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The Prevalence of Cyberbullying and Cyber-Victimization Behaviours in Internet Usage among Adolescents in Secondary Schools of Westlands Sub-County, Nairobi, Kenya

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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 traditional 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 among Nairobian adolescents, 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. 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 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. 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 intervention strategies in raising awareness among the adolescents in family as well as in educational settings.

Keywords: *Adolescents, Cyberbullying behaviors, Cyber-victimization behaviors, Internet Usage, In-School Students*

1. Introduction

1.1. Background of 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).

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 cyber bullying 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 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. 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). Meanwhile 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). 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 et al, 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 predominant. 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 Okoth (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 cyberbullying 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

As the digital age perpetuates to unfold, the advancement of internet technological use along with the newnessof 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). 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. 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 students studying in different private schools in Westland's 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. 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, school environment, community levels and informing policy makers for a more proactive preventive efforts.

1.3. Purpose and Objectives of the Study

The purpose of this study was to establish the extent of CB/CV behaviors with internetusage in secondary schools of Westland's Sub-county, Nairobi County.
More specifically, the objectives of the present study were:
- To investigate if the internet usage among in-school adolescents is associated with the participation in cyberbullying and victimization behaviors.
- To examine in terms of age and gender among the in-school adolescents, the tendency toparticipate in internet usage and cyberbullying and cyber-victimization behaviors.

2. Literature Review

2.1. Current Trends on Cyberbullying

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. 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 (Chao & Yu, 2017). 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 et al, 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.

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).

There are many research studies conducted on traditional 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 (Okoth, 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, Mukhngo & Chebii, 2017). Consequently the research evidences cited in other studies offers the impetus for this current study particularly due to the grave implications cyberbullying behaviors can have on today's adolescents and ultimately to discover the extent of the problem.

3. Method

3.1. Research Design and Study Population

The research design that this study adopted was a descriptive survey design as its structured design is preplanned with the intention of the researcher to collect numerical data in the form of questionnaires through quantitative research approaches. The study population included all the available in-school learners of the 3 grades from grade 8 to grade 10 from the sampled international secondary schools of Westland's Sub-county and they were sampled using simple random sampling technique. A total of 232 school students from the two schools (53.4% male, 46.6% female: Mean age = 14.8, SD = 1.3) participated in the study after the parental consent was obtained. 33.6% were in Grade 8, 29.7% were in Grade 9 and 36.6% were in Grade 10 indicating a minimum error in sampling.

3.2. Instrument

A single survey questionnaire consisting of three sections was used as the instrument to obtain information from the study participants. The first part of the questionnaire was intended to collect participants' demographic characteristics such as age, gender, grade and family pattern.

3.2.1. 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.The psychometric properties of the Compulsive Internet Usage Scale has good reliability scores of α = .89 and very high internal consistency of RMSEA= .053 - .084 and CFI = .966 - .984 (Meerkerk, Franken, Garretsen & Van den Eijnden, 2009).

3.2.2. 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). 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 were 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).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.

3.3. Data collection Procedure

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 and then research permit was obtained from National Commission for Science, Technology and Innovation (NACOSTI). The principals of the schools approved of the study to be conducted with their students.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. The students with parental consent were given a short rationalization concerning the aim and purpose of the study and were assured of confidentiality prior to the administration of the questionnaire.

4. Results and Discussion

4.1. Internet Usage among In-School Adolescents

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	

Table 1: internet Usage Behavior
Note: F = Frequency

The results on internet usage behavior are summarized in Table 1. 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 1 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.

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.

4.2. Participation in Cyberbullying and Cyber-Victimization Behaviors

The results of participation in cyberbullying and victimization behaviours were summarized in Table 2.

		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	

Table 2: Participation in Cyberbullying and Cyber-Victimization Behaviours
Note: F = Frequency

Overall, 14% (n = 33) indicated that they have ever bullied another student online. Whilstcyberbullying 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 2 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.

4.3. 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 Table3.

	Internet Usage and Behaviour	Cyberbullying Victimization	Cyberbullying Perpetration
Internet usage and behaviour	1		
Cyberbullying victimization	-0.005	1	
Cyberbullying perpetration	-0.007	.367**	1

Table 3: Pearson's Correlation Showing Association between Internets
Usage and Participation in Cyberbullying and Cyber-Victimization Behaviors
*Note: N=232, ** Significant at A=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.

4.4. 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.

Parameters		Participation in Cyberbullying Perpetration		Participation in Cyberbullying Victimization	
		β	p-value	B	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	

Table 4: Linear Regression Analysis Showing the Influence of Gender and
Age on the Internet Usage and Participation in Cyberbullying Perpetration and Victimization
Note: B Is the Regression Coefficient; Reference Is the Value of the Comparison
Group; LSD- Least Significant Difference

The results of Table 4 indicate that internet usage has no relationship with participation in cyberbullying perpetration (β = -.005, p > .05) and participation in cyberbullying victimization (β = -.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.

5. 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.

5.1. 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 colleague (2017) in a study of cyberbullying among adolescents in Taiwan.

Studies by Hinduja and Patchin (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 in schools to recognize their vulnerabilities and identify protective factors for both bullies and victims of cyberbullying experiences.

5.2. 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 (Aricak, 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 students 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, Roumeliotis & Xu, 2014).

Goddard (2008) on the other hand suggests that girls are more enticed by cyberbullying 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. 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 and colleagues (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, Mahdavi, Carvalho, Fisher, Russell & Tippett, 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 ofcyberbullying and cyber-victimization behaviors.

6. 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.

7. 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.

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