 students, the results are beneficial to the researchers, pupils, parents, teachers, health professionals and the Kenyan school community in large.

5.5.1 Policy recommendations

Parents: Every parent need to discuss with their teens about cyberbullying and need to model respect by encouraging them to talk about any inappropriate behavior or conduct online. Parental control options must be explored to reduce the digital divide between themselves and their children. Parents must lead by example and must try to instill good social skills particularly empathy, good moral reasoning and greater self-esteem so as to reduce the risk of becoming involved as a bully or a victim.

Students: To give a sense of ownership students can be encouraged for actively engaging in peer mentoring groups, counseling and cyber mentoring. Awareness raising programs can help them understand the risks and benefits of responding to CB/CV behaviors at the right time in the right manner. The students can be encouraged to improve their pro social skills, moral reasoning, resilience and also promote empathy, anger management skills, conflict resolution and peer respect among students. Supporting the student victims to speak up and not experience victimization alone by remaining silent in regards to both male and female in-school students must be prioritized. Students can be empowered to seek help from parents, teachers and external agencies to seek support, guidance and advice on cyberbullying.

Schools: Most of the school policies and practices must be developed with the collaboration from all the school community members so as to have a clear and consistent information, support and step by step practical operation process in handling CB/CV behaviors. Schools must have clear policies on CB being regarded as inappropriate behavior and it 'must be reinforced by constant reminders and consistent implementation when the need arises' (Butler, Kift, Campbell & Sperara, 2011, p.20).

School communities need to maintain a positive and 'authoritative' environment promoting proper discipline, co-operative learning methods, positive attitudes and behaviors for proper

implementation of technology use and anti-CB interventions (Hinduja, 2018). Authoritative (high disciplinary structure, high student support) school environment promotes more positive relations and less of cyberbullying, aggression and violence among students (Hinduja, 2018). Collaborative partnership of school community along with parental responsibility can make anti-CB interventions into a shared responsibility to promote a positive school culture and environment.

School Counselors: School counselors can play a major role by encouraging students through problem solving skills, social skills training, relaxation techniques and reconstruction of their hostile attitudes and behaviors in preventing and coping with exposure to cyberbullying behaviors. Through individual and group counseling, counselors can develop assertiveness training for cyber-victims to stand up against being bullied. Class room approaches help students to raise awareness on cyberbullying, encourage empathy and build prosocial behaviors among the teens. School counselors can collaborate with parents and school authorities (teachers, administrators) to increase awareness on cyberbullying prevention programs and encourage positive implementation of school policies and practices.

Educational Departments: The study recommends that Ministry of Education introduce certain structures and policies to increase awareness by delivering well targeted and clearly conveyed messages about deterring anti-cyberbullying behaviors among the in-school learners. Certain specific guidelines in terms of school's code of conduct and policies regarding internet usage and e-learning can be revised on an on-going basis to improve the internet safety measures and enhance the safety of the learners. Recommending schools to partner with parents in monitoring systems to control and improve the school safety measures and in turn enlighten the behavioral norms, offer guidance and broaden the supervision of adolescent's safer online practices. The adolescents generally act without considering the consequences henceforth criminalizing this behavior must not be encouraged but a proactive 'whole-child' prevention approach in educational institutions may enable the teens not to engage in cyberbullying acts.

5.5.2 Recommendations for further research

Since this research was conducted only among the two schools of Westlands sub-county, it is recommended that future research works can be extended to other parts of Nairobi county and Kenya as a whole. Further research studies on cyberbullying and cyber-victimization behaviors can include more comprehensive research approaches and along with the quantitative study can include qualitative dimensions in order to understand the problem in greater depth. Likewise longitudinal studies is recommended to assess the association between cyberbullying and its impact on the adolescent's health. The study can be extended to university students in Kenya or other age groups as well.

More studies can investigate if it extends beyond school to universities and if it does impact psycho-socially and behaviorally on both the cyber victims and the cyber perpetrators. Further research could also spread beyond the student circle to teachers and parents, as this would provide more comprehensive insight into the phenomenon and conclusive action plans can be formulated. Since digital media use is an integral part of the changing landscape of Kenya, the rural schools are also not immune to this massive change hence studies can also outspread to the communities with a vision to create improved digital citizens in this global world.

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Appendix 1

Invitation Letter for Participation

TO

THE PRINCIPAL
(School)
(Date)

Dear Sir/ Madam,

Invitation of Participation

I am Jenny Prince Mathew, a Master's student of Counselling Psychology at the Institute of Youth Studies, from Tangaza University College, an affiliated college of The Catholic University of Eastern Africa (CUEA). I am working a thesis on the prevalence of cyberbullying and cyber-victimization behaviors of adolescents among Secondary schools in Nairobi County. There has been much action and research on the traditional forms of bullying in schools, with a lot of success however cyber-bullying through the use of technology have put today's youngsters to a much more high potential risk content. As Cyberbullying and victimization behaviors of adolescents in schools is becoming a relevant problem among the school population in regards to their mental health and well-being, I believe that the said study will go far in promoting deeper insight and exposure into their behaviors. Moreover, the study would provide important implications for prevention and intervention strategies to be implemented in schools and most importantly will set precedence for similar studies on the exploration of this phenomenon and bridge the knowledge gap that currently exists in Nairobi County.

I would be grateful therefore if you could permit me to conduct my study in your school. The study will include a simple process of filling up of questionnaires by the students from Year 8 to Year 10 respectively. The study is being supervised by Rev. Dr. Cosmas Kagwe and Rev. Dr. Henryk Tucholski. The study has also received ethical approval from the said college. Your kind support will definitely facilitate this study and help students from your school to live more fully. For further clarification contact 0722 457038. I would be pleased to meet you and clarify the details of my study at any convenient time available to you.

Thanking you,

Kind Regards

Appendix 2

Parental Consent Form

Dear Parent(s) or Guardian(s):

I am a Master's student in the Psychology Department at the Tangaza University College and I am conducting research on prevalence of cyber-bullying and what can be done to eliminate it. With approval from the Principal of the School, I am investigating the kind of cyber bullying and cyber victimization behavior among students, from grades 8-10. This information will be compared with another school in Nairobi city.

Each student will be asked to fill out short questionnaires in the school which will measure bullying behavior among peers and their internet usage. All information given by the students is totally anonymous.

Please sign below giving your child consent to participate in the brief questionnaires and have your child return this form to his class teacher.

Name of student _____

Parent's signature _____ Date _____

For your information:

Once the questionnaire has been submitted it is anonymous. The questionnaires contain no identifying information for your child or for others. There are no questions that call for the naming of individual children who are bullies or victims. Neither the researchers nor the research assistants will use your child's name or any other identifying information in oral or written reports. The school counselors will be informed of the study and will be available for students to talk to, that day or on additional days as needed.

Appendix 3

Participant's Consent Form

Title of the Project: The Prevalence of cyberbullying behaviors among adolescents in secondary schools of Nairobi

• This study is being conducted by an individual student of research methods class at Tangaza University College. • It has been approved by the lecturer (contact: iysma@tangaza.org). • The study involves no known risks to participants and contains no deception. • The task requires the participant to answer a series of questions to examine the cyber bullying and cyber victimization behaviors among students. • All responses will be treated as strictly confidential. No participant's results will be presented individually but only in aggregate form. • Participation in this study is voluntary and there will be no monetary compensation. A refusal to take part will not lead to an individual being penalized in any way, and all participants have the right to withdraw themselves at any time.
Name of the researcher: Jenny Prince Mathew
Position of the researcher: Researcher
Email Address and telephone number of the researcher:jennypmatthew27@gmail.com Phone number +254722 457038
Signed by the researcher:……..Date……..
Statement to be signed by the participant: • I confirm that the organizer has explained fully the nature of the project and the range of activities which I will be asked to undertake and that I have received an information sheet. I confirm that I have had adequate opportunity to ask questions about this project. • I understand that my participation is voluntary and that I may withdraw at any time during the project, without having to give a reason. I agree to take part in this study.
Signature of the participant:……..Date……..

Appendix 4

Students Questionnaire

INSTRUCTIONS

Please answer all the questions honestly and exhaustively. All the information provided will be used strictly for academic/research purpose. All the information provided will be treated with the utmost confidentiality.

Section A: Some personal details

Please give the appropriate information about yourself by ticking or filling where applicable.

1. Your Age ☐ 2. Your Gender (M/F) ☐

3. Your Class ☐ Eg: Year 8, Year 9 & Year 10

4. With whom do you live:

Both Parents (Mother & Father)…… ☐ Single Parent (Either Mother or Father)... ☐
Grandparents…….. ☐ Others…… ☐

Section B: Part 1:General information about Internet Use and Behavior

(please tick all boxes that apply)

5. How often do you use the internet?

☐ Do not use the internet ☐ Once a day ☐ Several times a day
☐ Once a week ☐ Several times a week ☐ Once a month

6. On average, how long do you spend on the internet per week?

☐ 0-5 hours ☐ 5-10 hours
☐ 10-15 hours ☐ 15-20 hours
☐ 20 or more hours

7. Location of computer used most often

☐ In my bedroom ☐ In public space at home ☐ Home office or study
☐ At friend's house ☐ School or library ☐ Other

8. What activities do you use the internet for?

☐ Communicating with friends ☐ Homework/Schoolwork
☐ Internet games ☐ Send pictures
☐ Downloading music, films or programs

9.On Average, how long do you spend time to communicate with your friends?

□Never □ Few times aweek

□Once a day □ More than once a day

10.On Average, how long do you spend time to play online games?

□Never □ Few times aweek

□ Once a day □ More than once a day

11.Have you ever given online passwords to friends: Yes___No____

12. Have you ever bullied another student using mobile phone, laptops or other internet devices?

Yes No

Have you ever been bullied through mobile phone, laptops or other internet devices?

Yes___No

Part 2: The Compulsive Internet Use Scale (CIUS)

Instruction

The following questions should be answered about your use of the internet for private purposes.

	Never	Seldom	Sometimes	Often	Very Often
14. How often do you find it difficult to stop using the internet when you are online?	0	1	2	3	4
15. How often do you continue to use the internet despite your intention to stop?	0	1	2	3	4
16. How often do others (e.g. partner, children, parents, friends) say you should use the internet less?	0	1	2	3	4
17. How often do you prefer to use the internet instead of spending time with others (e.g. partner, children, parents, friends)?	0	1	2	3	4
18. How often do you think you should use the internet less often?	0	1	2	3	4
19. How often do you look forward to your next internet session?	0	1	2	3	4
20. How often do you rush through your (home) work in order to go on the internet?	0	1	2	3	4
21. How often do you neglect your daily obligations (work, school or family life) because you prefer to go on the internet?	0	1	2	3	4

Section C: Cyber bullying and Cyber victimization Scale

The following questions are about a new type of bullying: cyberbullying. Cyberbullying is an aggressive behaviour, as bullying is, perpetrated through an electronic device such as PC or smartphone and Internet: Social Network as Facebook, Instagram, Whatsapp, blog and so on.

Cyberbullying and Online Aggression Survey Instrument

Circle your answer for each question

Cyberbullying Victimization Scale

In the last 30 days, I have been cyberbullied in these ways…

	Never	Once	A few times	Several times	Many times
22. Someone posted mean or hurtful comments about me online	0	1	2	3	4
23. Someone posted a mean or hurtful picture online of me	0	1	2	3	4
24. Someone posted a mean or hurtful video online of me	0	1	2	3	4
25. Someone created a mean or hurtful web page about me	0	1	2	3	4
26. Someone spread rumors about me online	0	1	2	3	4
27. Someone threatened to hurt me through a cell phone text message	0	1	2	3	4
28. Someone threatened to hurt me online	0	1	2	3	4
29. Someone pretended to be me online and acted in a way that was mean or hurtful to me	0	1	2	3	4
30. In the last 30 days, I have been cyberbullied	0	1	2	3	4

Cyberbullying Offending Scale

In the last 30 days, I have cyberbullied others in these ways…

	Never	Once	A few times	Several times	Many times
31. I posted mean or hurtful comments about someone online	0	1	2	3	4
32. I posted a mean or hurtful picture online of someone	0	1	2	3	4
33. I posted a mean or hurtful video online of someone	0	1	2	3	4
34. I created a mean or hurtful web page about someone	0	1	2	3	4
35. I spread rumors about someone online	0	1	2	3	4
36. I threatened to hurt someone through a cell phone text message	0	1	2	3	4
37. I threatened to hurt someone online	0	1	2	3	4
38. I pretended to be someone online and acted in a way that was mean or hurtful to them	0	1	2	3	4
39. I cyberbullied others	0	1	2	3	4

Appendix 5

Tangaza Ethical Approval Letter

TANGAZA UNIVERSITY COLLEGE

The Catholic University of Eastern Africa

DIRECTORATE OF POSTGRADUATE STUDIES & RESEARCH

E-mail: dir.pgsr@tangaza.ac.ke Website: www.tangaza.ac.ke

OUR Ref: DPGSR/ERC/07/2018 **Date:** 30th July 2018

Jenny Prince Mathew
Reg. No. 16/00280
Institute of Youth Studies
Tangaza University College

Dear Ms. Jenny,

RE: The prevalence of cyberbullying and cyber-victimization behaviors in internet usage among adolescent's in Secondary Schools of Westlands's Sub-County, Nairobi County

Reference is made to your request dated *18th July 2018* for ethical approval of your thesis proposal research tools by Tangaza University College Ethics Review Committee.

We are pleased to inform you that your proposal and the research tools have gone through the ethical review committee as requested and the approval has been granted. In line with Tangaza University College Research policy, you will be required to submit a copy of the final research findings to the Director of Research for records.

Before proceeding to the next stage, ensure that all the comments that were made regarding your research tool have been addressed to the satisfaction of your supervisors. Note that it is an offence to proceed without addressing the concerns of the Ethics Review Committee.

This approval is valid for one year from *30th July 2018*.

This approval does not exempt you from obtaining a research permit from the National Council of Science, Technology and Innovation – Kenya (NACOSTI).

Yours sincerely,

TANGAZA COLLEGE
Catholic University of Eastern Africa
P. O. Box 15055 - 00509
NAIROBI

Daniel M. Kitonga (Ph.D)
Director, Post-Graduate Studies & Research

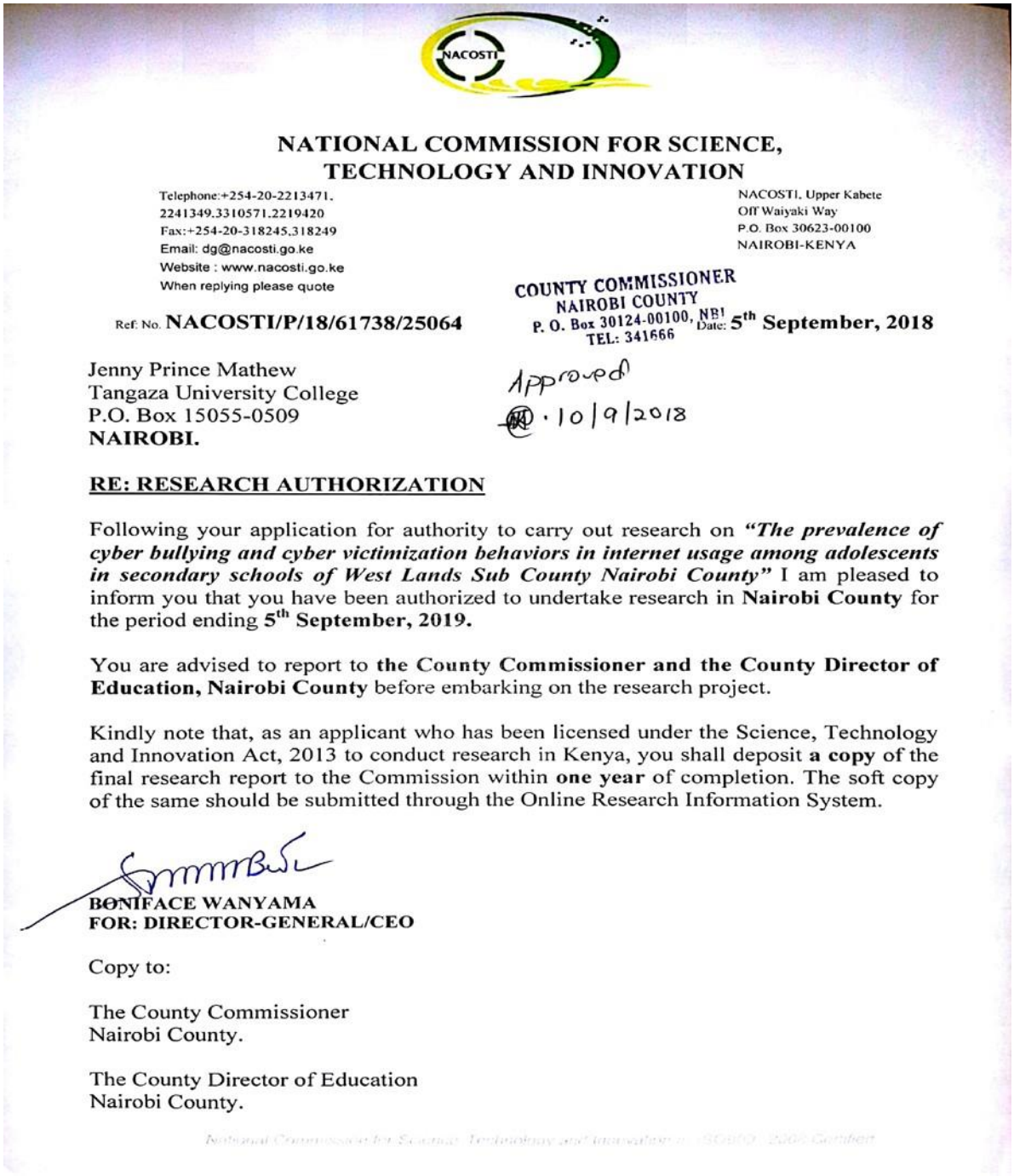
CC:
Ms. Lucy Njiru – Programme Leader, MA in Counseling Psychology

P.O. Box, 15055 - 00509 Langata, Nairobi Kenya
Tel: 254 20 8067667/ 0732 897000/ 0733 685059/ 0722 204724/ 0714 610777

Email: inquiries@tangaza.org
Website: www.tangaza.org

Appendix 6

NACOSTI Research Authorization Letter



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/18/61738/25064**

COUNTY COMMISSIONER
NAIROBI COUNTY
P. O. Box 30124-00100, NBI
TEL: 341666

Date: **5th September, 2018**

Jenny Prince Mathew
Tangaza University College
P.O. Box 15055-0509
NAIROBI.

Approved
10/9/2018

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"The prevalence of cyber bullying and cyber victimization behaviors in internet usage among adolescents in secondary schools of West Lands Sub County Nairobi County"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **5th September, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi 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.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

Appendix 7

Research Authorization letter from Nairobi County Director of Education

Republic of Kenya

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

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

When replying please quote

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

Ref: RCE/NRB/GEN/VOL.1

Date: 10th September, 2018

Jenny Prince Mathew
Tangaza University College
P. O. Box 15055 - 0509
NAIROBI

RE: RESEARCH AUTHORIZATION

We are in receipt of a letter from the National Commission for Science, Technology and Innovation regarding research authorization in Nairobi County on *"The prevalence of cyber bullying and cyber victimization behaviors in internet usage among adolescents in secondary schools of West Lands Sub County Nairobi County".*

This office has no objection and authority is hereby granted for a period ending **5th September, 2019** as indicated in the request letter.

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

NAIROBI
10 SEP 2018

RHODA MWEI
FOR: REGIONAL COORDINATOR OF EDUCATION
NAIROBI

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

Appendix 8

Research Authorization letter from Westlands Sub – County Director of Education

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EDUCATION

Telegrams: '**SCHOOLING**", Westlands
Telephone :
When replying please quote
Our Ref:

SUB-COUNTY EDUCATION OFFICE
WESTLANDS SUB-COUNTY
P.O BOX 13788-00800
NAIROBI.
12TH, SEPTEMBER 2018

THE PRINCIPALS
SECONDARY SCHOOLS
WESTLANDS SUB-COUNTY

RE: RESEARCH AUTHORIZATION

The bearer of this Letter: **Jenny Prince Mathew, Tangaza University College** has been authorized to carry out research on ***"The prevalence of cyber bullying and cyber victimization behaviors in internet usage among adolescents in secondary schools of Westlands Sub-county, Nairobi County."***

Kindly accord her the necessary assistance.

FOR SUB COUNTY DIRECTOR OF EDUCATION - WESTLANDS
Date: 12/9/2018
Sign:

JULIUS MBURU KIMANDO
SUB-COUNTY DIRECTOR OF EDUCATION
WESTLANDS

Appendix 9
NACOSTI Research Permit

THIS IS TO CERTIFY THAT:
MS. JENNY PRINCE MATHEW
of TANGAZA UNIVERSITY COLLEGE,
19023-00501 Nairobi,has been
permitted to conduct research in
Nairobi County

on the topic: *THE PREVALENCE OF CYBER BULLYING AND CYBER VICTIMIZATION BEHAVIORS IN INTERNET USAGE AMONG ADOLESCENTS IN SECONDARY SCHOOLS OF WEST LANDS SUB COUNTY NAIROBI COUNTY*

for the period ending:
5th September,2019

.....
Applicant's
Signature

Permit No : NACOSTI/P/18/61738/25064
Date Of Issue : 5th September,2018
Fee Recieved :Ksh 35000

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

CONDITIONS

1. The License is valid for the prbposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

National Commission for Science,
Technology and Innovation

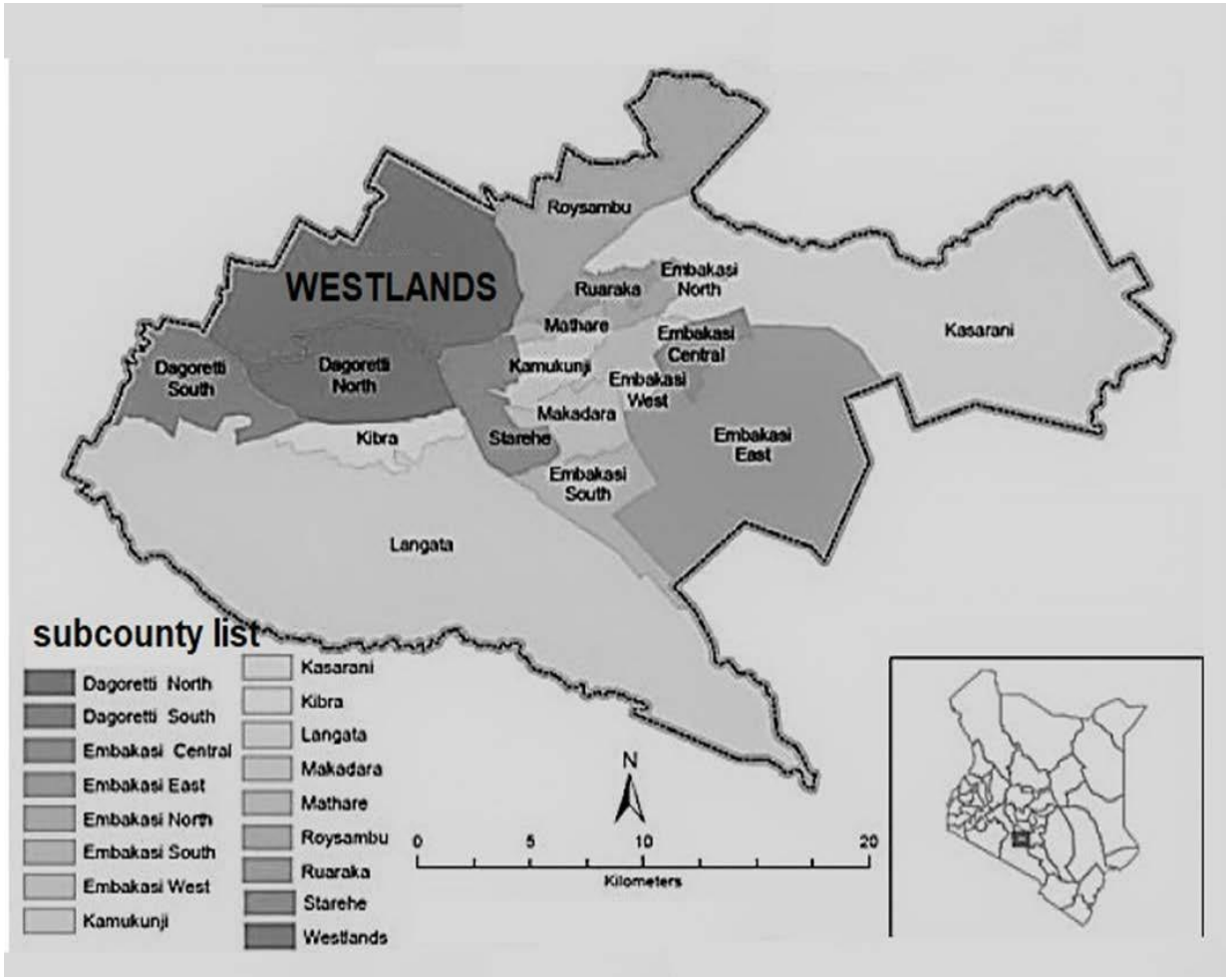
RESEARCH CLEARANCE PERMIT

Serial No.A 20390

CONDITIONS: see back page

Appendix 10

Map of Nairobi County with indication of Westlands Sub-County



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Appendix 11
Plagiarism Report

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Analyzed document: 2/19/2019 12:22:07 PM

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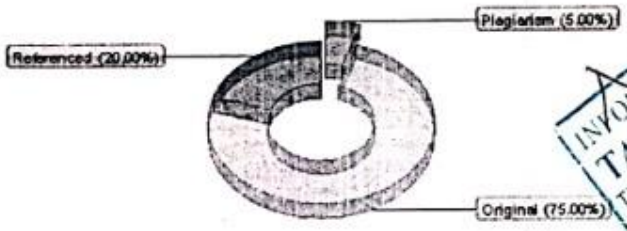

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