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Cyber Bullying: Media Used and Generalised Self-Efficacy among High School Adolescents in Gilgil Sub-County, Kenya

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Abstract:

The goal of this study was to explore media used in cyber bullying in relation to generalized self-efficacy among high school adolescents. In particular, the study examined cyber bullying from four perspectives: (a) What is the extent of using certain media in cyber bullying?(b) Is there gender difference in media used in cyber bullying?(c) Is there age difference in the media used in cyber bullying?(d) What is the influence of cyber bullying media on the generalized self-efficacy? Data was collected from 385 high school students from 6 schools. The study found Facebook and WhatsApp to be the popular media of cyber bullying. Findings indicated no statistically significant age or gender difference in the use of text messages, email, WhatsApp, Facebook and Chat rooms. The present study indicated that the use of certain media in cyber bullying affect the psychological wellbeing of the adolescents and sets a stage for future studies to be conducted to help eradicate cyber bullying.

Keywords: Bullying, cyber bullying, media, self-efficacy, perpetration, victimization

1. Introduction

In the last decade, there has been a tremendous growth in technology; that has given way to accessibility of relatively affordable communication gadgets. Approximately, 70% of Kenyan adolescents have access to an internet-enabled phone on a daily basis. These devices are intended to afford a means to access sources of knowledge, entertainment and for establishing and maintaining relationships. In addition, Kenya has a high internet penetration of 85% and approximately 44 million internet users. Unfortunately, cyber bullying has turned the cyber world into a hostile environment that place vulnerable adolescents at risk. A thorough understanding of the media of cyber bullying is crucial so that intervention measures to curb the effect of cyber bullying can be put in place.

1.1. Related Literature on Media Used in Cyber Bullying

Different media are used to carry out cyber perpetration, Elledge et al., (2013) suggest that the effects of cyber bullying should be assessed by examining the medium used to perform cyber bullying. Rigby and Bortolozzo (2013) points out that the importance of considering the medium is because of the implication it has on publicity. Medium and publicity have been found to affect pro-victim attitudes and coping strategies. Smith et al., (2008) reported that the cyber bullying media to include social networking sites, phone calls, text messages, emails, picture/video clip, instant messaging, websites and chatrooms.

Social networking sites are websites where individual post their profiles complete with pictures, interests, hobbies and experiences (Kowalski et al., 2008). Facebook, Skype, Instagram, Snapchat and Twitter are social networking sites that have grown in popularity, worldwide (Adreassen, Pallesen & Griffiths, 2017). A study by Hawi and Samaha (2016) indicated that 33% of the world's population is active on social network sites. Lenhart (2015) study, among 1060 teens in America found that 92 % of the teens indicated going online daily with 24% constantly being online. Woods and Scott (2016) found that 90% of adolescents reported being active online, day and night. Baldry, Farrington and Sorrentino (2017) found 99% of the sample of 2785 Italian students had access to the internet on a daily basis and 83.1% had at least one profile on a social network site. Studies indicated long duration and high frequency on the social networking sites may give the adolescents an opportunity to engage in cyber bullying (Lenhart, 2015; Barlett et al., 2014). Social networking sites provide a window on "youth culture" by allowing the adolescents to see who is doing what, where and with whom. These sites can help individuals find old friends and stay in touch with family members. However, frequent comparison of adolescents with their peers on the sites may bring a sense of competition which may provoke jealousy and egotistic behaviour that can eventually lower their self-esteem levels. Females are more likely to be online for social purposes than males, increasing their likelihood of cyber bullying in social network sites (Sticca Ruggieri, Alsaker & Perren, 2013).

In addition, the use of social networking sites poses a threat to the psychological well-being of the adolescents. Inappropriate pictures and humiliating messages can be posted on these sites so that anyone who is on the cyber victim's 'friends list' can see. Pew Internet & American Life Project (2013) reported that there exists an age difference in the way the adolescents share information on their social media sites, older teens aged 14- 17 years, more frequently post their photos (94%) than younger teens aged 12-13 years (82%). Females spend more time on social networking sites than males (Kittinger, Correia & Irons, 2012). Studies suggest that the longer the duration of time spent interacting and sharing personal information online, the greater the likelihood of becoming a cyber victim (Sampsa-Kanyinga & Lewis, 2015; Tsitsika et al., 2015). There is evidence that more time spent on social media is related to low levels of self-esteem (Vogel, Rose, Eckles & Franz, 2015). However, Raymer (2015) found no relation between the amount of time spent on social networking sites and self-esteem in a study that investigated effects of social media on self-esteem among college students aged 18 years and above, in a middle-sized university in northeast USA. The study posed two methodological limitations, first, the sample size was small (n= 40). Secondly, the study used only students enrolled in one course from one university. The current study overcame these limitations by using a large sample of adolescents and including multiple class levels from different schools in the final sample.

Instant messaging is another common media used in cyber bullying and it refers to real-time interacting via the internet with individuals on one's contact list (Juvoven & Gross, 2008). Using this medium, perpetrators can send nasty messages to their peers. At the same time, the cyberbully can use the victim's screen name to send messages to others. A common form of instant messaging service for smart phones is "WhatsApp" messenger. WhatsApp is a cross-platform mobile messaging app which allows users to exchange messages (O'Connell, 2014). According to WhatsApp Inc. (2017), this free service uses the internet to make voice calls, one to one video calls, send text messages, documents, images, audio files and voice notes to other users using standard cellular mobile numbers. Each user can indicate one's status also upload photos and videos anytime which become visible to other users.

Participation in chatrooms also increases the vulnerability of cyber bullying because participants are likely to engage in conversation with strangers (Notar et al., 2013). Electronic mail (e-mail) is a widely used means of digital communication and unfortunately a commonly used method of cyber bullying (Conway, 2009). Cyber perpetrators forward hurtful messages including embarrassing pictures to many people to humiliate the victim. In addition, cyber bullies can harass cyber victims using multiple identities and multiple e-mails addresses (Kowalski et al., 2008). According to a website nobullying.com (2016), Ask.fm was developed as a web page for anonymous users to post questions and answers online. On this online platform, the users can tag other users. The ability to send anonymous messages in Ask.fm enabled it to become popular as a medium of cyber bullying among the adolescents (Leyden, 2017). Sarahah is a more recent web application that has recently emerged and has become very popular among the teenagers, worldwide (Leyden, 2017). Users get personal web pages that others can anonymously write suggestions or compliments. This web application was intentionally developed to allow people to send and receive anonymous feedback from friends and co-workers (Leyden, 2017; Notopolous, 2017). The anonymity characteristic was supposed to promote honesty and positive criticism. Unfortunately, the web application has been extensively used for flaming and other forms of cyberbullying (Notopolous, 2017).

Other popular tools among adolescents are blogs, also referred to as weblogs. Blogs are regularly updated web pages containing the user's personal experiences, opinions and observations. These online journals are intended to be used for positive functions but unfortunately can be used as a tool for cyberbullying. A cyberbully can use a blog to write derogatory thoughts about a cybervictim (Anderson & Sturm, 2007). A cyberbully can post mean comments about the cybervictim's entries or take the cybervictim's blog comments out of context, quoting the cybervictim's personal thoughts in the cyberbully's own blog (Anderson & Sturm, 2007). Websites which are mostly created for enriching businesses or for positively expressing personal information sadly can also be used as a media for cyberbullying. In some cases, web pages are created strictly for the purpose of posting offensive information and/or pictures about other individuals (Kowalski et al., 2012).

Text messaging is another method used to cyber bully because it is cheap, quick and popular among the adolescents (Conway, 2009). A bully can send a horrible message about a victim to all the contacts on the cyber bully's contact. Text messaging can involve taking photos with cell phones and sending these photos to others with an intention to hurt the victim (Kowalski et al., 2012). A British study, among students aged 11 to 15 years indicated that bullying through text messages and emails was more common than other forms of cyber bullying (Public Health England, 2017). The findings were consistent with (National Center for Education Statistics, 2015) that reported text messaging to be the most popular medium.

According to Smith et al., (2008), bullying through posting pictures and video clip had a more negative effect on the victims while chatrooms had the least effect. In addition, the study found bullying through text message, emails, instant messaging and phone calls had a similar effect on the victim as offline bullying. Smith et al., (2008) argued that video clips and pictures may capture more attention and be available to more audience especially when posted on popular social media sites (like you tube). The study further argued that the audience on phone bullying and instant messaging bullying are only limited to those on the bully's phone list or profile and the friends, therefore, causing a lesser effect. However, frequent harassment through instant messaging has been found to cause fatal outcomes. According to nobullying.com (2016), seven teens committed suicide due to being bullied on Ask.fm. Slonje and Smith (2008) study among 12 to 20 years old Swedish students from four different schools, found that gender for any cyberbullying media was not statistically significant although girls were found to experience more cyberbullying through emails more than boys. The study investigated cyberbullying through text messages, emails, mobile phones/pictures or videos, in and out of school.

A study in South Africa by Odora and Matoti (2015), with a sample of 346, Grade 11 and 12 high school students, indicated that there were age differences in the media used in cyberbullying behaviours. Odora and Matoti (2015) study reported that cyberbullying took place more on the computers than through mobile phones. In contrast, another South African study by Tustin and Zulu (2012) indicated that most cyberbullying took place through cell phones by text messages and social network sites. Tustin and Zulu (2012) study found that 14.7% in a sample of 346 learners used their cell phone to bully other learners. A study by Sam, Bruce, Agyemang, Amponsah and Arkorful (2017) in Ghana found the least used cyberbullying media was emails (32.3%) and the most common was text messages (72.3%) having experienced it at least once in the last six months.

Among the Kenyan adolescents, social media websites have become popular platforms for building new relationships and networking. Related studies in Kenya indicate that increased use of social media has elevated cyberbullying (Kamau, 2016; Nyaga et al., 2015; Serede, 2015; Ochura, 2014). To support this, Kigen et al., (2014) revealed a remarkable increase in cyberbullying in Kenya from 2013 particularly on the number of criminal offences related to social media websites. In addition, the study found text messages, emails, social networking sites, blogs and websites, to be popularly used among the youth in Kenya.

Reviewed studies in Kenya have investigated the popularity in the usage of certain media of cyberbullying (Kigen et al., 2014; Ochura, 2014) but little has focused on accessing the influence of cyberbullying media on the generalized self-efficacy of the Gilgil adolescents. However, the current study set out to bridge this gap.

1.2. Generalized Self-Efficacy

Generalized self-efficacy is one's belief in one's overall competence to effect required competence across a wide range of achievement situations (Judge, Erez, Bono & Thoresen, 2002). Similarly, according to Judge et al., (2002) generalized self-efficacy is a judgment of how well one can perform across a range of situations. Indeed, one's appraisal on success is related to high self-esteem (Chen, Gully & Eden, 2001). According to Bandura's Social Cognitive Theory (1997), self-efficacy influences the choice one makes and the courses of action one takes. The choice one makes may be due to the confidence one feels about the ability to do certain things. Feeling confident makes an individual to approach difficult tasks as challenges to be mastered rather than as threats to be avoided (Pajares & Schunk, 2001). Self-efficacy determines the efforts one will expend on an activity and how long one will persevere when confronted with obstacles and how resilient one will be in the face of adverse situations (Pajares & Schunk, 2001).

Studies have found a direct link between peer victimization and low self-efficacy (Kokkinos & Kipritsi, 2012; Erath, Flanagan, Bierman & Tu, 2010). A study by Oleinik-Shemesh and Heiman (2016) in Israel found cyber victimization strongly correlates with self-efficacy. Most of the studies reviewed have investigated the popularity in usage of certain media in cyberbullying (O'Moore & Minton, 2009; Hinduja & Patchin, 2008; Smith et al., 2006) but little has focused on accessing the influence of the media on the generalized self-efficacy of the adolescents. However, the researchers in the current study sought to find the influence of cyberbullying media to generalized self-efficacy among the high school adolescents in Gilgil Sub-county.

1.3. Research Questions

- What is the extent of using certain media in cyberbullying?
- Is there gender difference in the media used in cyberbullying?
- Is there age difference in the media used in cyberbullying?
- What is the influence of cyberbullying media on generalized self-efficacy?

2. Theoretical Framework

Social cognitive theory proposed by Albert Bandura, provides a framework for understanding, predicting and changing human behaviour (Bandura, 1978). The theory posits that both personal factors and environmental factors can affect the development of an individual's behaviour (Bandura, 1978). In support of the theory Xiao and Wong (2013) proposed a model that predicts that cyberbullying behaviour could be predicted by personal factors (internet self-efficacy, motivation, previous victimization online, age and gender) and environmental factors (social influences and environmental stresses).

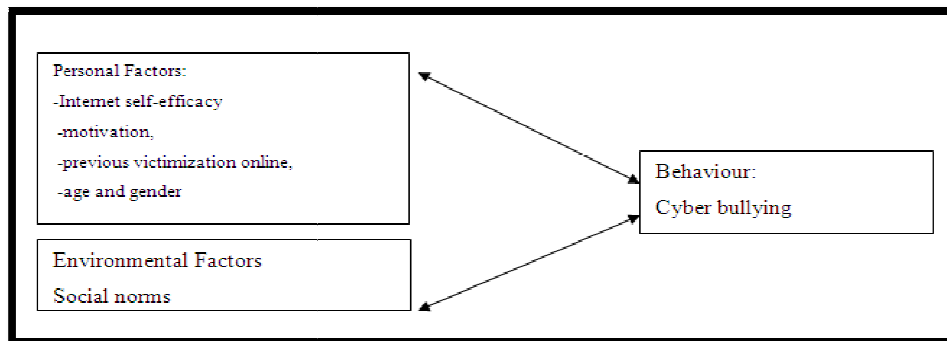


Figure 1: Illustrates the Xiao and Wong (2013) Model of Cyberbullying

2.1. Method

This was a mixed method study; the quantitative approach utilized an ex post facto, cross-sectional survey design. Focus group comprising of seven students discussed items on the related variables. The quantitative data was collected from 385 randomly selected from 6 high schools in Gilgil sub-location. To increase the rate of return, in each participating schools, the data collection took place in one location, in one hall (classroom) and the questionnaires were collected immediately the exercise was completed.

The study was conducted in accordance to the ethical principles. There was acquisition of the ethical approval from the national research body, NACOSTI, the County office, the County Education office and the participating schools. The teachers gave consent because most respondents were minors, but the respondents were informed that participation was voluntary.

2.2. Measures

Data was collected using self-report questionnaire that included a scale on generalized self-efficacy items, demographic and cyberbullying items. The study adopted the New General Self-Efficacy Scale (NGSE) by Chen, Gully & Eden (2001). The scale is a five-point Likert scale that requires the respondents to indicate their level of agreement with a rating of 1= Strongly Disagree, 2= Disagree, 3= Not sure, 4= Agree, 5=Strongly Agree. The summed score ranges from eight to forty with high scores indicating high generalised self-efficacy. The scale has a high internal consistency of alpha equals to 0.86 and a test re-test analysis has yielded high stability coefficient of 0.90 (Chen, Gully & Eden, 2001). The present study found the NGSE to have a Cronbach's coefficient of $\alpha = 0.852$. The cyberbullying tool consisted of some statements that were self-report measures with a 5-point Likert scale, with a rating of 1=Never, 2= once or twice, 3= a few times, 4=many times, 5= every day for items on media used in cyberbullying. The Cronbach coefficient computed for the cyberbullying items in the present study was found to be $\alpha = 0.706$.

3. Results and Discussion

The sample had a balanced gender ratio, an average age of 16 years with a standard deviation of 1.26. The respondents were asked to indicate what kind of phones they own. This was to assess the ownership and the functioning of the phones in terms of internet accessibility. The respondents were to indicate if they owned phones that could "only text", "text and go online" or had "no phones". The respondents were asked to respond to the statement; On a typical day how many hours do you spend online either on the phone or computer? The duration of time that the respondents spent online was categorised in three groups, "1 hour or less", "2 hours" and "3 hours and more". A cross-tabulation was done between the kind of phone owned and time spent online. Subsequently, a Chi-square test of Independence was then tested to explore the relationship between the kind of phone owned and time spent. The findings on the cross-tabulation are presented in Table 1.

Kind of Phone		Time Spent Online			Total
		1 hour or less	2 hours	3 hours & More	
Text	Frequency	32	11	19	62
	% Within Phone Ownership	51.60%	17.70%	30.60%	100.00%
	% Within Time Spent Online	28.80%	9.60%	11.90%	16.10%
Text & Online	Frequency	66	96	132	294
	% Within Phone Ownership	22.40%	32.70%	44.90%	100.00%
	% Within Time Spent Online	59.50%	84.20%	82.50%	76.40%
No Phone	Frequency	13	7	9	29
	% Within Phone Ownership	44.80%	24.10%	31.00%	100.00%
	% Within Time Spent Online	11.70%	6.10%	5.60%	7.50%
Total	Frequency	111	114	160	385
	% Within Phone Ownership	28.80%	29.60%	41.60%	100.00%
	% Within Time Spent Online	100.00%	100.00%	100.00%	100.00%

Table 1: Cross-Tabulation of Respondents Phone Ownership and Time Spent Online

Data in Table 1 indicates the modal class in phone ownership was those who owned phones that could be used to text and go online (76.4%) as compared to those who had phones that were not internet enabled, (16.1%) or those who did not own phones (7.5%). This was consistent with findings from a study by Serede (2015) among 365 high school students in Nairobi County that found approximately 70% of the study sample owned or had access to a smart phone on a daily basis.

Regarding the number of hours, the respondents spent online, on a typical day, data on Table 1 indicates that the largest proportion of the respondents (41.6%) reported spending three hours or more when compared to those who spent two hours (29.6%) or one hour or less (28.8%). These findings indicate that a large number of the respondents spent three hours or more online. These findings are consistent with Njoroge (2013) study that suggested that Kenyan adolescents spend a lot of hours online on a daily basis. Similarly, Wanjohi (2014) in a study that investigated social media on college students in Nakuru County reported that 63.2% of the sample spent a lot of hours (compulsive use) on Facebook, in a typical day.

The largest proportion that indicated spending 3 hours or more online on a daily basis were those who owned phones that were internet enabled (82.5%). Considering that the present study sample comprised of day school students, it is possible that those who do not own internet-enabled had access to one from other family members at home. Interestingly, those who owned no phones indicated the least percentage in all durations of the time spent online (1 hour, 2 hours, 3 hours or more). Those who owned an internet enabled phone spent more time online because they had access to the internet anytime, anywhere and for long periods. A chi square test of independence indicated a significant association between phone ownership and time spent online $\chi^2(1, n=385)=25.389, p=0.0, \text{Cramer's } V=0.18$.

The respondents were required to indicate their point of internet access. The findings on the point of internet access was cross-tabulated with the duration of time that the respondents spent online; "1 hour or less", "2 hours" and "3 hours and more". A Chi-square test of Independence was then tested to explore the relationship between the point of internet access and duration of time that the respondents spent online.

Point of Internet Access		Time Spent Online			Total
		1hour or less	2 hours	3 hours & More	
Home Computer	Frequency	25	13	19	57
	% Within Internet Access	43.90%	22.80%	33.30%	100.00%
	% Within Time Spent Online	22.50%	11.40%	11.90%	14.80%
Cyber	Frequency	16	35	35	86
	% Within Internet Access	18.60%	40.70%	40.70%	100.00%
	% Within Time Spent Online	14.40%	30.70%	21.90%	22.30%
Phone	Frequency	70	66	106	242
	% Within Internet Access	28.90%	27.30%	43.80%	100.00%
	% Within Time Spent Online	63.10%	57.90%	66.20%	62.90%
Total	Frequency	111	114	160	385
	% Within Internet Access	28.80%	29.60%	41.60%	100.00%
	% Within Time Online	100.00%	100.00%	100.00%	100.00%

Table 2: Cross-Tabulation of Respondents by Point of Online Access and Time Spent Online

As shown in Table, 2 a large proportion of the respondents (62.9%) reported accessing internet through mobile phones as compared to those who accessed through computers at home (14.8%) or computers at cyber cafe (22.3%). These findings are in line with findings in Table 1 that indicated that most of the adolescents have phone that are internet enabled. Similarly, a previous study by Njoroge (2013) indicated that majority of the adolescents access the internet through the mobile phones as compared to computers at home or school or in the cyber cafe. More respondents used the cyber cafes than the home computers may be because the former are less expensive.

As expected, those who used their phones as their point of internet access indicated the highest percentage in all the durations of the time spent online (1 hour, 2 hours, 3 hours or more). This may demonstrate that the portability of phones increases the time spent online. A Chi-square test of independence indicated a significant association between point of internet access and time spent online $\chi^2(1, n=385)=13.730, p=0.0, \text{Cramer's } V=0.18$.

3.1. Media of Cyber Bullying among the Adolescents

The study sought to find out how popular different media of cyber bullying was among the respondents who engaged, experienced or witnessed cyber bullying. Using the Key "Never" "once or twice", "a few times", "many times", or "every day", the respondents indicated how often they used certain media of cyber bullying. The data collected was then coded such that "once or twice" was considered as rare, "a few times" was coded as occasional and "many times" and "everyday" were regarded to as common. The findings on the cross-tabulation between frequencies and media of cyber bullying are presented on Table 3.

	Media of Cyber bullying									
	Text Messages		Email		Whats App		Facebook		Chat Room	
	n	%	n	%	n	%	n	%	n	%
Never	209	54.3	226	58.7	198	51.4	193	50.1	331	86
Rare	70	18.2	78	20.3	27	7	35	9.1	40	10.4
Occasional	58	15.1	34	8.8	38	9.9	38	9.9	13	3.4
Common	48	12.5	47	12.2	122	31.7	119	30.9	1	0.3
Total	385	100	385	100	385	100	385	100	385	100

Table 3: Distribution of Respondents by Media of Cyber Bullying

Note. N =Frequency

As shown on Table 3, among those who occasionally engaged or experienced cyber bullying, the largest proportion was those who used text messages (15.1%) then Facebook and WhatsApp which had similar percentages of 9.9% and the least was Chat rooms. Whats App has been become a popular means of communication among the youths because of the special features of being able to send video and audio to other users. In addition, WhatsApp uses internet bundles that are cheaper than airtime. This may explain the popularity as a media of cyber bullying. According to data in Table 3, the commonly used media was Facebook (49.9%), WhatsApp (48.6%) and text messages (45.7%). Chat room had the least number of respondents. Looking at the distribution on Table 3, there seems to be an overlap indicating that cyber bullying was sometimes through a combination of some media.

In the qualitative study, when responding to the items "What do your friends use to cyber bully? The highest proportion of respondents indicated that they used WhatsApp followed by Facebook, a small number indicated text messages and the least used was emails and chat rooms. When the respondents were asked to indicate which cyber bullying media was most popular, majority indicated both WhatsApp and a few indicated Facebook. The focus group members indicated that WhatsApp was popular because it is more interactive and cheaper than other media. With WhatsApp, one is able to call, chat and video chat using internet bundles that are cheaper than using airtime bundles. The focus group findings were consistent with the quantitative findings.

Contrary to the present findings, some previous studies indicated that text messaging was the most popular medium (National Center for Education Statistics, 2015; National Center for Education Statistics, 2013; Hinduja & Patchin, 2008; Cross, Epstein, Clark & Lester, 2008; Smith et al., 2006). Conway (2009) argues that text messaging is popular because it is cheap and quick. Boys Town (2010) reported that emails were most popular with 46% having used this media, 44% used online chat rooms, 43% used social network sites and 41% used text messages through phones. May be due to change in technology, WhatsApp has overtaken text messaging and other means that were popular in the past

To determine the proportion of males and females on the media of cyber bullying, descriptive statistics between gender and the frequency of the cyber bullying media were examined. The distribution is presented on Table 4.

	Cyber Bullying Media									
	Text Messages		Email		WhatsApp		Facebook		Chat Room	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
At Least Once	89	87	75	84	92	95	92	100	28	26
Never	104	105	118	108	101	97	101	92	165	166
Total	193	192	193	192	193	192	193	192	193	192

Table 4: Cross-Tabulation between Gender and Cyber bullying Media

Gender was compared in the cross-tabulation between frequency and the different media. Data on Table 4 indicates that in cyber bullying, more females used WhatsApp, Facebook, and emails while more males used text messages and chat rooms. Similarly, a study by Boys Town (2010) found that chat rooms were more popular among the male respondents than the females. These findings are inconsistent to Thorp (2004) study that indicated that more females prefer to use chat rooms to bully others as compared to males.

The current study further sought to test if the gender difference in the use of the various cyber bullying media was significant. Preliminary test for normality indicated that the data on cyber bullying media was normally distributed. Therefore, the Independent-sample T-test was computed to test the difference between the two independent measures (male and female) on cyber bullying media. The findings are presented on Table 5.

	Levene's Test for Equality of Variances		T-Test For Equality of Means				Std. Error Difference	95% Confidence Interval	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference		Lower	Upper
	Text messages	1.904	0.168	0.853	383	0.394		0.109	-0.143
			0.854	376.91	0.394	0.109	-0.143	0.361	
email	0.017	0.897	-0.614	383	0.54	-0.077	-0.324	0.17	
			-0.614	381.08	0.54	-0.077	-0.324	0.17	
Whats App	2.077	0.15	0.274	383	0.784	0.045	-0.276	0.366	
			0.274	381.45	0.784	0.045	-0.276	0.366	
Facebook	9.068	0.003	0.78	383	0.436	0.123	-0.187	0.432	
			0.78	381.11	0.436	0.123	-0.187	0.432	
Chat room	0.721	0.396	-0.337	383	0.736	-0.017	-0.113	0.08	
			-0.337	377.62	0.736	-0.017	-0.113	0.08	

Table 5: Independent-Sample T-Test between Gender and Media of Cyber Bullying

Data on Table 5 indicate that the p values between gender and the various cyberbullying media (text messages ($p=0.394$), email ($p=0.54$), WhatsApp ($p=0.78$), Facebook ($p=0.43$) and $p=0.73$ for chat rooms) are all greater than $p=0.05$. Therefore, there is no significant gender difference in the use of the different cyberbullying media.

In spite of previous studies (Ochura, 2014; BoysTown, 2010; O'Brien & Moules, 2010), having provided important information on the popularity of media used in cyberbullying, they did not investigate if age difference existed. However, the current study sought to find out if there was significant age difference in use of the each of various media of cyberbullying (text messages, email, WhatsApp, Facebook, chat rooms). A One-Way Between-Groups ANOVA was used to test the age difference. The test also allows comparison of scores on a categorical variable for three or more groups whereby in this case it was three age clusters (15 years and below, 16-17 years, 18 years and above). The findings are presented on Table 6.

		Sum of Squares	df	Mean Square	F	Sig.
Text messages	Between Groups	2.884	2	1.442	.911	.403
	Within Groups	604.493	382	1.582		
	Total	607.377	384			
Email	Between Groups	2.473	2	1.236	.817	.443
	Within Groups	578.161	382	1.514		
	Total	580.634	384			
Whats App	Between Groups	.110	2	.055	.021	.979
	Within Groups	982.763	382	2.573		
	Total	982.873	384			
Facebook	Between Groups	.252	2	.126	.053	.949
	Within Groups	915.109	382	2.396		
	Total	915.361	384			
Chat room	Between Groups	1.475	2	.737	3.232	.41
	Within Groups	87.159	382	.228		
	Total	88.634	384			

Table 6: A One-Way Between-Groups ANOVA Test between Age and Cyberbullying Media

Data on Table 6 indicates that p values in the One-Way Between-Groups ANOVA between each of various media of cyberbullying (text messages, email, WhatsApp, Facebook, Chat rooms) and age were greater than $p=0.05$. Therefore, there was no statistically significant age difference in the use of text messages, email, WhatsApp, Facebook, Chat rooms.

Media of Cyber Bullying		Generalized Self- Efficacy
Email	Pearson Correlation	-.253**
	Sig. (2-Tailed)	.000
Text Message	Pearson Correlation	-.218**
	Sig. (2-Tailed)	.000
Whats App	Pearson Correlation	-.332**
	Sig. (2-Tailed)	.000
Facebook	Pearson Correlation	-.358**
	Sig. (2-Tailed)	.000
Chat Room	Pearson Correlation	-.172**
	Sig. (2-Tailed)	.001

Table 7: Relationship between Media Used in Cyberbullying and Generalized Self-Efficacy

Note: N=385

The correlation between the different media used in cyberbullying was negative but significant at $p=0.05$, however, the relationship was weak. Table 7 indicate that Facebook had a greater influence on generalized self-efficacy and chat rooms had the least. These findings were consistent to (Smith et al., 2008). Facebook allows aural and visual content which may capture more attention, be available to more audience and be viewed, repeatedly.

3.2. Summary

The study findings revealed that the most commonly used media of cyberbullying was Facebook followed by WhatsApp while the least used was Chat rooms. Facebook and WhatsApp are popular communication means among the adolescents. This may signify that the more a medium is popular as a means of communication, the more the likelihood of being used in cyberbullying. In addition, more females were found to use WhatsApp, Facebook, and emails while more males used text messages and Chat rooms. However, the Independent-sample T-test revealed there was no significant gender difference in the use of the different cyberbullying media. A one-way between-groups ANOVA revealed that age difference in the use of text messages, email, WhatsApp, Facebook, Chat rooms was not statistically significant. The different media of cyberbullying had a negative influence on generalized self-efficacy levels, but the effect was weak. The influence was more when the written and visual media was used and if the medium was popular. This may be because the adolescent may feel more distressed knowing that a wide audience can view the embarrassing material.

4. Recommendations

Most of the cyberbullying takes place off school grounds therefore it is important that parents monitor their teen's internet behaviours and be keen to detect frolics. The home computers should be situated in places where a parent can spot what the adolescent is engaging in, such as in the living room. This is possible if parents, guardians and significant others get more involved in their children's everyday life. The involvement will aid in detecting changes in their teen's behaviour. If possible, the parents should go through the adolescents' social media network profiles and phone contact list and frequently enquire on the buddy list. The adolescents should be cautioned about sharing too much personal information to avoid the prospect of the information being used for bullying. Acts of cyberbullying among the adolescents should not be taken lightly or brushed off, on the other hand, parents should not over react, instead the proper psychological help should be sought.

5. Limitations

The study utilised a cross sectional design which was not experimental in nature. Despite this study providing important insight on the relationship between the variables it limits the causality effect. This study used a time frame of six months on cyberbullying items which helped to increase behavioural recall and accuracy. This may have caused disparity on the prevalence rates on behaviour with related studies that used a time frame of more than six months.

6. Conclusion and Suggestion for Further Studies

The different media of cyberbullying had a negative relationship with self-efficacy levels, but the relationship was dependent on the degree of popularity of certain media, the number of viewers a hurting message can reach using a medium and the type of material that can be posted on a medium. Future studies can investigate more media used in cyberbullying than the present study and more so, explore their effects in relation to other psychological measures.

7. Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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