Pixels hurt more than sticks and stones:

CONFRONTING CYBERBULLYING ON FACEBOOK

Tom Kwanya, Angella Kogos, Lucy Kibe, Erick Ogolla, Claudior Onsare

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Executive Summary

This report documents the process and findings of a research project titled "Pixels hurt more than sticks and stones: confronting cyberbullying on Facebook". The project which was conducted with a generous financial support from Facebook Inc. was carried out by researchers based in the School of Information and Social Studies, The Technical University of Kenya. The study was initiated in 2020 but, due to COVID-19 pandemic, was completed in 2022.

This report comprises six chapters. The first chapter explains the research concept. It specifically elucidates the context of the study, research problem, significance and justification of the study, scope and delimitations of the study, limitations of the study, as well as the dissemination strategy of the research findings. The second chapter presents the review of literature on the subject, analyses research gaps, and explains the conceptual and theoretical underpinnings of the study. The third chapter clarifies the research approach, design, population, sampling approaches, data collection techniques and tools, data collection procedure, data analysis as well as research reliability and validity. The fourth chapter presents the analysed research data while the fifth chapter discusses the findings and positions them in the existing body of knowledge on cyberbullying in universities. The sixth chapter summarises the findings and presents the recommendations of the study.

This study was conducted in conformance with best practices in scholarly research. The researchers obtained ethical clearance as well as a research permit from research regulators in Kenya. Similarly, the project was cleared by institutional gatekeepers of all the universities which participated in the research. The findings have been analysed and presented in a way which does not identify the respondents of the study. Therefore, their contributions, views and identities remain anonymous and confidential.

All efforts have been made to ensure that this report is as accurate as possible. Nonetheless, we apologise for any errors that may have slipped through the rigorous editing and review process.

Acknowledgments

It took valuable contributions of several parties to make this project successful. First, and foremost, the researchers acknowledge the generous financial support from Facebook Inc. which enabled them to fund all the project activities. Second, the research team acknowledges technical and institutional support offered by The Technical University of Kenya which ensured that the project was conducted ethically and accountably. Specifically, the team appreciates the mentorship of the Vice Chancellor, Prof. F.W.O. Aduol and acknowledges the administrative support of Prof. Fiona Mbai, the Director of Research and Knowledge Exchange, The Technical University of Kenya. Third, the team acknowledges the contribution of the participants in the study. The deans of students and students' counsellors played two important roles in the project. One, they were involved directly as key informants and they contributed valuable insights on the nature and effects of cyberbullying on the academic and social lives of the students under their care. Two, they helped to identify and mobilise student respondents to the research questionnaire and participants in the focus group discussions. Their invaluable support ensured that the project was conducted successfully in their institutions. The undergraduate students, who were the primary participants in the study, also contributed valuable data through questionnaires and focus group discussions. Their insights helped the researchers to understand salient issues relating to cyberbullying in Kenyan universities from the perspective of the students who were either victims or perpetrators of the vice. It would have not been possible to paint a true picture of cyberbullying among undergraduate students in Kenyan universities without the input of the students. Fourth, the researchers also acknowledge the administrators of the 24 universities in which the study was conducted. They opened their gates for the research team and maintained a conducive environment for the study. The research team is truly grateful for this support. Wherever this report will be read, the valuable contributions of these parties will be remembered. Furthermore, your support has contributed to both local and global effort towards making Facebook safer not only for students but also for all users of the platform. Thank you.

List of abbreviations and acronyms

AI:	Artificial Intelligence
BAKE:	Bloggers Association of Kenya
CAK:	Communications Authority of Kenya
CBR:	Control Balance Ratio
COVID-19:	Coronavirus Disease of 2019
CUE:	Commission for University Education
ETCB:	End to Cyberbullying
FB:	Facebook
FGD:	Focus Group Discussion
HRSA:	Health Resources and Services Administration
ICT:	Information and Communication Technology
IT:	Information Technology
ITCBPC:	Information Technology Cyber Bullying Prevention Capacity
KOT:	Kenyans on Twitter
KUDSA:	Kenya University Deans of Students Association
LGBT:	Lesbian, Gay, Bisexual, Transgender
MDG:	Millennium Development Goal
MP:	Member of Parliament
NACOSTI:	National Commission for Science, Technology and Innovation
SCT:	Social Cognitive Theory
SIM:	Subscriber Identification Module
SLT:	Social Learning Theory
STEM:	Science, Technology, Engineering and Mathematics
SVM:	Support Vector Machine
UK:	United Kingdom
UNESCO:	United Nations Educational, Scientific and Cultural Organisation
UNICEF:	United Nations International Children's Fund

Abstract

Cyberbullying is a form of harassment using electronic media. It has become increasingly common especially with the growing ubiquity of social media. Most cyberbullying cases inevitably occur on Facebook because it is the most preferred social media platform. Statistics on the nature, prevalence or consequences of cyberbullying in Kenya is unknown. Nonetheless, anecdotal evidence suggests that cyberbullying is increasingly becoming a major concern in the country. In the recent years, many suicide cases in Kenya have been linked to diverse forms of cyberbullying. Coincidentally, all the victims were reportedly bullied on Facebook. Knowing that most cyberbullying cases go unreported, this is just the tip of the iceberg. This study investigated the nature, prevalence and consequences of cyberbullying on Facebook among undergraduate students in Kenyan universities. The study was a cross-sectional survey targeting undergraduate students in 24 chartered public and private universities selected purposively from the 8 regions of the country. The target population was 610,563 undergraduate students and 49 deans of students, from whom a sample of 9,710 students and 24 deans of students was drawn. Data was collected concurrently using semi-structured questionnaires, focus group discussions and key informant interviews. This study confirmed that most undergraduate students in Kenya's universities had experienced different forms of cyberbullying. It also emerged that those who did not have a personal brush with cyberbullying knew a classmate who had experienced some form of cyberbullying. Outing, exposure, exclusion, impersonation, catfishing, cyberstalking, trolling, flaming, vigilantism, shaming, blackmail, revenge porn and warning wars were the specific types of cyberbullying that undergraduate students in Kenya had experienced. The study also found that the prevalence of cyberbullying among undergraduate students in Kenyan universities is about 80% with victims being both genders, but predominantly female students experiencing it more than the males. This study confirmed that the social effects of cyberbullying on Facebook include suicide ideation, poor mental health, poor physical health, substance abuse, social alienation, economic loss, victim bullying, depression, low-self-esteem, stress, social withdrawal and stigmatisation. The study also confirmed that the effects of cyberbullying on the academic lives of undergraduate students were poor academic performance, absenteeism, lack of concentration, discontinuation and dropping out of university. Therefore, the study concludes that cyberbullying greatly affects the academic performance of bullying victims. The findings of this study are instrumental in developing a framework for mitigating cyberbullying by providing both technological and non-technological solutions to making Facebook safer. The findings may also influence policy formulation and implementation on university students' support systems by agents of socialisation such as government, university management, family and church, among others.

Keywords: *Cyberbullying, Online safety, Facebook, Undergraduate students, Kenya*

1.

INTRODUCTION AND BACKGROUND OF THE STUDY

1.0 Introduction

Bullying has moved from Kenyan schoolyards to social media platforms such as Facebook, Twitter and Instagram. Bullying in the social media is known as cyberbullying. It is the bullying that takes place over digital platforms and devices like cell-phones, computers, and tablets. Cyberbullying can occur through short messages, text, and apps, or online in social media and other forums. It can also occur in gaming, where people can view, participate in, or share content. Laibuta (2019) further describes it as sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can also include sharing personal or private information about someone else thereby causing them embarrassment or humiliation. Some cyberbullying activities cross the line into unlawful or criminal behaviour. Cyberbullying incidents are becoming more prevalent because of the growth of social media uptake in Kenya.

According to the Communications Authority of Kenya (CAK), the total number of data/Internet subscriptions users in Kenya by September 2019 was at 52 million (CAK, 2019). Ninety per cent of Internet usage in Kenya is via mobile phone. Inexpensive android gadgets are driving the trend. Most Internet service providers in Kenya offer free social media access with every data purchase. Owino *et al.* (2016) argue that the most popular social media platforms in Kenya are Facebook, Twitter, LinkedIn and Instagram. They further report that the majority of social media users in Kenya visit their preferred platforms at least once every hour with the cumulative number of hours spent by users on social media standing at 10 hours per week. These authors further explain that Facebook is the most preferred social media platform in Kenya followed by Twitter. Other authors (Ndavula & Mberia, 2012; Owiny, *et al.*, 2014; Kimemia & Mugambi, 2016; Kamau, 2017) concur that Facebook is the most popular social media platform in Kenya.

Statistics from a UNICEF report (UNICEF, 2019) indicates that one in three young people in 30 countries all over the world said they have been a victim of online bullying with one in five reporting having skipped school due to cyberbullying and related violence. Almost three-quarters of the young people interviewed also said social networks including Facebook, Instagram, Snapchat, and Twitter are the most common places for online bullying. Additionally, a study by McAfee Intel Security (McCann, 2015) showed that 87% of youth have witnessed cyberbullying and nearly 69% have experienced it.

There is no data on the prevalence of cyberbullying in Kenya. However, some cases have been reported in the mass media. For example, a former Miss Kenya sued her

ex-boyfriend, the pageant organisers and three others for making images that had been taken in private public. According to an article in the *Daily Nation* (Mburu, 2017), the High Court found that her ex-boyfriend had breached her right to privacy under Article 31(c) of the Constitution. For the breach, the court fined him 1 million shillings. In another case reported by Wako (2019b), a radio presenter at Kiss FM was allegedly bullied by some people in #KOT (Kenyans on Twitter) due to her weight in what is commonly referred to as fat-shaming. In yet another case reported in January 2019, a man committed suicide after one of his followers on Facebook dared him to kill himself by writing in Kiswahili, "*siujiue basi tukuzike*", meaning "just kill yourself, we bury you" (Kejitan, 2019b). Additionally, Muchene (2019) interviewed a popular Kenyan gospel singer who had cried on live television while narrating his case of cyberbullying. He reported that members of the public often made fun of him on Facebook and Twitter each time he released songs with some sarcastically remarking that the songs lacked originality.

Wambui (2017) prepared a summary of Kenyan celebrities who have been bullied in cyberspace. The list included a former Citizen TV anchor who was attacked for being on air with her baby bump. Another victim is a celebrated Kenyan female musician who was attacked on social media after she posted a photo where she had no makeup on, showing some skin blemishes and heavy acne scarring on her forehead. The *Daily Nation* (Ondieki, 2017) also reported the case of a University of Nairobi medical student who committed suicide by jumping in front of a car on Waiyaki Way in Nairobi. It was reported that the student had reached out for help in the popular Facebook group, "Buyer Beware", after her daughter was sexually assaulted only to be blamed and harassed for her child's assault. The members of the group accused her of lying. It was reported that she took her life because of the cruelty of the readers' comments in the group.

Kenya does not have a specific law relating to cyberbullying. However, it is important to note that the Computer Misuse and Cybercrimes Act (2018) does contain a brief provision (section 37 A) for one form of cyberbullying, that is, revenge porn. It states that "A person who transfers, publishes, or disseminates, including making a digital depiction available for distribution or downloading through a telecommunications network or through any other means of transferring data to a computer, the intimate or obscene image of another person commits an offence and is liable, on conviction, to a fine not exceeding two hundred thousand shillings or imprisonment for a term not exceeding two years, or to both". It does not define

cyberbullying nor does it contextualise the crime. The revenge porn sentence and fine is also not adequately deterrent. This Act was suspended by the High Court pending the determination of a suit filed by Article 19 and Bloggers Association of Kenya (BAKE) challenging the constitutionality of 26 provisions of the Act (Kakah, 2018). The following are some of the changes they want made:

1. That Section 8(1) should replace "knowingly" with "intentionally";
2. That any attempt to regulate cyber stalking or cyberbullying be developed in consultation with a meaningful and representative cross-section of civil society, academics, the technology and media industry, and other relevant non-state actors;
3. That sections 14 and 15 be drafted to be consistent with existing criminal laws on fraud and forgery to avoid duplication or contradiction; and
4. That Section 14(1) should incorporate the requirement of dishonest intent.

The court is yet to fully determine the suit. BAKE (2018), Laibuta (2019) and Article 19 (2018) also argue that the Act provides for punishments that would have a chilling effect on the right to freedom of expression as it reintroduces criminal libel which might threaten social media platforms that have become effective channels for online activism, online democracy and the fight for social justice.

1.1 Statement of Research Problem

Cyberbullying is a form of harassment using electronic media. It has become increasingly common, especially with the growing ubiquity of social media. Most cyberbullying cases inevitably occur on Facebook because it is one of the most preferred social media platforms. Kenya is one of the countries in Africa with the highest number of social media users. However, statistics on the nature, prevalence or consequences of cyberbullying in the country is unknown. Nonetheless, anecdotal evidence suggests that cyberbullying is increasingly becoming rampant. In the recent years, many suicide cases in Kenya have been linked to diverse forms of cyberbullying. For instance, from the beginning of 2019 three deaths resulting from cyberbullying have been reported. Coincidentally, all the victims were bullied on Facebook. Knowing that most cyberbullying cases go unreported, this is just the tip of the iceberg. Most of the victims of cyberbullying are young college students. Therefore, the purpose of this study is to investigate the nature, prevalence and consequences of cyberbullying on Facebook among undergraduate students in Kenyan universities.

1.1.1 The specific objectives of the study are to:

1) identify the types of cyberbullying that undergraduate students in Kenya experience on Facebook;
2) determine the prevalence of cyberbullying on Facebook among undergraduate students in Kenya;
3) investigate the effects of cyberbullying on Facebook on undergraduate students in Kenya;
4) examine the strategies that exist to curb cyberbullying on Facebook among undergraduate students in Kenya;
5) assess the effectiveness of the existing strategies on curbing cyberbullying on Facebook among undergraduate students in Kenya; and
6) suggest strategies which can be used to make Facebook safer from cyberbullying among undergraduate students.

In pursuing the objectives above, the study sought answers for the following research questions:

1. What are the types of cyberbullying undergraduate students experience on Facebook?
2. How prevalent is cyberbullying on Facebook among undergraduate students?
3. How is cyberbullying on Facebook affecting undergraduate students?
4. What strategies exist to curb cyberbullying on Facebook?
5. How effective are the existing strategies in curbing cyberbullying on Facebook?
6. Which strategies can be used to make Facebook safer from cyberbullying among undergraduate students?

The researchers used the findings of this study to propose technological and non-technological interventions to mitigate cyberbullying on Facebook. The findings may also provide evidence to inform policy on better socio-technical support to students. The findings have also been used to compile a booklet on how to prevent or cope with cyberbullying. This publication is distributed free of charge in soft and hard copy to students and university management. The findings may also be used to stimulate the formation of campus cyberbullying prevention and support networks by student leaders. It is expected that these networks will multiply and coalesce into a national advocacy mechanism against all forms of cyberbullying in Kenya.

1.2 Significance of study

An undergraduate student is a dyed-in-the-wool digital native whose life is defined by adept and extensive technology use, such as in social media, for every communication need. Social media use has positively revolutionised their life. Akin to the offline communities they belong to, the communities they also belong to on social media digital have brought in certain vices such as cyberbullying. Thus, there is growing interest in cyberbullying research in the world. Cyberbullying is a broad multi-disciplinary, multi-stakeholder and multi-social media research concern. This is because, first, a human being is social, psychological, physiological, biological, economical, and spiritual. Second, an undergraduate student exists in a society with a variety of socialising agents such as peers, siblings, parents, teachers, religious mentors, and the government. Third, cyberbullying, by its very nature, is a vice. Fourth, cyberbullying occurs on different social media platforms such as TikTok, Facebook, Twitter, Instagram, and YouTube. Thus, there is growing cyberbullying research globally. In the Kenyan context, previously, the nature, prevalence, and consequences of cyberbullying on Facebook among undergraduate students in Kenyan universities was unknown. The present study therefore seeks to bridge this research gap by providing empirical statistical and practical data on cyberbullying on Facebook among undergraduate students.

The findings of this study may be used by a diverse mix of stakeholders and socialisation agents to make Facebook safer from cyberbullying. The data on the types of cyberbullying may be used by university authorities and society in general to understand what constitutes cyberbullying. Therefore, people who are currently merely standing by as cyberbullying happens will be able to detect the vice promptly and help to nip it in the bud. Similarly, the findings on the prevalence of cyberbullying will help university administrators in Kenya to realise that the vice is rampant in their campuses and particularly affects undergraduate students. This realisation is likely to set in motion a set of actions to mitigate the situation. The suggested strategies of mitigating cyberbullying may also be applied by the relevant authorities to stem the wave of cyberbullying in Kenya's university campuses.

The findings of the study may also be used to anchor the formulation of relevant policies by university administrators to promote safe use of social media platforms such as Facebook. Similarly, the findings may inform advocacy campaigns which may result in the enactment or amendment of laws and other legislations on cyberbullying and other online crimes. Currently, the existing legal regimes are

neither specific nor comprehensive in terms of defining, detecting, punishing and discouraging cyberbullying. Efforts to strengthen these provisions may benefit greatly from the findings of this study. The findings of this study may also be used by scholars in diverse fields of study to understand the Kenyan perspectives of cyberbullying on social media platforms. This may aid the understanding of the vice in the Kenyan context, thus result in the development of theories and models which are specific to the Kenyan context. Similarly, the study may be used by researchers to propose cyberbullying research approaches in Kenya and other countries in Sub-Saharan Africa.

In general, the findings of this study will directly benefit students, parents, educators, university administrators, religious leaders, and various government agencies in selecting technological and non-technological strategies for countering cyberbullying on Facebook. The results can also be incorporated into cyberbullying victim support. This research contains generalisable findings with an African feel that can be adopted in other jurisdictions in Africa and beyond.

1.3 Justification of study

Cyberbullying is a present-day vice. Its nature, prevalence and adverse effects on the victim have been documented by researchers in many parts of the world. In fact, there is an increased interest among global academic researchers regarding the vice. However, the majority of the current cyberbullying research is from America, Europe, Australia, and Britain. Research on cyberbullying in the African and Facebook contexts is minimal. Makori and Agufana (2020) sought to understand cyberbullying among learners in education institutions. Their case study involved 123 respondents with a response rate of 64% in one Kenyan public institution. Their data demonstrated that cyberbullying caused serious psychological harm on the victims, in some cases, leading to suicidal thoughts and actual suicide. Their study recommended more research and awareness. Another study from Kenya by Ndiege *et al.* (2020) used an exploratory case study research design in one privately-funded independent university within Nairobi. They collected data from a convenience sample of 396 students from a population of 6,500 students. Their study also employed the cyberbullying victimisation and perpetration survey that was proposed by Doane, Kelly, Chiang, and Padilla (2013). It confirmed the existence of cyberbullying.

The uniqueness of the present study abounds. First, it gives a general feel of cyberbullying but also focuses solely on cyberbullying on Facebook. Second, the

present study employs a wider and different research methodology, design and approach. Further, given the apparent gaps in the existing literature, the present study conducted a thorough theory-based scientific investigation into cyberbullying on Facebook among Kenyan undergraduate students. This is likely to enhance the interpretation of similar and dissimilar concepts. Thus, this study has produced a different outlook with a few similarities to other research. This is because although cyberbullying had been previously studied, the subject was still poorly understood as there was no research in Kenya that focused solely on cyberbullying on Facebook.

1.4 Scope and delimitations of the study

The geographical scope of the study focused on Kenya. Kenya is an East African country with a current population of 45,564,296 as per 2019 census (Trizer, 2019). Kenya is considered to be the fastest growing economy in East and Central Africa (World Bank, 2021). This growth has been enhanced by the adoption of ICTs in the country, with Kenya having the highest Internet penetration in Africa at 85.2%, with the first runner up being Libya (84.2%), and third Nigeria (73%) (Namunwa, 2019; Johnson, 2021). This widespread Internet availability, coupled with a mobile phone penetration of 109%, has made Kenya the leading country on the continent, overtaking Nigeria which has 83% mobile phone penetration (Gilbert, 2021;), has led to the country having over 11 million active social media users as at January 2021, 88.5% of whom use Facebook (Kemp, 2021). The youth, aged between 18-35 years, make up the majority of Facebook users. Therefore, to be able to reach this population, the study focused on undergraduate university students because they best represent the category of those who use the social media platform the most and are consequently more likely to be the most affected by cyberbullying. The scope of the study was limited to the fully chartered universities in the country because accredited universities have been established for a longer period and attract more students hence have a more representative population. Currently, Kenya has 52 fully chartered universities of which 31 are public institutions and 21 are private (Commission for University Education, 2021).

The study also included deans of students of the universities serving as key informants because they are the university officers charged with managing student welfare and are expected to provide students with support and oversee their overall learning and social experience while enrolled at the institution. It is, therefore, within their bailiwick to manage any crisis that may arise from cyberbullying among students in campus as well as implement interventions to curb the same.

The study focused on cyberbullying on Facebook because, as indicated earlier, it is the most widely used social media platform in the country and among university students. Therefore, the existence and prevalence of cyberbullying on other social media platforms was outside the scope of this study. This, however, did not preclude the researchers from seeking insights into general social media use among the population as way of establishing social media use habits and preferences that would aid the interpretation of data.

Conceptually, the study was limited to investigating the types, prevalence, and effects of cyberbullying among undergraduate students in Kenya. While the study investigated the existence and effectiveness of interventions by university administration to curb cyberbullying, this information was sought from the point of view of the students and the deans of students. Therefore, activities of departments such as guidance and counselling units or offices in the institutions were outside the scope of this study. Similarly, the experience of cyberbullying on Facebook and interventions implemented by the social media platform were also investigated based on the interaction of students with the platform as end users. Thus, representatives of Facebook were not incorporated as part of the study population.

1.5 Limitations of the study

First, investigating cyberbullying on Facebook among undergraduate students in Kenya is to research about personhood and nationhood in Kenya. This is why cyberbullying research is multi-disciplinary and multi-stakeholder. Therefore, this study had to dabble in psychology, biology, sociology, philosophy, physiology, religion, and law to understand cyberbullying as a phenomenon. The researchers had to take into consideration the perspectives of the victims, perpetrators and bystanders on the vice. Further, the research had to consider diverse facets of cyberbullying from the perspective of all the socialising agents such as parents, guardians, siblings, religious leaders, university administrators, the government, and Facebook itself. This is because they all play an important role in helping to fully unravel cyberbullying on Facebook. The socialising agents are also important stakeholders in the implementation of the technological and non-technological interventions against cyberbullying. The researchers in the present study, being social scientists with a bent towards communication, information and knowledge systems management, might have a neat but superficial understanding of the totality of a human being. This might have limited their understanding of, say, the psychological and physiological aspects of cyberbullying on Facebook.

Second, this study's response rate was 87.7%. It could have been higher had the study been conducted without the cloud of Covid-19 hanging over it. The Covid-19 pandemic also meant that students spent more time online and maybe, because of that fact, were acutely aware of cyberbullying on Facebook.

Third, more male students signed up for the research as this study received a total response of 65% male, 34.1% female and 0.9% non-entry on gender. The low response by females can be attributed to the fact that even at the enrolment level, Kenyan universities have more male than female students (Faria, 2021). The male students also seemed more enthusiastic about expressing their experiences and opinions on cyberbullying than the female students. Gender socialisation might have been the limitation here, where the male respondents followed the dominant socialisation of being more outspoken than females.

Fourth, there was a concern from the respondents about free speech versus ethical speech on Facebook. This was evident, for instance, in situations where social media commentators made factual, but offensive, commentary about other users. Some respondents further argued that restricting offensive speech online would limit their freedom of speech.

The limitations of this study point to the potential future of cyberbullying research topics in Kenya. This is because social media networks such as Facebook will continue to evolve. The following are two of the possible areas for future research on cyberbullying:

- A strictly Kenyan philosophical, psychological, physiological, religious lensed cyberbullying on Facebook research.
- A purely law and governance focused research on cyberbullying on Facebook.

1.6 Strategies for dissemination of findings

The findings of the study will be disseminated in the following ways:

Journal articles

The research findings of this study will be published in the form of peer reviewed journal articles in high impact journals. Journals are an effective way of reaching scholars in related disciplines who may use the findings to support further research in the area or bolster their literature review. The researchers intend to publish at least 10 journal articles from the findings of this study. To increase the impact of

the findings, the articles will be published in journals of varied disciplines such as information sciences, higher education, student support services and welfare, communication, and linguistics. The researchers will publish the articles under open access licenses to further enhance their dissemination and use.

Conferences papers

The research findings will also be presented at conferences. This will include developing and presenting posters, lightning speeches, keynote addresses, and conference papers on cyberbullying. The researchers' purpose to present the findings of the study at both local and international conferences is to maximise the dissemination of the data. Conferences will also provide the opportunity for informal conversations about the findings of the study with other interested attendees. The researchers target to present the findings in at least five local, regional, and international conferences.

Dissemination fora

The researchers will disseminate research findings to research participants using dissemination fora. These fora are necessary because the main participants of the study were undergraduate university students who are not likely to attend conferences or seek information on cyberbullying from academic journals. Dissemination fora will, therefore, serve as an opportunity to provide the students with relevant accessible information about cyberbullying, how it affects them and what interventions they can apply to curb the vice. The researchers will, therefore, revisit the participating institutions to disseminate the findings to the student fraternity.

Roundtable meeting with deans of students

The researchers will hold a roundtable meeting with the deans of students from the participating universities. This will provide an opportunity to disseminate the findings of the study to them and thus provide them with data on the wider scope of the prevalence, types, and effects of cyberbullying in universities in the country. It will also be an opportunity for the deans of students from different universities to interact and share experiences on how to deal with cyberbullying in their respective institutions.

Specialised booklet

The researchers will produce a specialised booklet to aid the dissemination of information on cyberbullying and its effects in a simple and direct manner. The booklet will summarise the findings of the study in a way that is easily accessible to the layman. Its purpose is to aid the uptake of the research findings by removing research jargon and explaining the significance of the findings in an easy to understand manner. The booklet will also serve as a handbook or guide on how to recognise cyberbullying and how to deal with it in a healthy manner. Copies of the booklet will be distributed free of charge to the deans of students and students in the participating universities. A downloadable version of the booklet will also be published and kept in The Technical University of Kenya's digital institutional repository.

Self-archiving in The Technical University of Kenya's institutional repository

All the journal and conference papers will be archived in the institutional repository of The Technical University of Kenya. This will ensure that the findings of the study are available to the faculty, students, and public and thus increase their availability and dissemination.

2.
LITERATURE REVIEW

2.0 Introduction

Bullying can be defined as the intentional harm-doing or harassment that is directed towards a vulnerable target, and is typically repeated (Faris & Felmlee, 2019). It is often an aggressive form of behaviour aimed at hurting, embarrassing or harassing an individual. While there is no generally agreed upon definition of bullying, there are some features that are indicative of the same and these include the fact that bullying is in most cases a repetitive behaviour rather than an isolated incident, and also that it often involves a power imbalance in which case the victims of the bully is unable to defend themselves (Smith, 2016). Bullying is not a new social behaviour; it has been around for decades. However, with the ubiquity of social media, bullying has moved online. Belsey (2008), as cited by Hollá, Fenyvesiová and Hanuliaková (2017), defines cyberbullying as the use of information and communication technologies to support deliberate, repeated and hostile behaviour by an individual or group, which is intended to harm others. Unlike offline bullying, cyberbullying is persistent/pervasive and the bullying is not limited to a location or time. Secondly, the bullying is often public and permanent as any information uploaded to the Internet is nearly impossible to completely erase. Thirdly, it thrives on anonymity. Statistics show that most cyberbullying incidents occur on social media platforms. Petrov (2019) indicates that Instagram has the highest prevalence of bullying occurring on the platform at 42% followed by Facebook at 37% and snapchat at 32%.

2.1 Types of cyberbullying

Cyberbullying manifests in different forms. However, the common types of cyberbullying are exposure, outing, exclusion/isolation, impersonation, cat-fishing, cyber stalking, trolling, flaming, vigilantism, shaming, blackmail, revenge pornography, and warning wars. These types are discussed below.

2.1.1 Exposure

This is a type of cyberbullying where the bully exposes private information about the victim online leading to them being attacked or scammed or harassed by other unscrupulous individuals. For example, they may expose the victim's private mobile phone number, home address, or work address and contacts online. This exposure is often done without the victim's consent or knowledge. An example of such an occurrence is the case of Mary Wambui whose photo and contacts were posted in Facebook groups with captions soliciting for dates. This exposed her to a barrage of

calls and text messages that she had to switch off her phones until the fervour had calmed (Ondieki, 2017).

2.1.2 Outing

This is a form of cyberbullying whereby bullies expose information about the sexual orientation of Lesbian, Gay, Bisexual, Transgender (LGBT) persons without their consent. Despite the fact that there has been a gradual increase in the acceptance of LGBT individuals, this tolerance is not uniform the world over and sometimes outing of one's LGBT status may lead to arrest or repression in countries where there is low or no tolerance of the same (Kraus, 2014; Brandon, 2018; Berthélémy, 2019).

2.1.3 Exclusion or isolation

Exclusion or isolation as a form of cyberbullying occurs when individuals are excluded from participating in online groups or conversations by their peers. This may take the form of being removed or ejected from online groups or being left out of conversation treads that are about them. An example of such exclusion is the case of the students of Dentistry at Dalhousie where the men in the class created a Facebook group excluding their female colleagues and used the group to make degrading misogynistic and homophobic remarks about their classmates (Tryon & Logan, 2015). In Kenya, a Facebook group called "Buyer Beware" was created with the aim of alerting the public about fraud by business and individuals. As it gained popularity the group administrator, known as Mildred, gained popularity and power and would expel or block comments from members who did not agree with her agenda. This is an example of cyberbullying through exclusion (Ouma, 2020).

2.1.4 Impersonation

Impersonation as a form of cyberbullying occurs when a bully creates a pseudo account that they use to bully a victim without revealing their true identity. They may also create similar accounts to the victim using the victim's pictures and information and then use the account to ruin the victim's reputation by engaging in unsociable behaviour such as posting insulting or insensitive comments or visiting known terrorist or pornographic sites. Often the unsuspecting victims bear the brunt of the consequences of the bully's action and have a difficult task salvaging their reputation. A case in point is when police in Kenya arrested Mr. James Ombui

Oire for impersonating Kenya's National Assembly Leader of Majority Aden Duale and using a fake Facebook account to solicit money from the public under false pretences (Cheruyiot, 2019).

2.1.5 Cat-fishing

Cat-fishing is a form of cyberbullying whereby the bully creates fake accounts and uses them to bully other individuals. They use these fake accounts to extort money from individuals or have romantic or erotic relationships with victims without revealing their true-selves (D'Costa, 2014; Waring, 2019). Cyber-bullies can present themselves online as people close to the victim and use fake accounts to insult or abuse the victim.

2.1.6 Cyber stalking

Cyber stalking is another way in which cyberbullying occurs. This is where the perpetrator persistently contacts and attempts to communicate with the victims despite repeated demands that they desist. In her research on prevalence of Internet crimes among female students at the University of Nairobi, Gitonga (2014) found that 76.1% of the women in the study had been stalked online and it caused them to fear about their personal safety. Cyber stalking often escalates to offline stalking.

2.1.7 Trolling

Trolling is a form of cyberbullying whereby the bully starts arguments or upsets victims by starting controversial topics or making aggressive or insulting statements about an individual or topic. The discussions may start out innocently enough but as the debates get heated, often attacks become personal and insults and obscenities are targeted at the victim (Bourque, 2017; Moreau, 2020). Trolling is often disguised as free speech or contribution to a topic being discussed. However, most trolls do not contribute anything relevant to the topic but often attack other individuals indirectly or directly by insulting them using profanity or leaving condescending comments about the individuals' opinions, looks, gender or religion. Internet trolls use anonymous accounts to spread their vitriol, making it difficult to control them.

2.1.8 Flaming

Flaming is the form of cyberbullying whereby one responds to comments or joins discussions with disparaging, harsh or insulting remarks. Unlike trolling, flamers do not aim to disrupt the on-going discussion and have sincere points to make.

However, the manner in which they respond to discussions is often off-putting, rude and vulgar. Flamers ignore calls for civil discussions and often accuse people who are offended by their actions as being 'snow flakes' or 'too sensitive' (Gil, 2020).

2.1.9 Vigilantism

Vigilantism is a form of cyberbullying whereby victims are bullied because of the way they look or actions they have undertaken. Online shaming often takes the form of vigilantism as most of the people participating in the shaming feel justified to do so because of the actions of the individual being shamed (Laidlaw, 2017). An example is the case of Alison Ettle, dubbed 'Permit Patty' by the Internet users. She was shamed online for calling the police on an African American girl who was selling water to raise money to go to Disney World. Alison was accused of being racist and received death threats, threats of sexual assault as well as people trying to enter her building to confront her (Molloy, 2018). While the public felt justified in condemning Ettle's behaviour, the ostracism and hate that resulted from the shame was dis-appropriate to the perceived crime. Online vigilantism has lasting real life consequences that may include shamed individuals losing their jobs, their reputation being permanently destroyed, being rendered un-employable, being physically attacked and constantly insulted whether online or offline. (Mohamed, 2018)

2.1.10 Shaming

Shaming is a form of cyberbullying whereby the bullies shame victims over their physical appearance of behaviour. Often the victims are women and fat-shamed (insulted for being overweight) or slut-shaming (accused of having low morals) or being called ugly or stupid. In Kenya, a radio presenter, Linda Nyagweso, was fat-shamed online when a photo of her was shared on Twitter (Wambui, 2017).

2.1.11 Blackmail

Victims can also be blackmailed by bullies who threaten to expose their nude photos or other embarrassing information unless the victim agrees to pay them or perform certain tasks. Bullies often gain the trust of the victim and then convince them to share sensitive personal information or images of sexual nature. Common targets are online dating sites. The bullies initiate a 'relationship' with victims and convince them to share intimate images/information about themselves. Once

they have this information, they threaten to expose the victim online or to family, friends, or employers unless the victim pays them or performs more sexual favours for them. This is referred to as 'Sextortion' (FBI, 2015; Wolak, Finkelhor, Walsh & Treitman, 2018; Stokel-Walker, 2019). The victims of extortion are often prominent persons who have a reputation to protect and would likely afford to pay off the blackmailers.

2.1.12 Revenge pornography

Commonly known as revenge porn, this is a form of cyberbullying where a jilted lover or partner threatens to reveal intimate images of the former partners out of malice with the aim of causing them embarrassment. Once the images have been uploaded and shared, it is nearly impossible to undo the damage done to the reputation of the victim and the repercussions to their personal life. In 2018 Farida Karoney, currently the Cabinet Secretary for the Ministry of Lands in Kenya, had private photos of her leaked on the Internet by a trusted lover (Nyakundi, 2018). Another case was of Ms Roshanara Ebrahim who was removed from the *Miss World Kenya* competition in 2016 after an ex-boyfriend sent her nudes to the event organisers. The boyfriend was later charged with violation of Ms. Ebrahim's privacy and ordered by the court to pay damages of 2.5 million shillings (Oduor, 2019). Revenge pornography is a violation of trust as private images that were not meant for viewing by third parties are shared without the consent of the individual and because of the nature of the Internet it is difficult to completely erase them once they are viral; they keep resurfacing in future (Hatimy, 2019; Mugambi, 2019; Wekesa, 2019).

2.1.13 Warning wars

Most social media sites are aware of the prevalence of cyberbullying on their platforms and have put in place systems for victims to report the crime. Warning wars, however, takes advantage of these systems and use them to harm the victims. This occurs when bullies wrongly and repeatedly flag a victim's account as being offensive, explicit or containing nudity or sexual materials. In response to the notification, the social media administration suspends or blocks the victim's account pending review or permanently disable it. The victim who has been falsely accused of failing to meet community guidelines or posting offensive content has to contend with consistently defending themselves and their content to get their accounts reinstated and the ban lifted (Meyer, 2014). This form of cyberbullying abuses the protocols or protections put in place to prevent cyberbullying. It paints

the victims as bullies and leaves them with no recourse to plead their case. In October 2019, a popular YouTube family in Kenya, Kabi-wa-Jesus, reported copyright strikes against smaller YouTube channels for using their content despite having asked them to share the same (Ghero, 2019). The Kabi-wa-Jesus family had been sharing their videos without any restrictions but as they gained popularity, they copyrighted their work without warning their subscribers.

2.2 Effects of cyberbullying

The effects of cyberbullying include suicide or suicide ideation, poor academic performance, poor mental and physical health, and alcoholism or substance abuse, among many others. These are discussed hereunder.

2.2.1 Suicide and suicide ideation

Cyberbullying can lead to suicide or suicide ideation. This is often the case in situations that involve young children or teenagers. Research on cyberbullying and suicide ideation has shown that there is a significant relationship between cyberbullying and victims having suicidal thoughts. This is because cyberbullying often causes the victim to be depressed, have diminished self-worth, feelings of loneliness and hopelessness (McNamee, 2014; Holt *et al.*, 2015; Maldonado, 2018; Mitchell *et al.*, 2018; Chang *et al.*, 2019; Hinduja & Patchin, 2019). Other instances of suicide or suicide attempts are as a result of blackmail or sextortion. This occurs in instances where the victims are unable to meet the escalating demands of their tormentors and commit suicide to escape the persecution of their blackmailers (Clark, 2016; Nilsson *et al.*, 2019).

2.2.2 Poor academic performance

Research studies conducted on the impacts of cyberbullying have shown that there is a significant relation between cyberbullying and decline in academic performance (Holladay, 2010; Faryadi, 2011; Yousef, Shaher & Bellamy, 2015). Grinshteyn and Yang (2017) were able to link cyberbullying to an increase in school absenteeism among high school students in the United States. Victims of cyberbullying reported being unable to do their assignments, concentrate in class, or even attend classes because of the bullying. Surprisingly the research shows that both bullies and victims had their academic performance adversely affected by cyberbullying. Thus, the impact is not limited to the victims of cyber-bullies only (Wright, 2015; Muzamil & Shah, 2016).

2.2.3 Poor mental health

Cyberbullying, like traditional bullying, can impact the emotional wellbeing of the victims since they are likely to suffer from poor mental health as a result of the bullying. This often manifests in the form of social anxiety, distress, fear, depression, higher relational aggression, low empathy, post-traumatic stress disorder or paranoia (Arıcak, 2009; Bannink *et al.*, 2014; Kowalski *et al.*, 2016). Cyberbullying, especially body shaming, is likely to exacerbate or lead to victims developing body dysmorphia because of being constantly mocked over their physical looks (Olenik-Shemesh & Heiman, 2017).

2.2.4 Poor physical health

The stress and tension that results from cyberbullying may result in poor physical health of the victims. Burton, Florell and Gore (2013) conducted a study on the long-term effects of bullying and found out that the victims of bullying displayed symptomatic illnesses such as bodily pain, headaches, slow recovery from illness and general poor health. In addition, the emotional stress from cyberbullying can lead the victim to act in a manner that is injurious to their physical health, such as self-mutilation, inability to sleep, skipping meals or binge eating, all of which lead to a decline in physical health (Gordon, 2019).

2.2.5 Substance abuse and alcoholism

Some victims of cyberbullying are pushed into abusing drugs or alcoholism as a coping mechanism (Peleg-Oren *et al.*, 2012; Gámez-Guadix *et al.*, 2013). According to Vieno *et al.* (2011), being victimised causes distress and anxiety in the bullied person. This can be a precursor to alcohol and tobacco abuse. They also noted that bullies are more likely to be involved in other deviant behaviours such as substance abuse. Selkie *et al.* (2015) conducted a multi-site study on cyberbullying and alcohol abuse among female college students and found that 37.5% of the students who had experienced cyberbullying met the criteria for problem drinking.

2.2.6 Social alienation

Humans have an innate need to belong to a community and interact socially. Cyberbullying can cause alienation of victims as it hinders the ability and opportunity of victims to interact online as well as threatens their sense of belonging within an online community (Saylor, *et al.*, 2012; Tobin *et al.*, 2015). Given the popularity of social networking services in the modern society, a majority of individuals

have a robust online life as this is where they spend most of their time and form relationships with other online users. However, when they are bullied online then being online becomes a stressful experience and thus leads to alienation from their online relationships (Yun, Jeon & Lee, 2014).

2.2.7 Economic losses

Cyberbullying is linked to poor life satisfaction of the victims. The consequences of cyberbullying, especially shaming, may lead to dire offline consequences such as loss of employment and shunning by the community that the victim lives in. Many companies do background checks on employees before hiring them. If an individual has been publicly shamed or bullied for "bad" behaviour, it would affect their chances of being employed (Kim, 2019). When cyberbullying takes the form of extortion or blackmail, the victims suffer financial loss along with emotional distress. This negatively impacts their economic capability (Yates, 2017).

2.2.8 Victims-bullying

Cyberbullying can lead to victims of bullying becoming bullies themselves. In a study conducted by Salazar (2017) among 6944 middle school students, it was found that cyberbullying victimisation was a predictor of cyberbullying perpetration. In September 2019, a video posted on Instagram by 13-year-old boy went viral. In the video the boy was lashing out at a classmate for bullying him and calling him gay. The video was shocking for the vulgar language used by the boy and the physical threats he made against the girl he alleges was bullying him (Kejitan, 2019a; Wako, 2019a). It is possible that in defending themselves from cyberbullying, victims may themselves become bullies.

2.3 Existing Strategies to curb cyberbullying

The widespread and pervasive nature of cyberbullying has led to the proposal of several strategies aimed at reducing or stopping it. A majority of these strategies are aimed at high school children and may not be applicable to adults facing cyberbullying. Discussed below are some of the suggested strategies to counter cyberbullying.

2.3.1 Passive resistance

A common advice for dealing with trolling is to ignore the troll. This strategy proposes passive resistance and advises the victim of the bullying to ignore the

bullying activity to avoid escalation of the behaviour. Victims of cyberbullying are advised not to read the comments or respond to the attempts by the troll to get an emotional reaction from them. This advice is so widely accepted that the phrase "don't feed the trolls" has been coined to popularise it (Feinberg & Robey, 2009). Despite its popularity, this strategy is ineffective in preventing cyberbullying and often the bully escalates the bullying behaviour regardless of the victim's lack of response (Hulk, 2018).

2.3.2 Do not share private information online

Internet users are advised not to share private or intimate information online as this can later be used for blackmail. They are also advised not to trust strangers because, due to anonymity on the Internet, cyber-bullies can create fake identities and use them to gain the trust of the victim thus getting them to share intimate or private information (Minc, 2019). Despite this advice, the emergence of "deep fakes", which uses technology to create realistic fake images or videos of an individual that are difficult to distinguish as forgeries means that even seemingly innocently shared profile images can be manipulated and used to blackmail or shame individuals (Schwartz, 2018; Ajder & Paris, 2019). It is important that individuals who interact online learn to use privacy settings to limit or control access to information that is private to them.

2.3.3 Report or flag abusive content

Most social media sites have features that allow victims of cyberbullying to report the behaviour to the moderators and have the hurtful comments deleted or removed and the bully's account blocked or suspended. Facebook, Twitter and Instagram all have a community standards policy that outline what is considered objectionable content and the steps to be taken by the social media site to delete or repress such content. All three social media sites have features that allow an individual to report an account that posts information they believe to be objectionable (offensive or insensitive) and the report is reviewed to confirm that it is in contravention of the community standards policy. The information is deleted and the account creating them removed or suspended if the vice is confirmed. The reporting activity is made completely anonymous. Thus, the person whose social media account has been flagged or reported does not get to know who reported them (Instagram, 2020; Facebook, 2020; Twitter, 2020).

2.3.4 Anti-bullying programmes and campaigns

Anti-bullying programmes are put in place by institutions to educate students or Internet users about cyberbullying and its effects with the aim of preventing bullying and helping victims deal with bullying. Gradinger *et al.* (2016) investigated the effectiveness of an anti-bullying interventions called the ViSC programmes as preventive measures against bullying in general, and cyberbullying in particular, and found that the programme had a positive impact in reducing cyberbullying activities (Jacobs, Völlink, Dehue & Lechner, 2014).

2.3.5 Technological interventions

There are technological features that designers of social media sites can integrate to prevent or reduce cyberbullying. For example, Instagram used artificial intelligence to develop a deep learning programme that would detect abusive text and delete it without human intervention (Bayren, 2017). Even though the artificial intelligence platforms have learnt to recognise offensive words, they do not always accurately interpret, thus creating a loophole for cyber-bullies to exploit.

2.3.6 Seek legal redress

Victims of cyberbullying are advised to seek legal redress from the legal structures. This is especially so in instances of blackmail, sextortion or revenge porn. In Kenya, the Computer Misuse and Cybercrimes Act (2018) clause 37 states that anyone who distributes intimate/obscene images of a person without their consent is liable to a fine of KES 200,000 or a jail term not exceeding two years, or both. It is therefore possible for victims of revenge porn to seek legal redress in Kenya (Sasaka, 2018). Most victims, however, find it difficult to do this because they are often embarrassed about their behaviour and in most cases the police are unable to arrest or stop the bullying if the bullies are not operating within their jurisdiction. To be able to effectively prosecute their cases, the victims are advised to keep records of the interaction to provide the necessary evidence which can secure a conviction.

2.3.7 Counselling and therapy

Victims of cyberbullying are advised to seek counselling or therapy to help them cope with the mental trauma that persistent bullying causes. Through seeking professional help, victims of cyberbullying can manage stress, depression and low self-esteem as well as counter thoughts of suicide or suicide ideation. Therapy aids victims to realise that they are not to blame for being bullied. It also helps them to

deal better with the effects of cyberbullying (Kowalski, 2010). Counselling is not limited to the victims but should also be extended to the bullies as well. This is because people who bully others often need help with anger management, displaced aggression or with dealing with trauma from abuse themselves (SWDG, 2020).

2.3.8 Seek social support

Victims of cyberbullying are advised to seek social support. The temptation to isolate themselves from others leads to depression and should be avoided. Instead, victims should talk to individuals they trust about the bullying they are experiencing. Talking about it enables the victim to seek help through receiving advice rather than enduring the abuse silently (Hinduja & Patchin, 2018).

2.3.9 Disengagement

Victims of cyberbullying are often advised to disengage from virtual platforms and thus avoid the bullying. They are advised to de-activate their accounts and leave the social platform to avoid being bullied. This is especially the case in instances of public shaming. It is advisable to take a break from technology and switch off the phone, computer or tablet for a day or night (Hershenson, 2018; MHA, 2020).

2.4 Theoretical Framework for the Study

The study is anchored on four theories. These are the Social Cognitive Theory; Power and Control Wheel Model; UK Kids Online theoretical framework; as well as Control Balance Theory of Deviance and Cyberbullying. This section discusses the postulates of the theories and how they were applied in this study.

2.4.1 Social Cognitive Theory

This theory was proposed by Albert Bandura in 1960. The theory explains how learning occurs within a social context; when people interact in a dynamic and mutual way within a given environment. This interaction in turn shapes their behaviour. According to Lamorte (2018), the SCT was initially called the Social Learning Theory (SLT) but later became known as the SCT in 1986. The SCT attributes the outcomes of social influence on both external and internal social re-engineering, especially in shaping behavioural traits. It uniquely looks at ways through which individuals acquire and maintain their behaviour based on the social environment in which they live. Lamorte (2018) posits that the SCT takes into consideration the experiences from a person's past. These experiences are

consequently exhibited in their behaviour and actions. The experience encountered in the past most likely influences and reinforces expectations on the person thus shaping how they engage in certain situations and their reasons for doing so.

SCT, therefore, puts into consideration various levels of socialisation while addressing behaviour change in people. It examines factors which are both personal and environmental in nature. These factors are mostly exhibited in the form of recognition and effectiveness from biological diversity. Other factors are whether they have support from their peers or they live within an environment which is stressful. Peer support and environmental conditions can impact on the shaping of people's behaviour (Xiao & Wong, 2013). Xiao and Wong opine that SCT can be applied widely in research studies in the health industry, education sector, and in areas dealing with communication. The SCT can also be adopted to help understand and make predictions on the conventional bullying behaviours. In this study, we applied the theory to help us evaluate the different kinds of cyberbullying undergraduate students in Kenyan universities are exposed to on social media, particularly on Facebook, and the extent to which these affect the student's behaviour change and the resulting action among others. Borrowing from the SCT and comprehensively reviewing prior studies conducted on traditional and cyberbullying by researchers like Xiao and Wong (2013), this research focuses on how frequently cyberbullying occurs among undergraduate students in Kenyan universities, the experiences the victims go through, the effects that cyber-bulling has on these students, and, above all, the demographics (age and gender) of the victims and the bullies. These factors could be due to the personality and the influences on each person, the social and the environmental factors which are most likely the determinants of the undergraduate students' probability of engaging in cyberbullying or experiencing it. These factors can be depicted by the model in Figure 1.

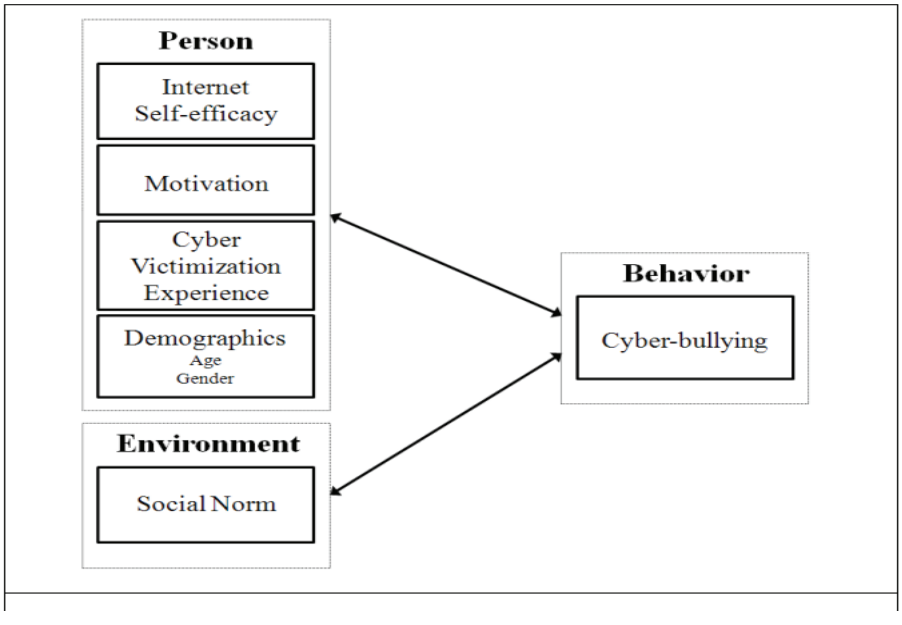

Figure 1: Social Cognitive Theory

Source: Xiao and Wong (2013)

2.4.2 Power and Control Wheel Model

The Power and Control Wheel model was proposed by Faucher, Jackson and Cassidy (2014). The model provides an illustration of the elements that may contribute to cyberbullying. They explain that the elements that are closely related to cyberbullying are intimidation and threat on social space, the use of language that may cause harm, threats to one's social status, social exclusion, cyber harassment, and the use of ICTs to convey unsolicited messages. All of these factors (or some of them) may be applied within a relationship where the abuser may exert some form of control over the victim. This model helped the researchers in understanding issues such as gender and cyberbullying among undergraduate students in Kenyan universities.

2.4.3 UK Kids Online theoretical framework

The UK Kids Online theoretical framework was of relevance in this study as well. This framework was developed in the UK by the European Community Safer Internet Programme. They were conducting research for developing policies and agendas in academia with regard to the risks and opportunities children in the UK face online.

The research, which was funded by the European Union (UK) Kids Online Network from 2006 to 2014, was subsequently renamed Better Internet for Kids. According to Livingstone *et al.* (2015), the objective of this study was to develop and provide an evidence-based solution for policy-makers in the UK, practitioners in the education sector, stakeholders in child welfare, clinicians and law enforcement agencies, among others, including parents and the industry at large. The project investigated several risks affecting the public while online and encompassed issues such as danger from strangers, cyberbullying, and pornography. The justification of the study was that if each of the risks online is considered separately, as done by most researchers, it may not be easy to see the relationship between each of the risks and how or whether the risks compound each other. This was because the researchers believed that those who encounter one kind of risk will most likely encounter one or more of the other risks (Livingstone *et al.*, 2015). The researchers incorporated findings from other contributors in academic disciplines. They then made a comparison and eventually managed to explain the risks and safety issues children experience online based on the following factors: the locations of the users on the Internet and the different platforms they use; the perception of both the children and their parents; the different kinds of risks they face online; the linkage between the risks experienced online against those experienced offline, that is, whether the risks experienced through a face-to-face encounter have a semblance with those experienced through the traditional media; if children are the victims or the perpetrators; the magnitude of the impact on the children, for example, the vulnerability or resilience of the children in taking the risks; whether they are supported by others or protected by law; and the strategies employed to ensure their safety as well as the intervention and coping tactics by individual entities and at national level.

Mascheroni and Staksrud (2015) observed a challenge in that the parents of the children involved were not concerned with their children's Internet use. They were not supportive because they did not understand the risks the young explorers were exposed to. This may be attributed to the fact that socialisation on the Internet is a relatively recent concept in many families, more or so for the parents. Mascheroni and Staksrud (2015) argue that as much as the children may be protected by various restrictions online, there is an increased opportunity to be taken by policy-makers, the parents of the children and the various educators to simultaneously limit extensive risk or harm that may come their way. They explain that it is possible to achieve this by moving away from the more restrictive forms of intervention to more active intervention patterns. For this approach to be effective, there is need

to acknowledge the risks that may occur, and, therefore, further investigation is needed to determine how sufficiently resilient the children can be in coping with the cyber risks if they encounter it.

Mascheroni and Staksrud (2015) envision that parents may not do much since there are many online opportunities associated with the digital skills and some of these have emerged fairly recently, thus, structures to support these to ensure good practices are yet to be established. They explain that although parents seem to try all-embracing strategies, further investigation is required to understand the reasons for the high level of risks still experienced and the mitigations that may be of benefit in order to increase online opportunities and minimise harm. Further, they observe that there is a relatively small group of exposed children experiencing similar levels of risk compared to their peers yet they lack intervention from their parents, an opportunity their peers enjoy. Because of this, policy-makers need to support parents and schools in mitigating such, and also inspire other players in the industry to increase responsible cyber practices and online safety. This can be done by seeking or reaching out to and supporting the few vulnerable children. This research seeks to develop strategies and a framework for dealing with cyberbullying among undergraduate students in Kenyan universities. It was guided by the model proposed by Livingstone *et al.* (2015) as depicted in Figure 2.

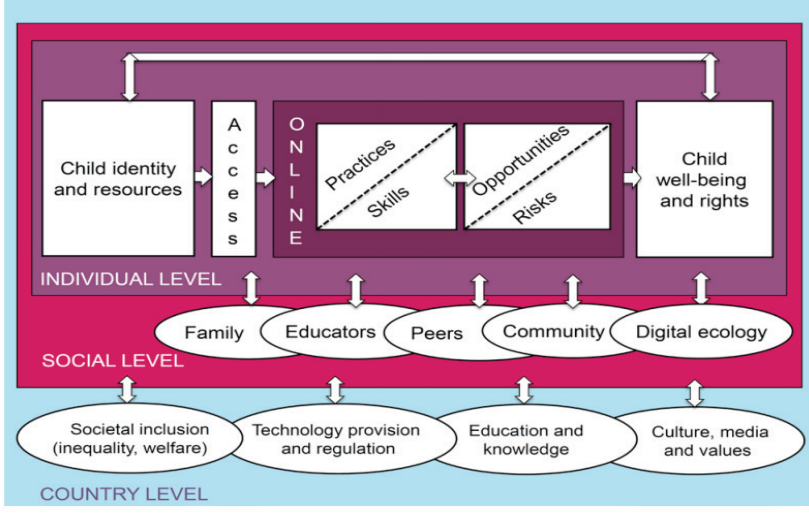

Figure 2: UK Kids Online theoretical framework
Source: Livingstone, et al. (2015)

2.4.4 Control Balance Theory of Deviance and Cyberbullying

The theory was first proposed in 1995 and reviewed in 2004 by Charles Tittle, a criminologist. Tittle (2004) applied this theory as a way of predicting deviant behaviour and posits that all individuals have control that they exert in their sphere of influence as well as control exerted on them by others within the same environment. He further argues that when there is a balance between the control exerted on the individual and the control he or she exerts on others, then the result is conformity to social norms. However, if the balance of control is lost then the result is deviant behaviour. Deviant behaviour is, therefore, an attempt to restore the control balance. Tittle (2014) refers to this balance as the Control Balance Ratio (CBR). He explains that if the CBR>1, then the individual has more control over others than they have over him (control surplus) and he/she may leverage that control in a deviant manner. If, on the other hand, the CBR<1, then the individual has less control over others than they do over him (control deficient) and is likely to act defiantly to try and protect themselves from the perceived vulnerability.

As such:

$$\text{Control Balance Ratio} = \frac{\text{Perceived Control Exerted}}{\text{Perceived Control Experienced}}$$

Lowry, Moody and Chatterjee (2017) adapted the control balance theory of deviance to predict and explain cyberbullying. They proposed that cyberbullying is a deviant behaviour that results from an imbalance of control. Therefore, it is intended to restore the control balance ratio for those who are deficient in control or an attempt to leverage the control surplus for those who have a surplus of control. In their proposed theory they indicated that cyberbullying occurs in an information technology supported environment. As a result, the use of technology may have an impact on the control balance ratio of individuals, especially in social media environments. They extended the control balance theory by adding two key constructs to the model: Deindividuation and Accountability.

Lowry *et al.* (2017) define deindividuation as the decrease in self-observation, self-evaluation and concern for social comparison and evaluation. They argue that the Internet, and social media in particular, increases deindividuation by promoting anonymity as well as creating a virtual distance between the individuals. Therefore, in virtual environments people are less inhibited and act out deviant behaviour as they are dissociated from their actions and effects of the same.

Accountability is the need for transparency and the need to justify one's behaviour to others. In virtual environments, accountability is low as people can hide their identity and do not have to face social censure for their actions in the real world (Lowry, Moody & Chatterjee, 2017). Lowry *et al.* (2017) propose that IT systems such as social media should be designed in a way that would reduce deindividuation and increase accountability, thereby consequently reducing cyberbullying as a deviant behaviour. They propose four key areas in which altering the IT design of social media would lead to increase accountability or reduces deindividuation.

These four areas are:

1. Identification: Refers to the extent to which an individual online can be identified and located. Social media allows for anonymity and this reduces inhibitions and the need for accountability hence allowing deviant behaviour to occur. Lowry *et al.* (2017) argue that the more identifiable an individual is, the more accountable they tend to be.
2. Monitoring awareness: Lowry *et al.* (2017) expounds that if individuals are aware that their activities are being monitored, they are less likely to engage in deviant behaviour.
3. Evaluation awareness: The researchers argue that the more aware individuals are that their activities are being logged and reviewed the less likely they are to perform deviant behaviour, especially if the output of the evaluation results in consequences for deviant behaviour.
4. Social presence awareness: Refers to the degree to which an individual is perceived as 'real'. This refers to the understanding that one's actions have effect on other people. Higher social presence awareness leads to less deindividuation and, hence, more control over deviant behaviour such as cyberbullying.

Lowry *et al.* (2017) proposed the model as visualised in Figure 3 to show how ICT design can be used to curb cyberbullying. In their model, they refer to the intervention of IT design as Information Technology Cyber Bullying Prevention Capacity (ITCBPC).

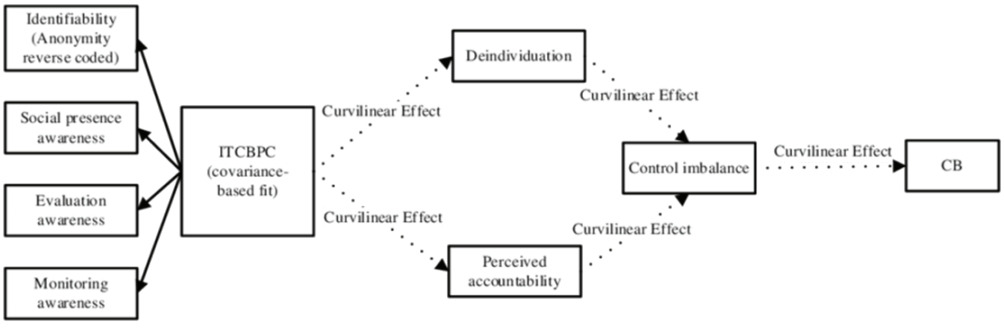

Figure 3: Control Balance Theory of Deviance and Cyberbullying

Source: Lowry et al. (2017)

This research borrows heavily from these frameworks to help understand the following: What strategies exist to curb cyberbullying on Facebook? How effective are the existing strategies in curbing cyberbullying on Facebook? Which strategies can be used to make Facebook safer from cyberbullying among undergraduate university students?

2.5 Conceptual framework

This study investigated cyberbullying, its types, prevalence, and effects on the academic and social lives of undergraduate students in Kenya. The types of cyberbullying such as shaming, impersonation and blackmail, are the independent variables. The prevalence of cyberbullying is varied depending on the age, gender, and course of study of the students. These are also part of the independent variables of the study. The intervening variables of the study include the interventions that reduce or eliminate the effects of cyberbullying on the students' academic and social lives. These include non-technological or technological interventions. Non-technological interventions include seeking therapy, having social support, seeking legal redress, and passive resistance, among others. Technological interventions include blocking bullies, and using artificial intelligence to filter cyberbullying content online, among other interventions. The effects of cyberbullying are also varied depending on the demographical characteristics of students, and the types of cyberbullying experienced. These are the dependent variables of the study. This research adopted the model that is illustrated in Figure 4.

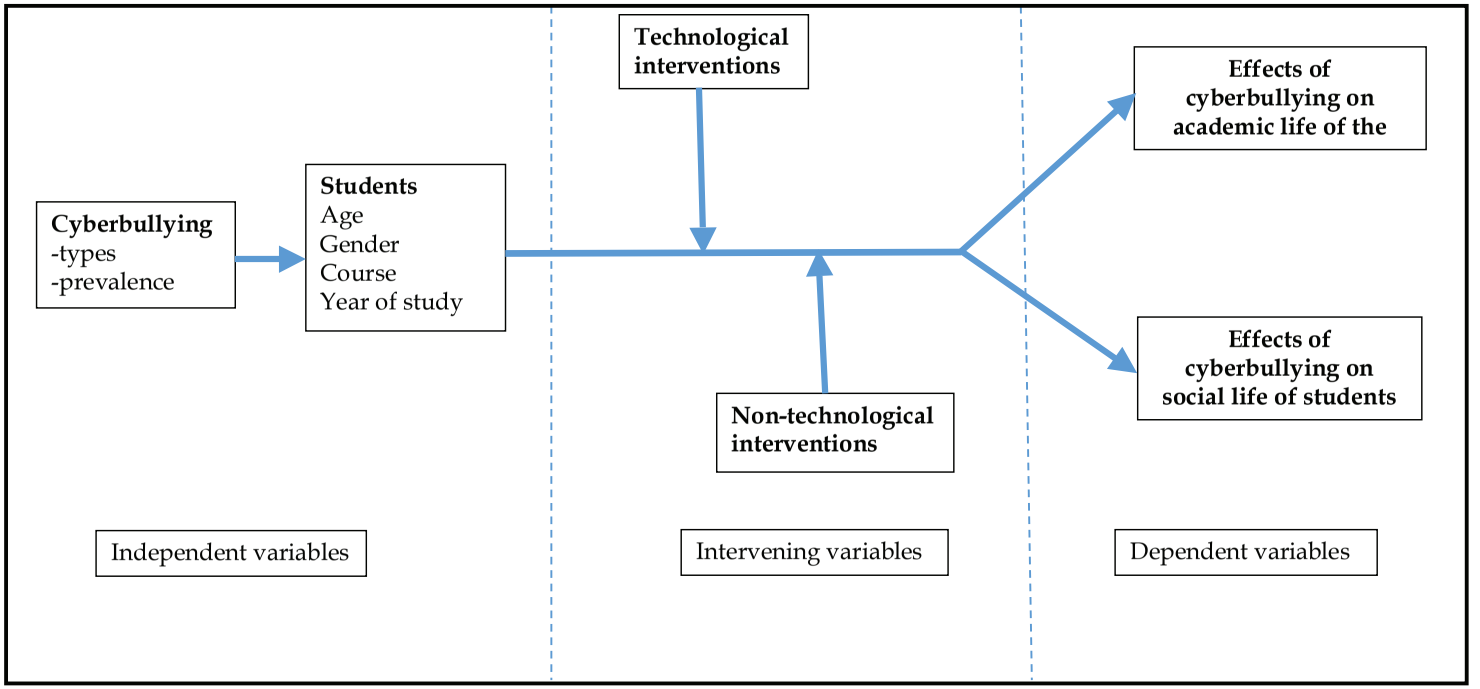

Figure 4: Conceptual framework

2.6 Literature Gaps Analysis

Table 1: Literature Gaps Analysis

S/N	Study	Focus	Findings	Knowledge Gap	Focus of current study
1	Watts, Wagner, Velasquez and Behrens (2017)	Cyberbullying in higher education: A literature review	The study found the prevalence of cyberbullying occurs among adolescents, its causes, effects, trends and strategies to mitigate cyberbullying among college students.	The study did not focus on the social media platforms in which cyberbullying occur, and whether the programs undertaken by the students had an impact on bullying incidences.	The current research in addition to reviewing literature, conducted an actual study on the prevalence, effects and strategies in place to curb cyberbullying among university students and also focussed on the impact of educational programs on cyberbullying among university students in Kenya.
2	Nwosu, Ngozi and Eberechi (2018)	This study investigated students' awareness and incidence of cyberbullying among undergraduate students in a Nigerian university.	The study findings revealed that the majority of the respondents had experienced cyberbullying through various cyber channels and the most common forms of cyberbullying experienced were through text message bullying, phone calls, chat room bullying and through email.	The study focused only on awareness of cyberbullying, the forms of bullying and the devices through which the bullying incidents occurred and did not look at intervention strategies in place. The study relied on documentary sources.	This current study takes a holistic view of cyberbullying among undergraduate students in Kenyan university with the aim of developing a conceptual model that accounts for all factors that may contribute to cyberbullying and the mitigation strategies.

S/N	Study	Focus	Findings	Knowledge Gap	Focus of current study
3	Martínez-Monteagudo, Delgado, García-Fernández and Ruíz-Esteban (2020)	The study focussed on the predictive capacity of emotional challenges like anxiety, depression, stress and how universities students adapt as a victim or perpetrator of cyberbullying.	The study found that there are high levels of emotional challenges such as depression and stress which affect the well-being of the students and increases the probability of either being a victim of cyberbullying or becoming a cyberbully.	The study only focused on the emotional problems experienced by both the victims and the perpetrators but do not give the specific prevention and intervention programs in response to cyberbullying in the university setting that can be used to address cyberbullying.	The current study investigates the effect of cyberbullying on both social and educational well-being of undergraduate university students in Kenya and suggests strategies that can be used to address them including support to the victims and the need for suitable legislation to address such.
4	Oyewusi and Orolade (2014)	The study focused on familiarising the schools in Nigeria with the roles they are supposed to play to support victims of cyberbullying	The study found that most students in Nigeria are not concerned with cyberbullying that occurs within the school environment but are affected by cyberbullying incidents outside the school environment.	The study focussed on cyberbullying among students in secondary schools in Nigeria and the environments in secondary schools could be different from those of universities as addressed in this current study	The current study seeks to help university students and universities administrators to identify types and incidents of cyberbullying and how to help victims cope with cyberbullying incidents, especially through the office of deans of students

S/N	Study	Focus	Findings	Knowledge Gap	Focus of current study
5	MacDonald and Roberts-Pittman (2010)	The purpose of the study was to gain an understanding of the prevalence of bullying on school-age children in grades 6-10 and from public and private schools in the United States.	The findings of the study indicate bullying incidents were reportedly higher among males compared to female peers. In addition, males were more prone to escalating the bullying offline compared to females who experienced bullying through sexual comments. Also bullying was more prevalent among middle school children than among high school children	The researchers explored cyberbullying behaviours by examining differences in gender, grade, and race in school children in grades 6-10 which is an equivalent age to primary and secondary going children in Kenya. At this age most students are still under the care of their parents and by Kenyan laws should not have gadgets for accessing the Internet registered in their name as they have not attained mandatory age of 18 years. As such, it does not give a suitable age for conducting demographic studies on cyberbullying in Kenya.	The current study explored cyberbullying behaviours by examining demographics such as gender, age, educational level and course among university students in Kenya who have attained legal age of 18 years and are considered adults with the rights to own ICT devise to engage online and with sound mind to make decisions regarding cyberbullying.

S/N	Study	Focus	Findings	Knowledge Gap	Focus of current study
6	Mimbi, Nembandona and Mtshazi (2018)	This study investigated mobile bullying among high school rural students, the influencing factors, the applicability of earlier theories, and legal and policy implications in South Africa.	The study found out that bullying increases with intensive use of chat rooms, Facebook and Twitter and some forms of bullying increase with age up to 14 years, drop at age 15 then rise again from 16 to 18 years and bullies mainly came from unstable residential areas and lack of self-control impacts on cyberbullying.	The study looks at bullying from the perspective of unstable (informal) residential areas and not urban areas. However, online presence should not be dictated by physical location since it is not location dependent.	The current study looks at cyberbullying among students in both public and private universities Kenya spread all over the country thus eliminating the bias of location dependency.
7	Ndiege, Okello and Wamuyu (2020)	The study investigates on the prevalence of cyberbullying among university students in Kenya	The study found victimisation as the highest form of cyberbullying mostly perpetrated because of malice and also male students are more likely to be bullies compared to females. The researchers also confirmed that cyberbullying exists within institutions of higher learning in Kenya.	The study focuses only on one private university based in Nairobi and with a small sample size to draw conclusions on its findings and may not be a true reflection on what happens in other universities across Kenya particularly public universities that operate differently from their private counterparts.	The current study explores cyberbullying among university students in Kenya from both public and private universities across Kenya to draw its conclusions.

S/N	Study	Focus	Findings	Knowledge Gap	Focus of current study
8	Johnson, Haralson, Batts, Brown, Collins, Van Buren-Travis and Spencer (2016)	Study focused on students' beliefs, feelings and behaviour on cyberbullying either as victims, perpetrators of cyberbullying or bystander. The study attempted to capture the overall feelings, beliefs, and behaviour by looking at scenarios that would most likely occur at Jackson State University in the USA.	The finding of the research showed that most of the participants agreed that that cyberbullying is vice which they do not want to experience and should not be tolerated. However, they reported that respondents indicated that cyberbullying was not a serious problem among the respondents since they rarely encounter it or perpetrate it.	The study only focused on determining whether the college students had experienced cyberbullying by either perpetrating the vice or being victims of cyberbullying. It focusses more on the most likely scenario to occur as opposed to what has happened before or is happening. It also does not look at other aspects of cyberbullying such as types, prevalence, effects and strategies of mitigating cyberbullying	The current study looks at all the aspects of cyberbullying including types, prevalence, effects, strategies of dealing with cyberbullying among undergraduate students in Kenya and possible mitigation measures in Kenya.

3.

RESEARCH METHODOLOGY

3.0 Introduction

Kumar (2014) defines a research methodology as a concept that considers and explains the logic behind research methods and techniques. Research methodology may also be defined as the study of methods by which knowledge is gained. This section explains the methodology of the study in terms of the research design, population, sample, sampling procedures, data collection methods, validity and reliability, and the ethical matters to be considered.

3.1 Research design

According to Kothari (2014), research design is a roadmap of how the research questions are investigated. The study adopted a mixed method research design in this study. Creswell and Poth (2017) explain that a mixed research method is used to gather, evaluate, and deduce quantifiable and qualitative data in one study or in a chain of studies investigating the same phenomenon. It entails employing quantitative techniques to provide answers to research questions that require numerical data. It, however, takes a qualitative approach when providing answers to research questions that require qualitative data. Williams (2007) agrees that a mixed method research approach is appropriate for research questions that require both textual and numerical data. Kumar (2014) argues that a mixed research method has an advantage over other methods because it enhances research possibilities in circumstances where all the objectives cannot be explored using one method; and it permits the researcher to concurrently provide answers to questions and ask further questions. According to Creswell and Plano (2011), a mixed method design can be divided into the following areas:

1. *Explanatory sequential design*: This entails conducting the research in phases. A quantitative study is carried out first where the quantitative data is collected and analysed. The result of the quantitative data is reinforced by conducting qualitative research from the same sample. This results in a sequence where there is a chronological order of the two phases. The researcher first conducts quantitative research and then a qualitative study follows. It is deemed explanatory because of the use of the qualitative data to expound on the quantitative data.
2. *Exploratory sequential mixed method*: In this case the two phases of research start with a qualitative phase where the participant's views are explored by the researcher. The researcher then constructs the quantitative phase from

the analysed data and the information from the qualitative stage. Therefore, the first stage assists in building of the instrument to fit the sample of the second phase.

3. *Convergent parallel design*: In this design, the researcher simultaneously conducts both quantitative and qualitative elements in the research within the same stage of the research process. The researcher then gives both methods equal weighting, analyses the two components independently, and interprets the results simultaneously (Creswell &Plano-Clark, 2011).

The study adopted a convergent parallel design to collect both quantitative and qualitative data concurrently. The collected data was independently and concurrently analysed. The study obtained the results from both sets of data and merged them for comparison and validation. This enhanced the interpretation of similar and dissimilar concepts.

3.2 Target population

The population of the study included all undergraduate students in all the forty-nine (49) chartered universities in Kenya (*see appendix 1*). The area of study included all the universities from the eight (8) regions of Kenya, namely, Nairobi, Rift Valley, Nyanza, Eastern, Coast, North Eastern, Central and Western. This approach of using the regions enabled the researchers to obtain and accommodate diverse ethnic, gender, international, racial and religious perspectives of cyberbullying among undergraduate university students in Kenya. The target population was six hundred and ten thousand, five hundred and sixty-three (610,563) students and forty-nine (49) deans of students adding up to a total of 610,612.

3.3 Sampling techniques

The study used a multistage sampling technique. The first stage identified the specific universities to study. Here, the researchers adopted stratified sampling. The universities were stratified as private and public universities. The researchers thereafter purposively selected 16 public and 8 private universities. The second stage was to identify the specific respondents for the study where the researchers applied information-oriented purposive sampling. The class representatives of all the undergraduate academic programmes in the selected universities were chosen. The researchers also involved all the deans of students in the selected universities. The third stage involved snowballing sampling to identify the victims of cyberbullying in the selected universities and conduct key informant interviews

with them. The starting point of the snowballing process was the data received from the class representatives or deans of students.

3.4 Sample size

As already stated, a sample of twenty-four (24) chartered universities in Kenya was used. This included 16 public and 8 private universities. As explained earlier, class representatives of each undergraduate academic programme in the participating universities were selected to participate in the study giving a number of 4,770 class representatives. The deans of students of the 24 selected universities also participated. Table 1 summarises the sample size.

Table 2: Sample size

PUBLIC UNIVERSITIES

S/N	UNIVERSITY	Sample
1.	Moi University	200
2.	Egerton University	240
3.	Multimedia University	150
4.	Maseno University	250
5.	Dedan Kimathi University	150
6.	Masinde Muliro University	250
7.	The Technical University of Kenya	240
8.	Technical University of Mombasa	220
9.	Pwani University	180
10.	Maasai Mara University	240
11.	Kibabii University	150
12.	Machakos University	240
13.	Taita Taveta University	200
14.	Garissa University	170
15.	Kisii University	250
16.	South Eastern Kenya University	250
TOTAL		3,380

PRIVATE UNIVERSITIES

1.	University of Eastern Africa-Baraton	200
2.	Catholic University of Eastern Africa	230
3.	Zetech University	250
4.	Kenya Methodist University	100
5.	St. Paul's University	150
6.	Kabarak University	150
7.	Daystar University	150
8.	Great Lakes University of Kisumu	160
TOTAL		1,390

3.5 Data collection

The researchers gathered both qualitative and quantitative data. The quantitative data was collected using structured questionnaires while qualitative data was gathered using semi-structured interviews and focus group discussions. The questionnaires and focus group discussions were used to collect data from the undergraduate students while interviews were used to collect data from the deans of students. The data collected was categorised as explained hereunder:

- *Section 1* – Background information about the respondents, basic demographic variables, and information about Internet usage patterns.
- *Section 2* – Cyberbullying experienced in the last 12 months; types of cyberbullying experienced or witnessed on Facebook.
- *Section 3* – Prevalence of cyberbullying on Facebook; and effects of cyberbullying on social and academic lives of the victims.
- *Section 4* – Solutions to cyberbullying; strategies to curb cyberbullying; effectiveness of the strategies in curbing cyberbullying on Facebook.

3.6 Data collection tools

This study employed the following data collection tools:

3.6.1 Structured questionnaire

Cheung (2014) defines a structured questionnaire as a document that contains questions that are formulated by the researcher and have expected answers to the questions. This type of questionnaire consists of pre-coded questions and bears a well-defined pattern to follow when answering the questions. The researchers

developed a structured questionnaire that consisted of closed-ended questions. Some of the questions were based on a Likert scale while others had multiple-choice responses. The questionnaires were administered to the undergraduate students of the sampled universities. The structured questionnaire was deemed suitable for this study because the sample size was large, thereby making it difficult for the researchers to conduct interviews personally with each respondent.

3.6.2 Interview schedule

An interview schedule consists of questions that a researcher develops to ask respondents during data collection (Allan, 2020). It is a list of questions prepared to guide the researcher when conducting interviews. An interview schedule facilitates the conduct of an interview and increases the probability of collecting accurate data through follow up on questions which are not responded to fully. The schedules also enhance the flow of research questions and reduce the chances of forgetting key questions during interviews. Semi-structured interview schedules were used to gather data from the deans of students in all the sampled universities.

3.6.3 Focus group discussion guide

A focus group discussion guide is a set of questions that assists researchers during a focus group discussion. It is structured in a way that there is some introduction, warm-up questions, and the main research questions. A focus group discussion guide was used with the undergraduate students.

3.7 Data collection procedure and pilot testing

The researchers first sought for a research permit from National Commission for Science, Technology and Innovation (NACOSTI). After obtaining the permit, the researchers obtained ethical clearance from a registered Institutional Review Board (IRB) in Kenya. Once the researchers got the clearances, they wrote letters to all sampled universities seeking authorisation to collect data from their undergraduate students and deans of students.

The researchers pretested the data collection tools and approaches before the actual data collection. According to Van-Teijlingen and Hundley (2001), pre-testing enables researchers to assess the suitability of the data collection tools so as to enhance the validity and reliability of the findings. Pretesting enabled the researchers to know if the selected samples would be viable or not. The researchers used the conventional pretesting method where they subjected the tools to respondents having similar

characteristics with the main research respondents (Lenzner *et al.*, 2016). It can also be termed as rehearsal piloting because it is like an imitation of the main data collection. According to Taminiau-Bloem *et al.* (2016), conventional pretesting should be conducted using the same data collection techniques as the ones of the main study. The aim of conventional pretesting is to check the feasibility of data collection tools and processes. The pretest usually gives information about (1) faults in the data collection tools, (2) distribution of the response, and (3) time taken to complete a questionnaire or interview (Lenzner *et al.*, 2016). The respondents of this pretest method are not informed it is a pretest to avoid influencing their views, hence they are called undeclared pretest participants (Hu, 2014). This allows the sample used for pretest to be used to conduct the main research.

The researchers pretested the data collection tools with a small sample of respondents from two institutions. The two pilot institutions were Multimedia University of Kenya (public) and Daystar University (private). The findings of the pretest study indicated that the tools had errors of terms and the principal investigator's email was inaccurate. Similarly, the questionnaire had questions that were not arranged well based on the research objectives. The focus group discussion guide was also long and with repetitive questions that would make the respondents to get bored and not concentrate while the interview schedule was brief and to the point. From the pretest data, the researchers were able to correct errors and improve the tools.

After the pretest, the actual data collection commenced. Data collection was done in two phases. The first phase was between March and May 2020 where the researchers collected data from the deans of students. The researchers contacted the deans of students and booked appointments. The deans were at liberty to either choose a face-to-face interview or conference call on Zoom teleconferencing platform. The researchers ensured that the interviews were as interactive as possible by giving the interviewees adequate time to respond to the questions. The researchers also keenly noted down the points as given during the interview and also recorded the same on audio and video for backup purposes. This was done with the permission of the respondents.

The second phase began in October 2020 and ended in June 2021. This phase consisted of data collection from the undergraduate students using unstructured focus group discussion guide and structured questionnaires. For quantitative data from students, the researchers convened all the respondents in each sample university in one place and administered the structured questionnaire. They explained different concepts in the questionnaire and let the respondents fill them. Once filled, the questionnaires

were collected by researchers. To ensure that all questionnaires were filled, the researchers remained in the room to explain any concepts that the respondents did not understand. This ensured a high response rate. For the focus group discussions, the researchers convened the respondents in small groups of ten respondents. Two researchers led the discussions: one guided the respondents through the questions while the other noted down the responses. The focus group discussions were also recorded on audio and video with the permission of the respondents.

3.8 Data analysis and presentation

Data analysis is the practice of scientifically cleaning, transcribing and modelling data in research, while data presentation is the process of visualising the analysed data (Kumar (2014). This study contained both quantitative and qualitative data which was analysed and presented as explained hereunder.

3.8.1 Quantitative data analysis and presentation

After collecting the questionnaires from the respondents, the data was checked and verified to ensure consistency and accuracy. The data was then entered in Google sheets in readiness for data analysis. When data entry was complete, the Excel was downloaded and loaded onto STATA software version 17 for analysis. The data was analysed statistically and presented using tables. STATA software was used to conduct regressions analysis from different variables of the study.

3.8.2 Qualitative data analysis and presentation

When conducting the interviews and focus group discussions, the researchers recorded the data as the respondents were giving their responses. The researchers later coded and grouped the data into different themes that emerged based on the objectives of the study. This was done through thematic analysis. The researchers coded the transcriptions in ATLAS.ti version 9 software that assisted in the analysis and visualisation of the data. Data was presented using wordles, textual displays and in verbatim statements.

3.9 Reliability and Validity of the research

Reliability and validity were observed while conducting this research. As Middleton (2019) explains, both reliability and validity are important aspects of evaluating the quality of any research and indicate how well the method, technique or the test used accurately measures the phenomenon under study. In this study, reliability

and validity were factored in in the research design, the methods of data collection and the analysis of test results.

3.9.1 Reliability of the study

Reliability refers to obtaining similar results from research instruments when measuring a phenomenon under study when the research tools are administered more than once to the same sample or sample with similar characteristics. Therefore, reliability shows the degree to which research results are stable and consistent in the results produced or measured (Jhangiani, Chiang, & Price, 2015; Dudovskiy, 2018; Middleton, 2019). Jhangiani, Chiang and Price (2015) argue that there are three forms of reliability used to consistently measure results. These are measures over time, known as test re-test reliability; across items, called internal reliability; and across researchers, known as inter-rater reliability.

To ensure reliability in this study, the researchers applied the research tools to respondents with similar characteristics as the main respondents in the study. The data collection tools were administered to students of Multimedia University of Kenya (public university) and Daystar University (private university) for the pilot study to determine a test and re-test reliability. Dudovskiy (2018) explains that a test and re-test reliability is the measure of reliability done by performing the same test with respondents who share similar characteristics as the sample group within a period of time. The pretest of the data collection tools during the pilot study was done to determine the appropriateness and viability of the data collection tools. The respondents of the pretest method were not informed that it is a pretest and, thus, their views were not influenced, making them undeclared pretest participants. From the pilot study, the researchers were able to identify whether the questions were eliciting an adequate range of responses, the shortcomings of the tools such as misunderstood concepts and terminologies, and the flow of questions. These were corrected in line with the objectives of the study before the main data collection commenced.

Similarly, for qualitative data, a parallel forms reliability was also applied where the same phenomenon (cyberbullying among university students) was assessed with participants of same sample group through a Focus Group Discussion approach. Interviews with deans of students on the same was also conducted by the researchers to measure internal consistency as a form of reliability. The deans of students were asked questions on the same concepts of cyberbullying similar to those asked in the questionnaires and FGDs to determine the consistency on the occurrence of the phenomenon under investigation. The researchers were then able to analyse the

responses from the deans of students and comparisons done to those obtained from the other respondents to arrive at conclusions that would reflect internal consistency.

Therefore, the researchers ensured reliability was achieved in the study based on the objectives. For example, using the pilot study, the researchers were able to modify the data collection tools and also know if the sample was appropriate to give the questionnaires or conduct interviews. The key informants also pointed out on areas that needed revision like addition of a debrief form to allow respondents pull out of the study if they feel so. From this, the researchers were able to reword, revise and re-scale the questions. Additionally, the researchers made sure that the concepts were based on the objectives of the study.

In addition, reliability was factored throughout the data collection process. First, by ensuring that the tools for data collection such as the questionnaire, the interview guide and the FDG guide were well designed and subjected to expert reviews before being administered to the respondents. This was done to ensure consistency and flow of concepts according to the research objectives. Second, the administration of the research tools to the respondents and key informants was done consistently. The researchers designed an interview and an FGD guide with questions that the key respondents were asked. The interview and FGD guides ensured that the same questions were asked to all the respondents. The same procedures were followed by the researchers during the interviews with the deans of students; the flow of questions in the questionnaires administered to all the student respondents was consistent throughout the research; and the manner in which the FGDs were conducted was also consistent throughout and across all the participating 24 universities. The same information was given to all participants during the entire research and possible variations in the understanding of terminologies used in the research tools ironed out early enough by the researchers by explaining, for example, the meaning of the different types of cyberbullying listed in the questionnaires. By doing so, the researchers ensured that there was a common interpretation of the concepts since they were introduced in the same manner by the researchers for all the respondents in different universities that took part in the study.

At the end of the data collection, analysis and presentation, a validation exercise was conducted by the researchers to interpret the findings back to the respondents. Validation of data was done to verifying whether or not the set of values derived from the study was acceptable as the true reflection of the respondents' views. As such it was used to verify reliability of data presented as actual accurate views of the

respondents during the research. Also, during data interpretation and analysis, the researchers sought the external views of other researchers to explore the inter-rater reliability in the interpretation of data, such as calculation of internal consistency of having different questions that could be having the same focus. The data that was obtained from the research was independently and concurrently analysed and the results from the sets of data merged and compared for validation. This enhanced the interpretation of similar and varied concepts. The data obtained from the research was cleaned, transcribed and modelled by first keying them into Google sheets then an Excel sheet downloaded and loaded onto STATA software version 17 for statistical analysis. The STATA software was used to conduct regressions analysis from different variables of the study to test for reliability and validity of results. Similarly, data from the FGDs were coded and grouped into themes and then thematic analysis and visualisation done using ATLAS.ti version 9 software.

3.9.2 Validity of the study

Validity can be considered as the extent to which scores from measurements conducted during the study represent the variables and constructs as they are supposed to (Jhangiani, Chiang, & Price, 2015) and it is reflected by the accuracy of the measure (Middleton, 2019). Simply put, validity is a measure of how an instrument, or a test, accurately measures what it is supposed to measure (Mohajan, 2017; Glen, 2020). Researchers should have confidence in their study if there is reliability and consistency in their study. However, more confidence will be shown by researchers if the scores represent what they are supposed to be (Middleton, 2019) since measures can be very reliable but lack validity. Valid research should display characteristics, properties and variations that correspond to the ideal situation.

According to Mohajan (2017), validity in research can be grouped under the following types:

1. Content Validity: Refers to the extent in which a question on a research instrument and the results derived from these questions are representative of all the questions that can be asked about the phenomenon, for example, if a questionnaire includes adequate set of items about a concept. The wider the scale of items represented around the concept being measured, the greater the content validity. As such, content validity looks at the extent to which the phenomenon under study is fairly represented along the entire domain the test seeks to measure. However, no statistical test can determine whether a measure can adequately cover a content area, thus, content validity usually depends on the judgment of experts in the field.

2. Face Validity: It is a key factor of content validity which is derived after a test has been done. Face validity, therefore, is the extent to which a study appears to measure what it was intended to or claim to measure and thus considered as a quick assessment of what the study is measuring. It establishes whether the measure seems to be assessing the intended construct under study. It is the simplest and least precise method of determining validity which relies on how the expert conducting the test is familiar with the subject matter and is often used to describe the appearance of validity without empirical testing. If the test is known to have content validity, face validity can be assumed, but face validity does not ensure content validity.
3. Criterion Validity: This refers to the degree of relationship between the results of a test to that of another that is already determined as valid, was designed to measure similar construct and the test performed under similar conditions. It is established by correlating one question with another that has previously been validated with standard setting thus scrutinise the validity of a research tool on a extremely theoretical level.

The three types of validity observed in this research are construct or face validity, content validity and criterion validity. In construct validity, the researchers designed the questionnaires with content that reflects what they deemed as ideal situations encountered by the respondents thus having good face validity. The face validity was assessed both quantitatively through the questionnaires and also qualitatively through the interviews and FGDs.

However, as Jhangiani *et al.* (2015) observed, face validity has its weaknesses since it is based on people's intuitions about human behaviour and this could be wrong analysis of actual events. Due to this, the researchers used other forms of validity such as content validity. Content validity was used by the researchers to represent the respondents' attitudes as reflected by their feelings, thoughts, ideas, and actions towards a phenomenon (in this case cyberbullying on Facebook). During the FGDs each of the respondents was given adequate time to express themselves and their opinions were accepted and recorded down by the researchers through tape recorders for transcription and on an FGD guide form. As such, each respondent who gave their views was accepted and not discriminated upon. Follow up questions by the researchers were done to ensure clarity of the respondent's views and feelings. By conducting this type of validation, the researchers made the respondents feel that their emotions were not only heard and seen by others but were accepted as well.

This validity was measured qualitatively through FGDs and interviews with key informants. In order to take care of content validity, the researchers measured the respondents' attitudes towards cyberbullying by carefully analysing the measured against the conceptually defined constructs in the research.

The researchers also employed criterion validity in which the constructs were measured and compared with other researchers' views of the same phenomenon. This was mainly done through literature reviews of secondary sources of data. A criterion was considered as any variable that the researchers believed was correlated with the constructs that were being measured in this study, for example the types of cyberbullying experienced by undergraduate students; the prevalence of cyberbullying incidents and; the interventions undertaken against cyberbullying among others.

The different forms of validity of this research findings were determined by the choice of sample population which was undergraduate students in all universities in Kenya, the research bias and the three research tools employed in this study. The population was arrived at because university students are the most active population on social media sites, for example. The choice of participating universities was arrived at to represent all regions in Kenya through the previous provincial administrative divisions in Kenya, thus eliminating any bias.The use of three different research data collection tools was to eliminate the weakness of the other and to provide in-depth information from the respondents.

To ensure validity, the researchers used scores and rating scales to measure variations in age, number of friends they have on Facebook among others. This was to ensure that the different variations were reflected as accurately as possible. The researchers also researched widely on the appropriateness of measurement methods used in the research before selecting the most suitable to measure the phenomena under study, based on existing knowledge in secondary sources as presented on existing literature as a way of generalising results. The researchers also defined the population under study based on age group and geographical location for reasons explained above. The sample was selected without bias and reflected honesty and objectivity in representation. The researchers also used data triangulation to enhance reliability and validity in the data collection. Data triangulation was achieved by using different research tools, namely, the questionnaires (for quantitative data), the interview schedules (qualitative data), and the FDGs (qualitative data as well). The data was also obtained from the key informants (deans of students), the students and from secondary sources.

4.

DATA ANALYSIS AND PRESENTATION

4.0 Response rate

Response rate refers to the degree to which the target respondents actually provide complete responses. The rate was obtained by calculating the number of respondents who successfully completed the questionnaire or participated in the interview divided by the sample size, multiplied by one hundred to get the percentage. This research involved a total sample size of 4770, from twenty-four public and private universities in Kenya. The research response rate is shown in Table 3.

Table 3: Response Rate

Respondents' strata	Sample size	Number of responses	Response rate
Students	4770	3020	63.3%
Students FGD	24	24	100%
Deans of students	24	24	100%

Source: Researchers (2021)

Data analysis for this study was based on responses from questionnaires administered to students, students FGDs and key informant interviews with the deans of students. Of the 4770 students targeted, the researchers managed to get complete responses from 3020 students. Therefore, the response rate from the questionnaires was at 63.3%. A follow-up FGD with the students was conducted for the targeted 24 universities and the response rate was at 100%. Additionally, the researchers interviewed 24 deans of students from the targeted 24 universities giving a response rate of 100%.

Following the outbreak of COVID-19 pandemic in December 2019, most universities were closed from around March to November 2020. Therefore, the researchers could not manage to reach the entire 4770 targeted students. In addition, the difference in the response could also be attributed to the challenge of administering the questionnaires to a wide range of students at the universities where there were no designated drop-off and pick-up points.

4.1 Demographic characteristics of student respondents

As already reported, a total of 3,020 students from 24 universities responded to the survey. There were 65.0% male students and 34.1% female students with 0.9% (27) respondents not providing information on their gender. The subjects with missing gender were subsequently excluded from the analysis by gender. The majority

(72.8%) of the students who responded were between 18 and 22 years of age. Most of the respondents were in their early years of study with about 57% being in years one and two. Table 4 provides the details on demographics.

Table 4: Demographic characteristics of respondents

Gender	
Male	1962 (65.0%)
Female	1031 (34.1%)
Age in years	
<18	21 (0.7%)
18-22	2198 (72.8%)
23-27	687 (22.7%)
28-32	45 (1.5%)
>32	32 (1.1%)
Age missing	37(1.2%)
Year of study	
Year One	964 (31.9%)
Year Two	782 (25.9%)
Year Three	631 (20.9%)
Year Four	510 (16.9%)
Year Five	13 (0.4%)
Year of study missing	120 (4%)
Course grouping	
Social Sciences & Humanities	1171(38.8%)
Education	884(29.3%)
Applied Sciences	469(15.5%)
Engineering	209(6.9%)
Natural Sciences	173(5.7%)
Physical Sciences	85(2.8%)
Course grouping missing	29(1.0%)

Source: Researchers (2021)

From Table 4, it is also evident that the majority (38.8%) of the responds were pursuing degree programmes in Social Sciences and Humanities. Students pursuing courses in natural, applied and physical sciences were comparatively fewer. This difference may be attributed to the fact that most universities have a larger number

of students pursuing humanities subjects than in science, technology, engineering and mathematics (STEM). However, 29 respondents did not identify the course programmes they were enrolled in.

Table 4 also shows that there were fewer female students (34.1%) who took part in the study compared to their male counterparts (65.0%). It was also noted that students aged below 18 and above 32 years reported a low participation at 0.7% and 1.1% respectively. Also, there were more first year students (31.9%) who took part in the study followed by second year (25.9%) and third year (20.9%). The least represented were fifth and fourth years at (0.4%) and (16.9%) respectively. It can be inferred that the reason there were more first and second year students who took part in the study than any other group was due to the fact that first and second year students are typically less busy compared to students in advanced years of study.

4.2 Demographic characteristics of deans of students

From the sample of 24 deans of students, 6 (25%) were female while 18 (75%) were male. All the respondents in the study had postgraduate qualifications with 16 (67%) of them having PhDs, while 8 (33%) had Master's level of training. Table 5 shows the areas the respondents are specialised in.

Table 5: Area of specialisation of deans of students

S/N	Professional Specialisation	Frequency
1	Counselling Psychology	5
2	Education	4
3	Religion and Theological Studies	4
4	Human Resource Management	1
5	Economics	1
6	Organic Chemistry	1
7	Leadership and Governance	2
8	Environmental Sciences	1
9	Social Education and Ethics	3
10	Public Administration	1
11	Peace and Conflict Management	1
Total		24

It is evident from Table 5 that the deans of students in Kenyan universities are drawn from a wide array of specialisations. Nonetheless, the majority are from

the humanities and social sciences. Counselling Psychology is the most popular specialisation among the interviewed deans of students. This is followed by Education as well as Religion and Theological Studies.

4.3 Types of Cyberbullying that Undergraduate Students in Kenya Experience on Facebook

This data was obtained from the questionnaires administered to students, FGDs with students and key informant interviews with the deans of students.

4.3.1 What is cyberbullying?

It emerged from the focus group discussions (FDGs) with students that they were well aware of what cyberbullying is. They described cyberbullying as the act of harassment, intimidation and threats though electronic means but most notably on social media. Thus, they were aware of cyberbullying as being a deviant behaviour carried out online in cyberspaces.

4.3.2 Attributes of a bully

The FGD participants were asked to give the attributes of a cyber-bully. Among the attributes that stood out were that bullies are intelligent, creative, arrogant and idle people. The other attributes were that the bullies are jealous, disrespectful, attention seeking, egocentric, cowardly and narcissistic. Figure 5 depicts these and other attributes of a cyber-bully in a word cloud. When asked about the gender of the bullies, most respondents, 16 (67%), were of the opinion that both genders (male and female) can bully others. Still, 7(29%) felt that males were more likely to be bullies while only 1(4%) thought that females can be bullies.

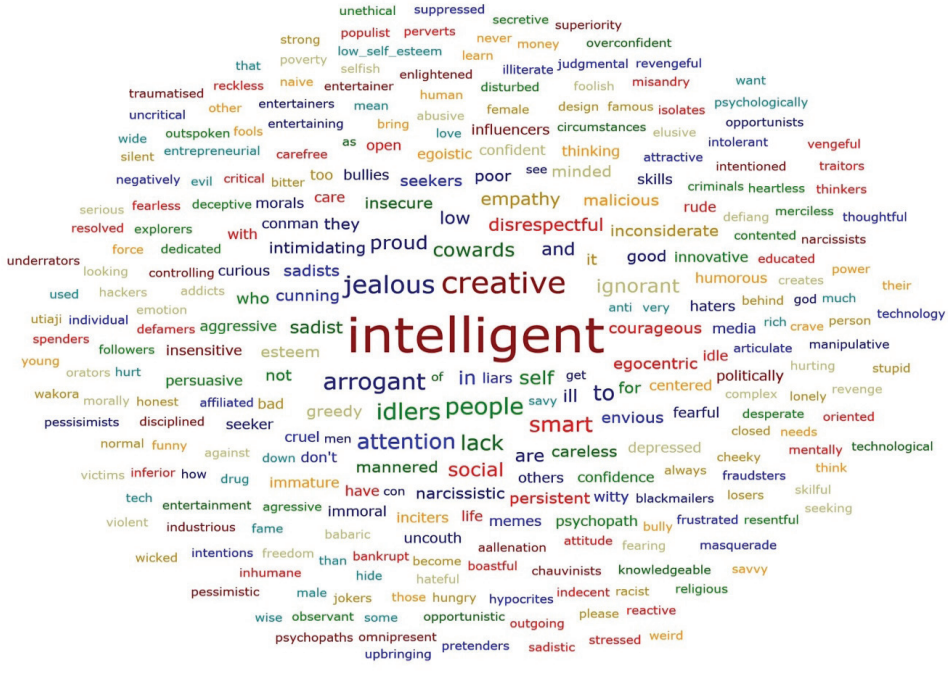

Figure 5: Attributes of a cyberbully

The complete set of the attributes as well as their frequency of occurrence is listed in Table 6. From the table, intelligence as an attribute of a cyberbully elicited the highest number of responses at 22 counts followed by creativity at 11 counts. Attention seeking and idling elicited 9 counts each. The least occurring attribute was given one (1) count each and included description of bullies as being vengeful, unethical and underachievers.

Table 6: Attributes of a cyberbully

Attributes of a cyberbully	Total	Attributes of a cyberbully	Total	Attributes of a cyberbully	Total	Attributes of a cyberbully	Total	Attributes of a cyberbully	Total
Intelligent	22	Hateful	3	Savvy	2	Frustrated	1	Reactive	1
Creative	11	Ill-mannered	3	Uncouth	2	Hackers	1	Reckless	1
Attention-seekers	9	Inconsiderate	3	Witty	2	Heartless	1	Religious	1
Idlers	9	Insecure	3	Abusive	1	Honest	1	Resentful	1
Jealous	8	Intimidating	3	Addicts	1	Hypocrites	1	Resolved	1
Sadist	8	Malicious	3	Articulate	1	Illiterate	1	Secretive	1
Arrogant	7	Persistent	3	Attractive	1	Indecent	1	Selfish	1
Normal people	7	Poor	3	Barbaric	1	Industrious	1	Spenders	1
Smart	6	Cruel	2	Bankrupt	1	Inferior	1	Stressed	1
Cowards	5	Curious	2	Bitter	1	Inhumane	1	Strong	1
Egocentric	5	Depressed	2	Blackmailers	1	Intolerant	1	Stupid	1
Ignorant	5	Famous	2	Boastful	1	Isolates	1	Superiority	1
Proud	5	Fearful	2	Chauvinists	1	Jokers	1	Suppressed	1
Self-centred	5	Fearless	2	Cheeky	1	Judgmental	1	Thinkers	1
Social	5	Foolish	2	Controlling	1	Knowledgeable	1	Thoughtful	1
Careless	4	Humorous	2	Criminals	1	Losers	1	Traitors	1
Confident	4	Immature	2	Deceptive	1	Manipulative	1	Traumatised	1
Disrespectful	4	Immoral	2	Dedicated	1	Masquerade	1	Uncritical	1
Empathy	4	Inciters	2	Defamers	1	Merciless	1	Underachievers	1
Entertainers	4	Influencers	2	Desperate	1	Naive	1	Underrators	1
Low-self esteem	4	Innovative	2	Disciplined	1	Observant	1	Unethical	1
Narcissistic	4	Insensitive	2	Disturbed	1	Omnipresent	1	Vengeful	1
Psychopath	4	Liars	2	Educated	1	Outgoing	1		
Aggressive	3	Open-minded	2	Elusive	1	Outspoken	1		
Conman	3	Opportunists	2	Enlightened	1	Overconfident	1		
Courageous	3	Persuasive	2	Entrepreneurial	1	Perverts	1		
Cunning	3	Pessimists	2	Evil	1	Populist	1		
Envious	3	Revengeful	2	Explorers	1	Pretenders	1		
Greedy	3	Rude	2	Fraudsters	1	Racist	1		

The respondents were also asked to state what they believed motivated cyberbullies. It emerged that the main reasons people bully others online was for fun, revenge, fame, seeking attention, poor socialisation and idleness. Figure 6 represents the motivations of a cyberbully in a word cloud.

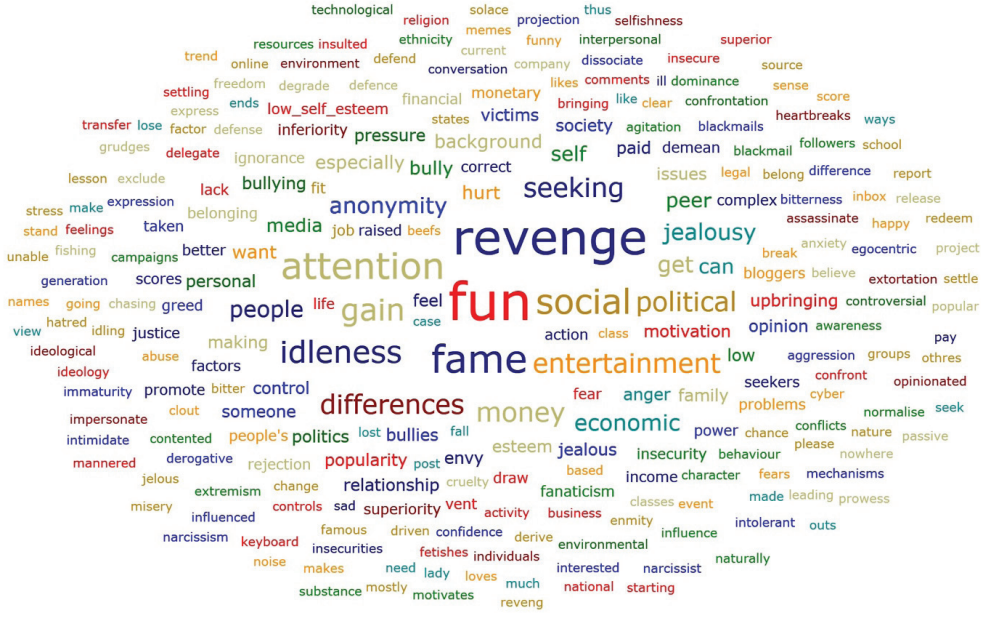

Figure 6: Motivation of cyberbullying

4.3.3 Social media networks used by students

The quantitative data collected from questionnaires administered to students showed that the students used a variety of social media platforms. The platforms used include Facebook, Instagram, Snapchat, Telegram, TikTok, Tinder, Twitter and WhatsApp. The results are indicated in Table 7.

Table 7: Social media networks among undergraduate students

	Male	Female	Overall
	n=1962	n=1031	n=2993
Facebook	1907 (97.2%)	970 (94.1%)	2877 (96.1%)
Instagram	1278 (65.1%)	652 (63.2%)	1930 (64.5%)
Snapchat	284 (14.5%)	547 (53.1%)	831 (27.8%)

	Male	Female	Overall
	n=1962	n=1031	n=2993
Telegram	120 (6.1%)	43 (4.2%)	163 (5.4%)
TikTok	340 (17.3%)	379 (36.8%)	719 (24.0%)
Tinder	64 (3.3%)	36 (3.5%)	100 (3.3%)
Twitter	1182 (60.2%)	354 (34.3%)	1536 (51.3%)
WhatsApp	1875 (95.6%)	988 (95.8%)	2863 (95.7%)
YouTube	1481 (75.5%)	737 (71.5%)	2218 (74.1%)
Other	63 (3.2%)	34 (3.3%)	97 (3.2%)

Facebook (96.1%) and WhatsApp (95.7%) were the two most subscribed social media networks among the participants of any gender. Facebook (97.2%) had the highest percentage of subscribers among males while WhatsApp (95.8%) had the highest percentage of subscribers among females. The least subscribed social media networks were Tinder and Telegram.

Participants in the FGDs were also asked to indicate the social media platforms they use. It emerged that the most popular platforms were Facebook, Twitter, Instagram, WhatsApp, TikTok and YouTube, were the most popular platforms used by the students. Figure 7 is a visualisation of the social media platforms used by students.

Figure 7: FGD social media networks

Female students reported a high number of social media networking presence compared to their male counterparts as indicated in Table 5. However, the variation was not significant as indicated by the P-Value of 0.015 in Table 8. It was also noted that students aged below and above 22 years reported low number of social media networks. The other age groups registered no significance at a P-Value of 0.000. However, of significance were the courses undertaken by the students. Students

taking Education courses reported a low number of social media networks compared to other courses. Subsequently, the students taking Sciences and Engineering courses were the most active on social media sites. They may be tech-savvy and as such engage more on social networks through their digital and mobile devices.

Table 8: Association of the number of social media networks by gender, age, and degree course

	Coef.	p-value	95% CI	
Gender (ref: Male)				
Female	0.16	0.015	0.03	0.29
Age group (ref: ≤ 22 years)				
>22 years	-0.32	0.000	-0.46	-0.18
Degree Course (ref: Social Sciences)				
Education	-0.18	0.014	-0.33	-0.04
Applied Sciences	0.09	0.351	-0.09	0.26
Engineering	0.03	0.790	-0.21	0.28
Natural Sciences	-0.03	0.806	-0.30	0.23
Physical Sciences	0.07	0.718	-0.30	0.43

4.3.4 Social media networks used by Deans of Students

A total of 23 (95.5%) indicated that they used Facebook. Only 1 (4.5%) of the deans was not using Facebook at the time of data collection. Other social media networks that the deans of students used were WhatsApp, Twitter and LinkedIn. WhatsApp was the most popular social media platform among the deans of students. The deans of students preferred using WhatsApp for communication because it enabled fast communication and was more flexible and accessible to more people. Figure 8 indicates the social media networks used by the deans of students.

Figure 8: Social media networks used by deans of students

4.3.5 Facebook use among undergraduate students

Most of the respondents (96.1%) reported that they were on Facebook with only 3.9% indicating that they were not on Facebook. A slightly higher proportion of female respondents, 5.9% versus 2.8%, reported that they are not on Facebook. The distribution of the number of friends on Facebook did not vary much between male and female participants. The male students had a higher percentage of friends on Facebook compared to the female participants. A number of males (7.0%) had more than 5000 Facebook friends compared to 6.2% among females. Overall, about 51.8% of the participants had more than 2000 friends on Facebook. The projection may be that males are not selective about who they friend on social media compared to the females. Table 9 depicts the data on Facebook use among undergraduate students.

Table 9: FB use among undergraduate students

	Male n=1962	Female n=1031	Overall n=2993
Are you on FB			
No	55 (2.8%)	61 (5.9%)	116 (3.9%)
Yes	1907 (97.2%)	970 (94.1%)	2877 (96.1%)
Number of friends on FB			
0-1000	518 (27.5%)	367 (38.6%)	885 (31.3%)
1001-2000	363 (19.3%)	193 (20.3%)	556 (19.6%)
2001-3000	271 (14.4%)	115 (12.1%)	386 (13.6%)
3001-4000	224 (11.9%)	84 (8.8%)	308 (10.9%)
4001-5000	374 (19.9%)	133 (14.0%)	507 (17.9%)
>5000	131 (7.0%)	59 (6.2%)	190 (6.7%)

The researchers went further to probe on the number of friendships the students had on Facebook with the intention of determining whether the number of friends correlate with the incidences of cyberbullying. The number of Facebook friends reportedly differed by gender and course taken. Female respondents reported a lower number of Facebook friends compared to the males. Similarly, students who were taking Education courses reported a high number of Facebook friends compared to other courses. The data to support these findings is provided in Table 10.

Table 10: Association of the number of Facebook friends by gender, age, and degree course

	Odd Ratio	p-value	95% CI	
Gender (ref: Male)				
Female	0.62	0.000	0.53	0.73
Age group (ref: ≤ 22 years)				
>22 years	1.09	0.350	0.91	1.29
Degree Course (ref: Social Sciences)				
Education	1.27	0.012	1.05	1.52
Applied Sciences	1.18	0.158	0.94	1.47
Engineering	0.85	0.306	0.63	1.16
Natural Sciences	0.94	0.705	0.66	1.32
Physical Sciences	1.33	0.228	0.84	2.11

4.3.6 Unfriending on Facebook among undergraduate students

About 74.6% of the participants had ever unfriended someone on Facebook with a slightly higher percentage being among males (75.6%) compared to 74.1% among females. The most common reason for unfriending someone on Facebook was losing touch with the person (94.2%). Another major reason for unfriending was personal fallout as indicated by 86.6% of the respondents. Safety was also a reason reported by most students, with 78.0% and 70.2% of males and females respectively responding that they did not feel safe with the person(s) they unfriended. Considering being unfriended on Facebook, 26% of males reported to have been unfriended on Facebook compared to 17% among females. Table 11 shows the data.

Table 11: FB unfriendliness among undergraduate students

	Male n=1907	Female n=970	Overall n=2877
Have you unfriended on FB?			
No	493 (25.9%)	236 (24.4%)	729 (25.4%)
Yes	1412 (74.1%)	730 (75.6%)	2142 (74.6%)
Reason unfriended on FB			
I did not like their content	609 (43.5%)	307 (42.4%)	916 (43.1%)

I had a personal fallout with the person(s)	1218 (87.0%)	622 (85.9%)	1840 (86.6%)
I had lost touch with the person(s)	1302 (93.0%)	699 (96.5%)	2001 (94.2%)
I was cleaning up my friends list	1114 (79.6%)	599 (82.7%)	1713 (80.6%)
I did not feel safe with the person(s)	1092 (78.0%)	508 (70.2%)	1600 (75.3%)
Have you been unfriended on FB?			
No	1346 (72.4%)	758 (81.5%)	2104 (75.5%)
Yes	512 (27.6%)	172 (18.5%)	684 (24.5%)

4.3.6.1 Reasons for being unfriended on Facebook

The main reasons for being unfriended on Facebook were personal fallout, relationship issues, cleaning friends lists, personal reasons, and personal differences. From the discussions it was clear that social media platforms like Facebook are arenas for people to create friendships and relationships-based networks. If there is a fall-out between people, it is inevitable that these networks will be severed as well.

Cyberbullying activities such as revenge pornography, exposure, outing, sextortion and blackmail often occur between people who are familiar with each other; they are often the result of relationships breaking. Individuals in relationships share private information with friends and colleagues and when fallouts happen, especially if they are acrimonious, the aggrieved parties may share the information to get back at their former friends, lovers, or business partners. It is, therefore, reasonable to infer that cyberbullying has a basis in relationships. Table 12 indicates the occurrences of reasons for unfriending on Facebook while Figure 9 is a visualisation of the same.

Table 12: Reasons for being unfriended on Facebook

Reasons for being unfriended	Occurrences	Reasons for being unfriended	Occurrences
Personal fallout	62	Own reason	4
Relationship	22	Argument	3
Cleaning friends list	16	Love	3
Personal reasons	10	Conversation	2
Personal difference	10	Political issue	2
Personal issue	10	Public service	2
Disagreement	9	Relationship issue	2
Difference opinion	8	Content difference	2
Misunderstanding	8	Unmet expectations	2

Political difference	5	Negative attitude	2
Ideological difference	4	Online conflict	2
Was not in good term	4	Personal life	2
Lost touch	4	Relationship break	2
Money	4		

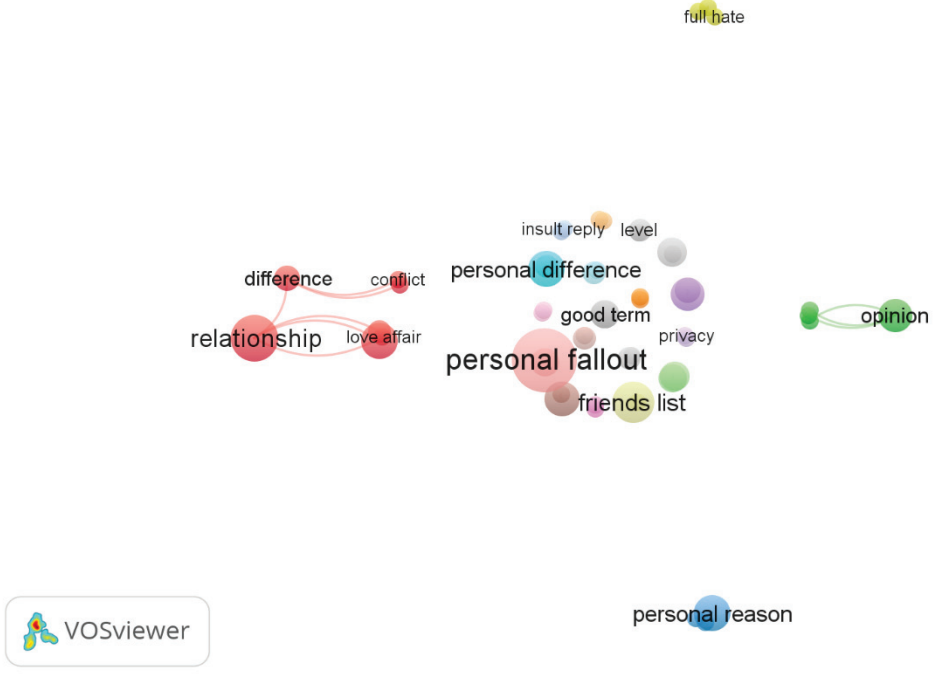

Figure 9: Reasons for being unfriended on Facebook

The most dominant reasons given for having been unfriended as depicted in Table 12 and Figure 9 was personal fallout as indicated in the 62 occurrences. This was followed by relationships at 22, and cleaning friends list at 16. The other notable mentions were personal reasons (10), personal differences (10), and personal issues (10). The least given reasons were online conflict (2), personal life (2), and relationship break (2).

Association of unfriending someone or being unfriended by gender, age, and degree course varied by gender and age group. Female students were less likely to be unfriended compared to males. Similarly, those aged above 22 years were more likely to be unfriended as indicated in Table 13.

Table 13: Association of unfriending someone or being unfriended by gender, age, and degree course

	Unfriended Someone				Have been unfriended			
	Odd Ratio	p-value	95% CI		Odd Ratio	p-value	95% CI	
Gender (ref: Male)								
Female	1.08	0.398	0.90	1.31	0.61	0.000	0.50	0.75
Age group (ref: ≤ 22 years)								
>22 years	1.19	0.091	0.97	1.46	1.48	0.000	1.22	1.80
Degree Course (ref: Social Sciences)								
Education	0.90	0.321	0.73	1.11	0.86	0.170	0.69	1.07
Applied Sciences	0.84	0.171	0.65	1.08	0.82	0.157	0.63	1.08
Engineering	0.86	0.378	0.61	1.21	1.28	0.153	0.91	1.80
Natural Sciences	1.24	0.315	0.82	1.87	1.06	0.776	0.72	1.56
Physical Sciences	0.97	0.898	0.57	1.63	0.98	0.953	0.57	1.69

4.3.7 Frequency of use of Facebook among undergraduate students

Most students reported to use Facebook daily (48.7%). The proportion of respondents reporting to use Facebook daily was highest among males at 53% compared to 40.2% among female students. The high proportion of female students reported to use Facebook sometimes compared to male students (29.2% versus 17.1%). Monthly usage of Facebook was constant at an overall of 2.5% with a similar number of respondents (2.5% males and 2.6% females) indicating the same. Some students (2.3% males and 5.6% females) mentioned that they have never used Facebook. Table 14 shows the data.

Table 14: FB frequency of use among undergraduate students

	Male n=1904	Female n=975	Overall n=2879
Hourly	167 (8.8%)	56 (5.7%)	223 (7.7%)
Daily	1010 (53.0%)	392 (40.2%)	1402 (48.7%)
Weekly	311 (16.3%)	162 (16.6%)	473 (16.4%)
Monthly	47 (2.5%)	25 (2.6%)	72 (2.5%)
Sometimes	326 (17.%1)	285 (29.%2)	611 (21.%2)
Never	43 (2.3%)	55 (5.6%)	98 (3.4%)

4.3.8 Time spent on Facebook by deans of students

The deans who used Facebook said that they spent an average of an hour daily on the platform.

4.3.9 Facebook groups used by students

It emerged that students belong to many groups online. The main groups were the student association groups (referred to as comrades' forums for the different universities), political forums, sports forums (Manchester United fans), alumni groups, and varied social groups. Figure 10 represents this data.

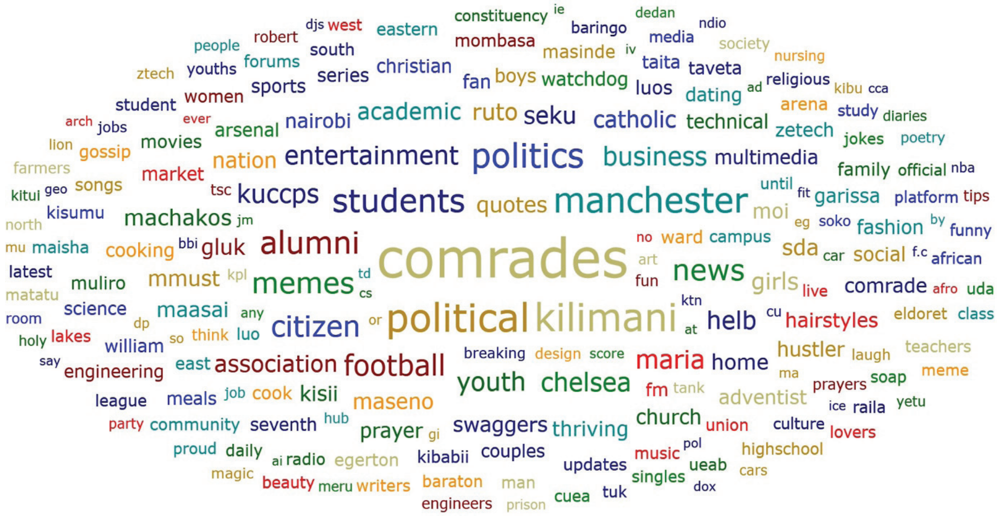

Figure 10: Facebook groups that students belong to

Overall, about a third of the respondents reported to be unable to join Facebook groups. The proportion unable to join Facebook groups varied by gender with about a third among males and a quarter among female respondents. Over half of the participants (60.0%) reported ever leaving a Facebook group, with a higher percentage of males (63.9%) having left a Facebook group compared to 52.0% among females. The most common reason for leaving a Facebook group was fallout, with 97.7% of the participants admitting to having had a fallout with the members. A high proportion of male students (13.5%) reported to have been removed from a Facebook group compared to 7.7% among female students. Table 15 documents this information.

Table 15: Facebook groups dynamics

	Male n=1907	Female n=970	Overall n=2877
Have you been unable to join FB group?			
No	1235 (66.3%)	668 (71.8%)	1903 (68.1%)
Yes	627 (33.7%)	263 (28.2%)	890 (31.9%)
Have you left any FB group?			
No	676 (36.1%)	449 (48.0%)	1125 (40.0%)
Yes	1197 (63.9%)	487 (52.0%)	1684 (60.0%)
Reasons left FB group			
The content was no longer relevant	460 (39.2%)	209 (43.2%)	669 (40.4%)
I had a fallout with the members	1145 (97.6%)	474 (97.9%)	1619 (97.7%)
I was not comfortable with the conversations	626 (53.4%)	243 (50.2%)	869 (52.4%)
Have you been removed from FB group?			
No	1579 (86.5%)	850 (92.3%)	2429 (88.4%)
Yes	247 (13.5%)	71 (7.7%)	318 (11.6%)

Some of the reasons students were removed from Facebook groups included students feeling that the content of the groups they were in was no-longer relevant; the decision of administrators who removed them from the groups; fallout between members of the groups or administrators or lack of a participation ideology. Ideological and political differences were also part of the reasons for respondents being removed form groups. Figure 11 visualises these.

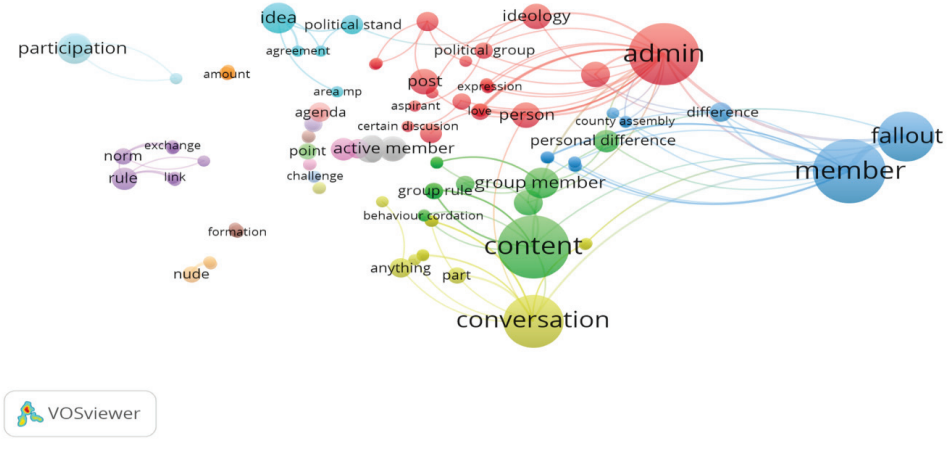

Figure 11: Reasons for being removed from groups on Facebook

4.3.10 Association of leaving Facebook group by gender, age, and degree course

Both female and male students were less likely to leave a Facebook group as indicated in Table 16. However, this was not the same case for the age groups. Students who were aged 22 years and above were most likely to leave a Facebook group. Students undertaking Education and Natural Science courses were less likely to leave a Facebook group. In contrast, those undertaking Engineering and Physical Sciences had a higher tendency of leaving Facebook groups.

Table 16: Association leaving Facebook group by gender, age, and degree course

	Odd Ratio	p-value	95%	CI
Gender (ref: Male)				
Female	0.61	0.000	0.52	0.72
Age group (ref: ≤ 22 years)				
>22 years	0.97	0.742	0.81	1.16
Degree Course (ref: Social Sciences)				
Education	0.90	0.278	0.75	1.09
Applied Sciences	1.00	0.998	0.79	1.26
Engineering	0.96	0.804	0.70	1.32
Natural Sciences	1.36	0.095	0.95	1.95
Physical Sciences	0.91	0.706	0.57	1.47

4.3.11 Uses of Facebook by students

Most students who responded to the survey reported that dating, business, academics, and politics were some of their main uses of Facebook. Dating (93.6%) was the most common use of Facebook among the participants with entertainment (26.3%) being the least common. Dating is a sensitive issue among undergraduate students in universities in Kenya. The advent of mobile technology and social media sites has made dating more of an online affair as opposed to being physical. It also cuts across barriers and distance making it a popular way of socialising among the youngsters. Strangely, a higher percentage of females (80.2%) used Facebook for politics, compared to males (56.2%). Table 17 presents this data.

Table 17: Major use of FB among undergraduate students

	Male	Female	Overall
	n=1907	n=970	n=2877
Social Networking	831 (44.2)	430 (46.0)	1261 (44.8)
Business	1489 (79.3)	784 (83.9)	2273 (80.8)
Entertainment	510 (27.2)	231 (24.7)	741 (26.3)
Academics	1255 (66.8)	693 (74.1)	1948 (69.2)
Dating	1730 (92.1)	904 (96.7)	2634 (93.6)
News	714 (38.0)	492 (52.6)	1206 (42.9)
Politics	1056 (56.2)	750 (80.2)	1806 (64.2)

4.3.12 Use of Facebook by deans of students

The deans of students used social media platforms for official communication to students on institutional matters, follow-up on student activities, as well as to provide assistance with online learning. This shows that aside from memos on notice boards, deans of students largely interacted with their students online. Figure 12 shows what the deans of students use social media for.

Figure 12: use of social media platforms by deans of students

4.3.13 Types of cyberbullying among undergraduate students

The majority of the students who experienced cyberbullying were either shamed (45.6%) or impersonated (44.6%). Cyberbullying through impersonation was higher among males (46.6%) compared to females (40.7%) while shaming was higher among female students (50.6%) compared to males (43.1%). This was closely

followed by blackmail (39.4%) and exposure (37.2%). Vigilantism and warning wars forms of cyberbullying were experienced more among male students (16.6%) as compared to females (7.2%) and (18.9%) males and (12.6%) respectively. On the other hand, cyberstalking was higher among female (43.0%) respondents as compared to male (33.3%) respondents. Table 18 presents this data.

Table 18: Types of Cyberbullying among undergraduate students

	Male n=1907	Female n=970	Overall n=2877
Outing	321 (16.8)	136 (14.0)	457 (15.9)
Exposure	718 (37.7)	351 (36.2)	1069 (37.2)
Exclusion	386 (20.2)	173 (17.8)	559 (19.4)
Impersonation	888 (46.6)	395 (40.7)	1283 (44.6)
Cat Fishing	454 (23.8)	218 (22.5)	672 (23.4)
Cyberstalking	635 (33.3)	417 (43.0)	1052 (36.6)
Trolling	632 (33.1)	283 (29.2)	915 (31.8)
Flaming	319 (16.7)	135 (13.9)	454 (15.8)
Vigilantism	316 (16.6)	70 (7.2)	386 (13.4)
Shaming	821 (43.1)	491 (50.6)	1312 (45.6)
Black mail	756 (39.6)	377 (38.9)	1133 (39.4)
Revenge porn	393 (20.6)	200 (20.6)	593 (20.6)
Warning wars	360 (18.9)	122 (12.6)	482 (16.8)

Participants in the focus group discussions narrated some of the experiences they had with varied forms of cyberbullying. Their responses are reported hereunder as verbatim statements.

4.3.13.1 Body shaming

"Was body shamed that am dark coloured."

"Meme created of me about my complexion."

"Because I am a university leader, I have been abused and bullied. I don't have a beard so they said I'm ladylike. They keep saying I'm a girl and men approach me on Facebook."

"I was body-shamed that my legs do not look exactly the same."

"Somebody asked why I need a water bottle when I can comfortably carry water on my collarbone."

4.3.13.2 Catfishing

"I was chatting people on Facebook thinking they were girls and a boy showed up for the date."

4.3.13.3 Cyberstalking

"People were sending nudes to me on Instagram."

"Account was hacked, and the person started posting nudes to my account"

"Someone stalked me online. I have blocked their account about seven times, but they still come back."

"I put up a picture and somebody began pestering me in the inbox."

"Posted a picture of my mother and people began saying she's beautiful and they wanted her."

"Cyberstalked by a witch doctor."

4.3.13.4 Exposure

"Dated someone who later exposed our conversation on Facebook".

"A guy exposed HIV status and nudes of an ex-boyfriend."

"I had two girlfriends and they used to come to my house unannounced and someone outed me to one that I had another girlfriend. She threatened to leave me so I hacked her WhatsApp and I would delete her status and put up mine."

"A friend has had her photos shared during student elections through bloggers who demean opponents."

"Someone shared my phone number without my consent."

4.3.13.5 Flaming

"Threats where students even abuse lecturers on WhatsApp and issue threats to them."

4.3.13.6 Impersonation

"Somebody hacked my brother's account and impersonated him."

"Somebody posed as the area MP's representative, so I sent them money to activate bursaries."

"Someone took over my phone and account and began talking to my girlfriend, but my cop friends caught him."

"She was a crush and I logged into her account using my phone and every time other men sent her messages; I would block and delete their messages"

"Someone impersonated me using my name and photograph and committed a crime; the police came looking for me"

4.3.13.7 Revenge porn

"A guy exposed HIV status and nudes of an ex-boyfriend"

"I posted pornography as a form of revenge for a failed relationship."

"A Mukorino [indigenous religious group known for strict decency and conservative dress codes] girl broke up with her boyfriend and he posted her nudes. It went extremely viral."

4.3.13.8 Sextortion

"Somebody posted pornographic content on my account; so, I closed down my account"

4.3.13.9 Trolling

"Anytime I post anything my father always will tell me, 'Umeanza kijana?' [Young man, you have begun misbehaving]"

"I posted something on Facebook and someone started to troll and abuse me."

"As a class representative, I was trolled for agreeing to have a make-up class."

"Bullied during election campaigns; I was trolled for wearing white attire; I have never worn white again."

"Posted motivational items. Someone trolled me for that."

"Danced at a religious crusade. Someone took a photo of me and created a meme and posted it on Facebook."

"I was trolled on Facebook after a football match that the team I support lost."

"I was vying, and someone said that I was a womaniser. It affected my reputation."

"During campaigns, I told someone I will deal with them."

"I made memes making fun of her because the guy she slept with was beaten for dating a friends' girlfriend."

4.3.14 Cases of cyberbullying reported to Deans of Students

All the deans of students said that they have had cases of cyberbullying reported to their offices. Among the cases reported 15 (62.5%) occurred on Facebook, 4 (16.7%) on Twitter 1 (4.2%) while 4 (16.7%) were on other social media platforms. This implies that the majority of cyberbullying incidents among undergraduate students in Kenyan universities occurred on Facebook.

The deans of students were also asked about the types of cyberbullying they observed occurring among their student communities. It emerged that the main type of cyberbullying students experienced was trolling, revenge pornography, impersonation and shaming (slut shaming and body shaming). Figure 13 visualises the findings.

Figure 13: Types of cyberbullying reported to deans of students

4.4 Prevalence of Cyberbullying on Facebook among Undergraduate Students in Kenya

All the student participants of the FGDs confirmed that they had experienced cyberbullying. When asked about how widespread they believed cyberbullying was, it emerged that the majority felt that cyberbullying occurred about 80% of the time. Figure 14 shows the word cloud for the same. Of all the media sites they engaged in, the one with the highest prevalence for cyberbullying was indicated as Facebook at 62.6% (15) followed by Twitter at 37.5% (9).

Figure 14: Prevalence of cyberbullying

4.4.1 Prevalence of cyberbullying as observed by the Deans of Students

The deans were asked if in their opinion cyberbullying situation in their universities was getting better or worse. The majority felt that, in their experience, cyberbullying was getting worse. Figure 15 shows the opinions of the deans in terms of the cyberbullying trends observed.

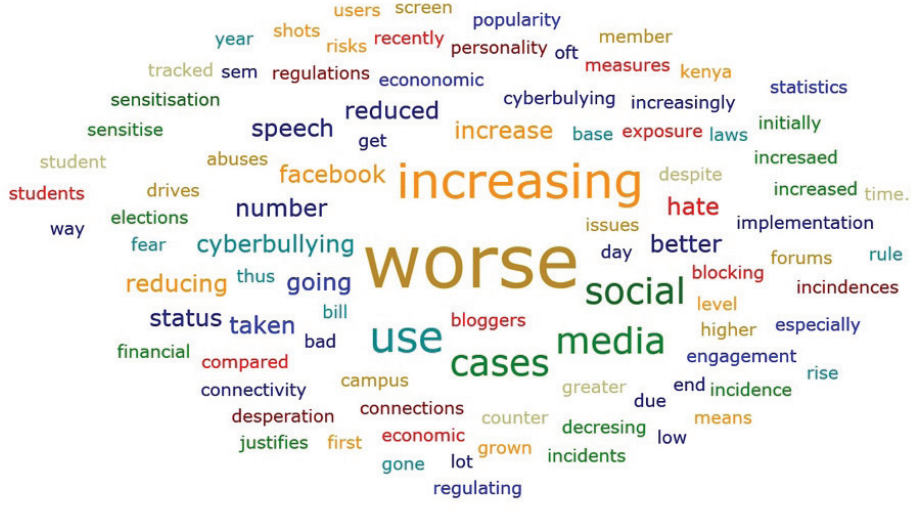

Figure 15: Trends of cyberbullying in universities

4.4.2 Prevalence of the occurrence of bullying incidents on social media

Statistics on the prevalence, nature or consequences of cyberbullying in Kenya were previously unavailable. However, from this research, the respondents indicated

that cyberbullying frequently occurred on social media and is becoming a global pandemic. A total of 2,877 Kenyan university students responded when asked to indicate whether they had experienced cyberbullying not. On one hand, a total of 958 (50.8%) of the male and 593 (59.4%) female respondents reported that they had not experienced cyberbullying. On the other hand, a total of 929 (49.2%) of the male and 405 (40.6%) confirmed that they had experienced cyberbullying. In comparison, more male students had encountered cyberbullying than their female counterparts. This is represented in Table 19.

Table 19: Prevalence of Cyberbullying on Facebook among undergraduate students in Kenya

	Male n=1907	Female n=970	Overall n=2877
Ever experienced cyberbullying?			
No	958 (50.8%)	593 (59.4%)	1551 (53.8%)
Yes	929 (49.2%)	405 (40.6%)	1334 (46.2%)
Ever had FB cyberbullying?			
No	220 (25.3%)	100 (26.5%)	320 (25.7%)
Yes	649 (74.7%)	277 (73.5%)	926 (74.3%)
Frequency of cyberbullying experienced			
Hourly	10 (1.1%)	3 (0.8%)	13 (1.0%)
Daily	35 (3.9%)	8 (2.0%)	43 (3.3%)
Weekly	43 (4.8%)	10 (2.6%)	53 (4.1%)
Monthly	47 (5.2%)	7 (1.8%)	54 (4.2%)
Sometimes	761 (84.9%)	363 (92.8%)	1124 (87.3%)
Do you know anyone who experienced cyberbullying?			
No	747 (48.3%)	402 (47.7%)	1149 (48.1%)
Yes	801 (51.7%)	440 (52.3%)	1241 (51.9%)

The students were also asked to indicate the frequency of cyberbullying incidents they experienced on Facebook. The majority (87.3%) of the students reported experiencing cyberbullying "Sometimes" with a higher proportion among females (92.8%) compared to males (84.9%). This was followed by "Monthly" (4.2%) represented by 5.2% male and 1.8% female respondents experiencing cyberbullying incidences. Others selected "Weekly" (4.1%), "Daily" (3.3%) and "Hourly" (1.0%).

4.4.3 Friend bullied on Facebook

It also emerged that the majority of the respondents, 1,241(51.9%), knew someone who had experienced cyberbullying. There was no major variation in the gender representation in this response at 51.4% males and 52.3% females. A majority (979)

of the respondents knew of at least five friends who had been bullied on Facebook while 293 knew of between 6 and 10 friends who had been bullied on Facebook. This indicates a high level of prevalence of cyberbullying on Facebook. The findings also revealed that fewer respondents believed that more than 15 friends have been bullied on the platform. Figure 16 displays the data on the number of friends bullied on Facebook.

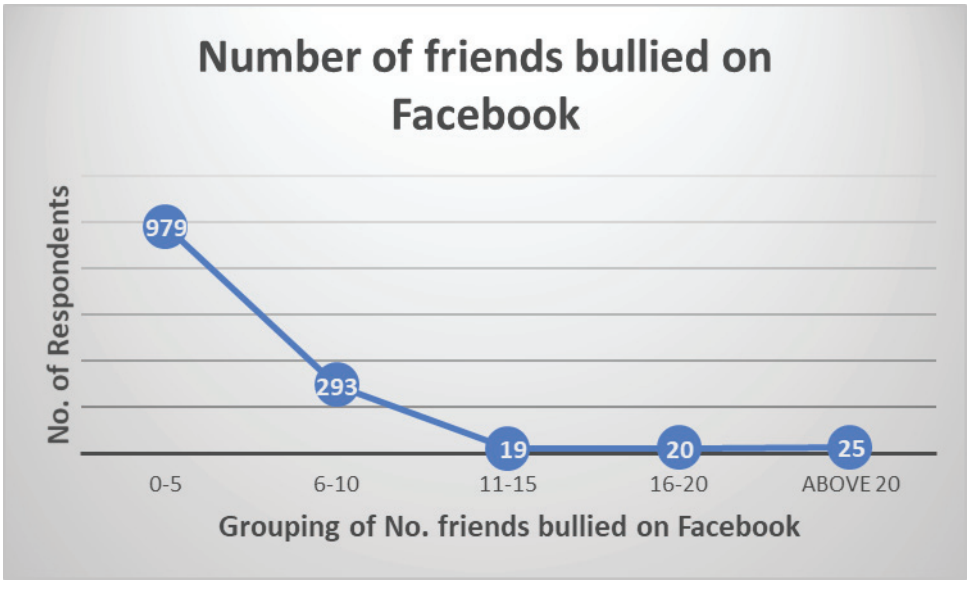

Figure 16: Number of friends bullied on Facebook

4.4.4 Association of experiencing Facebook cyberbullying by gender, age, and degree course

The demographic factors that determine the frequency of cyberbullying in this research included gender, age and courses students undertake at the university as depicted by Table 20.

Table 20: Association of experiencing Facebook cyberbullying by gender, age, and degree course

	Ever Experienced Cyberbullying				Experienced FB cyberbullying			
	Odd Ratio	p-value	95% CI		Odd Ratio	p-value	95% CI	
Gender (ref: Male)								
Female	0.73	0.000	0.62	0.85	0.79	0.083	0.61	1.03
Age group (ref: ≤ 22 years)								
>22 years	1.15	0.124	0.96	1.36	0.94	0.659	0.72	1.23
Degree Course (ref: Social Sciences)								
Education	1.09	0.345	0.91	1.31	1.73	0.000	1.28	2.35
Applied Sciences	1.04	0.717	0.83	1.30	0.75	0.088	0.54	1.04
Engineering	0.92	0.617	0.68	1.26	0.90	0.660	0.56	1.44
Natural Sciences	1.14	0.441	0.82	1.58	1.43	0.176	0.85	2.42
Physical Sciences	0.83	0.435	0.51	1.33	2.59	0.056	0.97	6.91

It is evident from the odds ratios in Table 20 that males are likely to experience cyberbullying than their female counterparts. Similarly, undergraduate students aged 22 years and above are likely to experience cyberbullying more than students in other age brackets. In terms of courses, students pursuing Education, Applied Sciences and Natural Sciences are likely to experience cyberbullying than those taking Engineering and Physical Sciences. There was no significant influence of the students' gender, age and course on the likelihood of cyberbullying happening on Facebook.

4.5 Effects of Cyberbullying on Undergraduate Students in Kenya

The students were asked by the researchers about the seriousness of the effects of cyberbullying on the students' lives. As given in Table 21, poor academic performance was ranked as very serious by male students (28.0%) followed by victim bullying (27.7%) while the female students identified suicide ideation (34.3%) followed by victim bullying (33.8%) as having a very serious effect on them. The respondents also indicated what they perceived as not constituting a serious effect. Overall, the respondents indicated that victim bullying (29.8%) and poor academic performance (29.3%) had very serious effect on the victims of cyberbullying. In contrast, they perceived suicide ideation (41.5%) and poor physical health (37.5%) as not having a serious effect on the victims of cyberbullying.

Table 21: Seriousness of Effects of FB Cyberbullying among undergraduate students by gender

	Male (n=1962)				Female (n=1031)				Overall (n=2993)			
	NS	LS	S	VS	NS	LS	S	VS	NS	LS	S	VS
Suicide ideation, n (%)	667	236	213	387	299	91	151	282	966	327	364	669
	(44.4)	(15.7)	(14.2)	(25.7)	(36.3)	(11.1)	(18.3)	(34.3)	(41.5)	(14.1)	(15.6)	(28.8)
Poor mental health, n (%)	431	393	390	374	175	175	216	276	606	568	606	650
	(27.1)	(24.7)	(24.6)	(23.6)	(20.8)	(20.8)	(25.7)	(32.8)	(24.9)	(23.4)	(24.9)	(26.7)
Poor physical health, n (%)	590	399	266	190	250	207	206	134	840	606	472	324
	(40.8)	(27.6)	(18.4)	(13.1)	(31.4)	(26.0)	(25.8)	(16.8)	(37.5)	(27.0)	(21.1)	(14.5)
Substance abuse, n (%)	439	296	349	384	230	136	185	221	669	432	534	605
	(29.9)	(20.2)	(23.8)	(26.2)	(29.8)	(17.6)	(24.0)	(28.6)	(29.9)	(19.3)	(23.8)	(27.0)
Poor academic performance, n (%)	397	365	363	438	186	177	221	269	583	542	584	707
	(25.4)	(23.4)	(23.2)	(28.0)	(21.8)	(20.8)	(25.9)	(31.5)	(24.1)	(22.4)	(24.2)	(29.3)
Social alienation, n (%)	391	355	357	392	172	167	227	232	563	522	584	624
	(26.2)	(23.7)	(23.9)	(26.2)	(21.6)	(20.9)	(28.4)	(29.1)	(24.6)	(22.8)	(25.5)	(27.2)
Economic loss, n (%)	508	340	307	296	259	171	180	149	767	511	487	445
	(35.0)	(23.4)	(21.2)	(20.4)	(34.1)	(22.5)	(23.7)	(19.6)	(34.7)	(23.1)	(22.0)	(20.1)
Victim bullying, n (%)	405	339	334	413	199	125	189	262	604	464	523	675
	(27.2)	(22.7)	(22.4)	(27.7)	(25.7)	(16.1)	(24.4)	(33.8)	(26.7)	(20.5)	(23.1)	(29.8)

Note: NS=Not Serious, LS=Less Serious, S=Serious and VS=Very Serious

Table 22: Effects of FB Cyberbullying among undergraduate students by age

	Aged 22 years and below (n=2219)				Aged above 22 years (n=764)				Overall (n=2983)			
	NS	LS	S	VS	NS	LS	S	VS	NS	LS	S	VS
Suicide ideation, n (%)	717 (41.5)	234 (13.5)	261 (15.1)	517 (29.9)	249 (41.9)	95 (16.0)	99 (16.7)	151 (25.4)	966 (41.6)	329 (14.2)	360 (15.5)	668 (28.8)
Poor mental health, n (%)	433 (24.0)	427 (23.7)	440 (24.4)	505 (28.0)	178 (28.6)	138 (22.2)	161 (25.8)	146 (23.4)	611 (25.2)	565 (23.3)	601 (24.8)	651 (26.8)
Poor physical health, n (%)	591 (35.5)	456 (27.4)	371 (22.3)	249 (14.9)	245 (42.8)	152 (26.6)	102 (17.8)	73 (12.8)	836 (37.3)	608 (27.2)	473 (21.1)	322 (14.4)
Substance abuse, n (%)	488 (29.3)	315 (18.9)	409 (24.6)	453 (27.2)	176 (30.7)	115 (20.1)	125 (21.8)	157 (27.4)	664 (29.7)	430 (19.2)	534 (23.9)	610 (27.3)
Poor academic performance, n (%)	428 (23.7)	408 (22.6)	441 (24.4)	528 (29.3)	154 (25.4)	135 (22.2)	139 (22.9)	179 (29.5)	582 (24.1)	543 (22.5)	580 (24.0)	707 (29.3)
Social alienation, n (%)	416 (24.2)	407 (23.7)	426 (24.8)	470 (27.3)	146 (25.5)	117 (20.5)	156 (27.3)	153 (26.7)	562 (24.5)	524 (22.9)	582 (25.4)	623 (27.2)
Economic loss, n (%)	583 (35.5)	365 (22.3)	356 (21.7)	336 (20.5)	187 (33.0)	148 (26.1)	125 (22.1)	106 (18.7)	770 (34.9)	513 (23.3)	481 (21.8)	442 (20.0)
Victim bullying, n (%)	449 (26.5)	344 (20.3)	391 (23.1)	512 (30.2)	151 (26.5)	121 (21.2)	132 (23.2)	166 (29.1)	600 (26.5)	465 (20.5)	523 (23.1)	678 (29.9)

Note: NS=Not Serious, LS=Less Serious, S=Serious and VS=Very Serious

According to Table 22, the respondents aged above 22 years thought that poor academic performance (29.5%) was a very serious effect of cyberbullying. This was closely followed by victim bullying (29.1%) and substance abuse (27.4%). Additionally, respondents aged 22 years and below were of the opinion that victim bullying (30.2%) had a very serious effect of cyberbullying followed by suicide ideation (29.9%) and poor academic performance (29.3%). The respondents aged above 22 years indicated that suicide ideation (41.9%) and poor physical health (42.8%) are not serious effects of cyberbullying. On the other hand, the respondents aged 22 years and below perceived suicide ideation (41.5%) and poor economic loss (37.5%) as not having a serious effect on the victims.

The participants in the FGDs presented their views about the effects of cyberbullying on the academic and social life of the students. In the case of the social life of the students, it emerged that the main effects of cyberbullying were low self-esteem, depression, suicide ideation, social withdrawal and social alienation. Other effects of cyberbullying on the social life of the students include stigmatisation, mistrust, stress, fear and loneliness. Figure 17 is a visual representation of the effects of cyberbullying on the social life of the students.

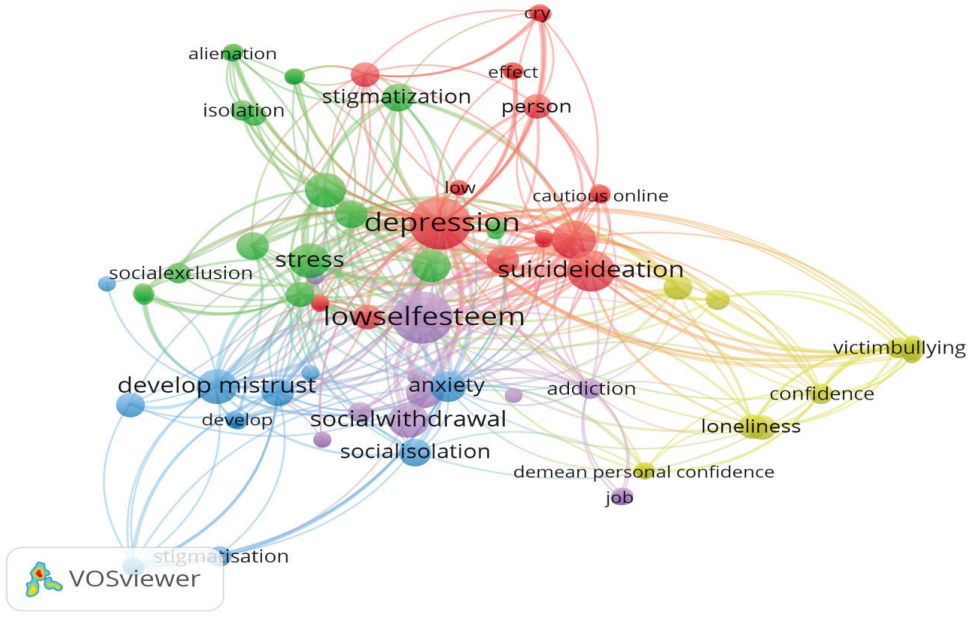

Figure 17: Effects of cyberbullying on social life of students

Deans of students were also asked about the effects of cyberbullying on the social life of students. They observed that students affected by cyberbullying had suicide ideation, depression, low self-esteem, anger, stress and were withdrawn. Figure 18 indicates the effects of cyberbullying on the social lives of students as observed by the deans of students.

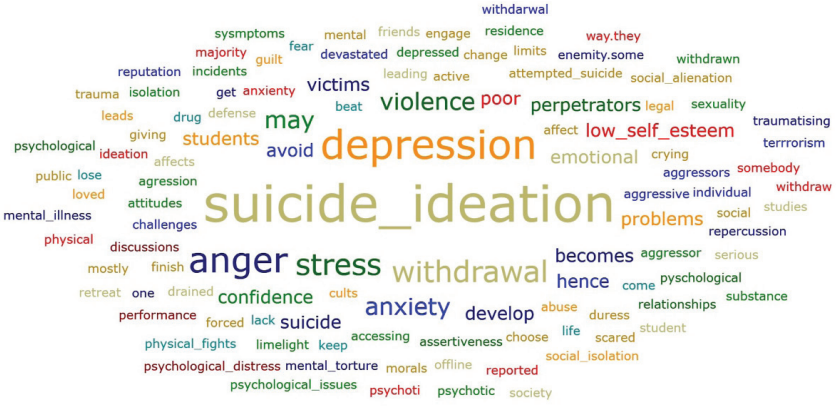

Figure 18: Effects of cyberbullying on social life of students as observed by deans of students

The main effects of cyberbullying on the academic life of students are poor academic performance, absenteeism from classes and deferment of studies as depicted in Figure 19.

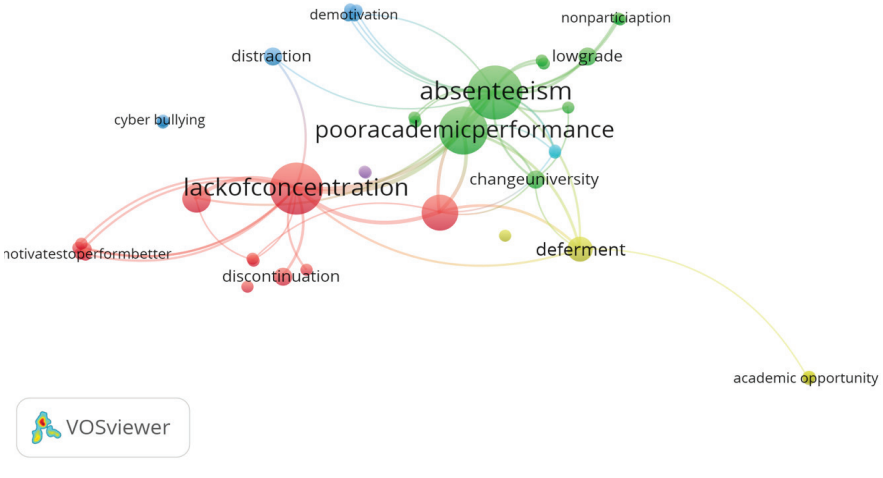

Figure 19: Effects of cyberbullying on academic life of students

The deans were also asked about their opinion on the effects of cyberbullying on the academic life of their students. They stated that the main effects of cyberbullying on the academic life of student were poor academic performance, absenteeism, dropping out of school and withdrawal of students. Figure 20 shows the effects of cyberbullying on academic life of the students as observed by the deans of students.

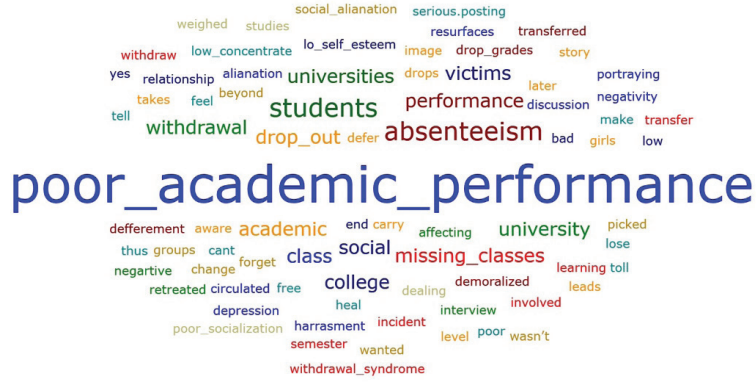

Figure 20: Effects of cyber bullying on academics of students as observed by Deans of students

4.6 Strategies that Exist to Curb Cyberbullying on Facebook among Undergraduate Students in Kenya

When asked to explain how they coped with cyberbullying, the respondents mentioned a variety of methods while indicating the extent to which they employ the strategies. The strategies varied between the male and female students. This is tabulated in Table 23. Enhancing online privacy (61.6%) was the most reported strategy for coping with cyberbullying to a greater extent. However, this strategy worked best for the females (66.5%) compared to their male counterparts (59.5%). The other common strategies reported to a great extent included employing anti-bullying campaigns (41%) and flagging abusive content (40%). Disengagement and victim-bullying were considered as strategies of coping with cyberbullying to no extent for both males and female respondents. It is worth noting that most of the listed strategies for coping with cyberbullying work well for females than males except for flagging abusive content, seeking legal redress, disengagement and victim bullying.

Table 23: Strategies of coping with Cyberbullying on Fb among undergraduate students

	Male (n=1962)				Female (n=1031)				Overall (n=2993)			
	NE	LE	ME	GE	NE	LE	ME	GE	NE	LE	ME	GE
Passive resistance, n (%)	143 (27.2)	136 (25.9)	109 (20.7)	138 (26.2)	45 (20.5)	68 (30.9)	49 (22.3)	58 (26.4)	188 (25.2)	204 (27.3)	158 (21.2)	196 (26.3)
Enhancing online privacy, n (%)	57 (9.7)	75 (12.8)	106 (18.1)	349 (59.5)	15 (5.9)	23 (9.1)	47 (18.5)	169 (66.5)	72 (8.6)	98 (11.7)	153 (18.2)	518 (61.6)
Flagging abusive content, n (%)	84 (16.3)	79 (15.3)	139 (26.9)	214 (41.5)	33 (15.2)	44 (20.3)	59 (27.2)	81 (37.3)	117 (16.0)	123 (16.8)	198 (27.0)	295 (40.2)
Seeking legal redress, n (%)	106 (20.9)	110 (21.7)	127 (25.0)	164 (32.3)	46 (21.8)	38 (18.0)	61 (28.9)	66 (31.3)	152 (21.2)	148 (20.6)	188 (26.2)	230 (32.0)
Anti-bullying campaigns, n (%)	107 (19.2)	86 (15.5)	142 (25.5)	221 (39.7)	33 (14.0)	45 (19.1)	51 (21.6)	107 (45.3)	140 (17.7)	131 (16.5)	193 (24.4)	328 (41.4)
Counselling therapy, n (%)	93 (17.8)	102 (19.5)	134 (25.6)	194 (37.1)	34 (14.2)	38 (15.8)	63 (26.3)	105 (43.8)	127 (16.6)	140 (18.3)	197 (25.8)	299 (39.2)
Social support, n (%)	100 (19.0)	118 (22.4)	147 (27.9)	162 (30.7)	33 (14.8)	43 (19.3)	68 (30.5)	79 (35.4)	133 (17.7)	161 (21.5)	215 (28.7)	241 (32.1)
Disengagement, n (%)	145 (28.9)	124 (24.8)	110 (22.0)	122 (24.4)	48 (23.5)	59 (28.9)	58 (28.4)	39 (19.1)	193 (27.4)	183 (26.0)	168 (23.8)	161 (22.8)
Victim-bullying, n (%)	170 (35.2)	140 (29.0)	74 (15.3)	99 (20.5)	86 (43.7)	39 (19.8)	36 (18.3)	36 (18.3)	256 (37.6)	179 (26.3)	110 (16.2)	135 (19.9)
Others, n (%)	10 (19.6)	12 (23.5)	11 (21.6)	18 (35.3)	10 (58.8)	1 (5.9)	2 (11.8)	4 (23.5)	20 (29.4)	13 (19.1)	13 (19.1)	22 (32.4)

Note: NE=No Extent, LE=Less Extent, ME=Moderate Extent and GE=Great Extent

The response from the respondents on curbing strategies was also categorised by age with two categories (below and above 22 years of age). The responses varied by age as illustrated in Table 24.

Table 24: Strategies of coping with cyberbullying on Facebook among undergraduate students by age

	Aged 22 years and below (n=2219)				Aged above 22 years (n=764)				Overall (n=2983)			
	NE	LE	ME	GE	NE	LE	ME	GE	NE	LE	ME	GE
Passive resistance, n (%)	456	489	357	419	165	157	137	129	621	646	494	548
	(26.5)	(28.4)	(20.7)	(24.3)	(28.1)	(26.7)	(23.3)	(21.9)	(26.9)	(28.0)	(21.4)	(23.7)
Enhancing online privacy, n (%)	187	223	393	1147	78	87	127	368	265	310	520	1515
	(9.6)	(11.4)	(20.2)	(58.8)	(11.8)	(13.2)	(19.2)	(55.8)	(10.2)	(11.9)	(19.9)	(58.0)
Flagging abusive content, n (%)	273	317	490	642	98	119	149	210	371	436	639	852
	(15.9)	(18.4)	(28.5)	(37.3)	(17.0)	(20.7)	(25.9)	(36.5)	(16.1)	(19.0)	(27.8)	(37.1)
Seeking legal redress, n (%)	322	387	457	531	116	131	152	186	438	518	609	717
	(19.0)	(22.8)	(26.9)	(31.3)	(19.8)	(22.4)	(26.0)	(31.8)	(19.2)	(22.7)	(26.7)	(31.4)
Anti-bullying campaigns, n (%)	278	355	452	745	124	121	146	237	402	476	598	982
	(15.2)	(19.4)	(24.7)	(40.7)	(19.7)	(19.3)	(23.2)	(37.7)	(16.4)	(19.4)	(24.3)	(40.0)
Counselling therapy, n (%)	296	321	450	740	104	101	171	234	400	422	621	974
	(16.4)	(17.8)	(24.9)	(41.0)	(17.0)	(16.6)	(28.0)	(38.4)	(16.5)	(17.5)	(25.7)	(40.3)
Social support, n (%)	294	401	492	581	108	126	167	202	402	527	659	783
	(16.6)	(22.7)	(27.8)	(32.9)	(17.9)	(20.9)	(27.7)	(33.5)	(17.0)	(22.2)	(27.8)	(33.0)
Disengagement, n (%)	466	433	381	372	146	149	141	133	612	582	522	505
	(28.2)	(26.2)	(23.1)	(22.5)	(25.7)	(26.2)	(24.8)	(23.4)	(27.6)	(26.2)	(23.5)	(22.7)
Victim-bullying, n (%)	607	402	263	309	194	143	123	89	801	545	386	398
	(38.4)	(25.4)	(16.6)	(19.5)	(35.3)	(26.0)	(22.4)	(16.2)	(37.6)	(25.6)	(18.1)	(18.7)
Others, n (%)	39	40	39	60	18	16	19	18	57	56	58	78
	(21.9)	(22.5)	(21.9)	(33.7)	(25.4)	(22.5)	(26.8)	(25.4)	(22.9)	(22.5)	(23.3)	(31.3)

Note: NE=No Extent, LE=Less Extent, ME=Moderate Extent and GE=Great Extent

The two categories of those below 22 years and those above 22 years felt that enhancing online privacy was effective to a very great extent (58.8%) followed by running anti-bullying campaigns (40.7%) compared to 58.0% and (40.0%) respectively. There were minimal variations on the response between the two groupings in terms of their views of whether a method was effective or not.

4.6.1 Victims' strategies to curb Cyberbullying

The respondents in the FGDs were asked to explain how they responded to cyberbullying. The main responses were to ignore the bullying, revenge by bullying back, report the bullying incidents, blocking the bullies or seek counselling.

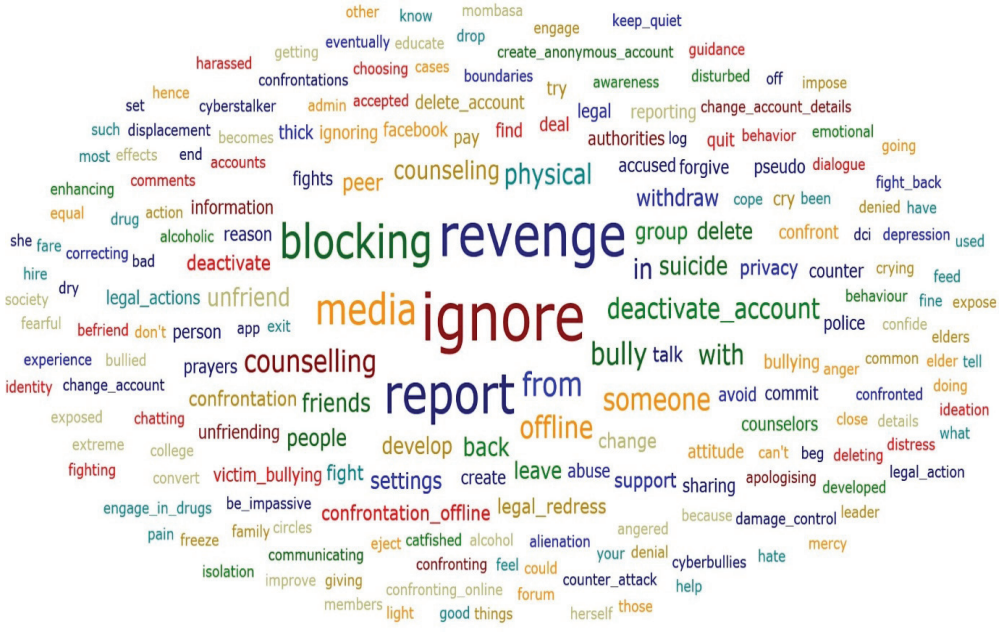

Figure 21: Victim's strategies to cope cyberbullying

4.6.2 Facebook's strategies to curb cyberbullying by students

The respondents were aware of some of the strategies that Facebook has put in place to curb cyber bullying. The main ones that the respondents were aware of included blocking perpetrators, reporting bullies, use of strong passwords, having privacy settings, unfriending, deactivating accounts and flagging of accounts. Figure 22 visualises the strategies used by Facebook on its platform to curb cyberbullying. Table 25 shows the frequency of the occurrences.

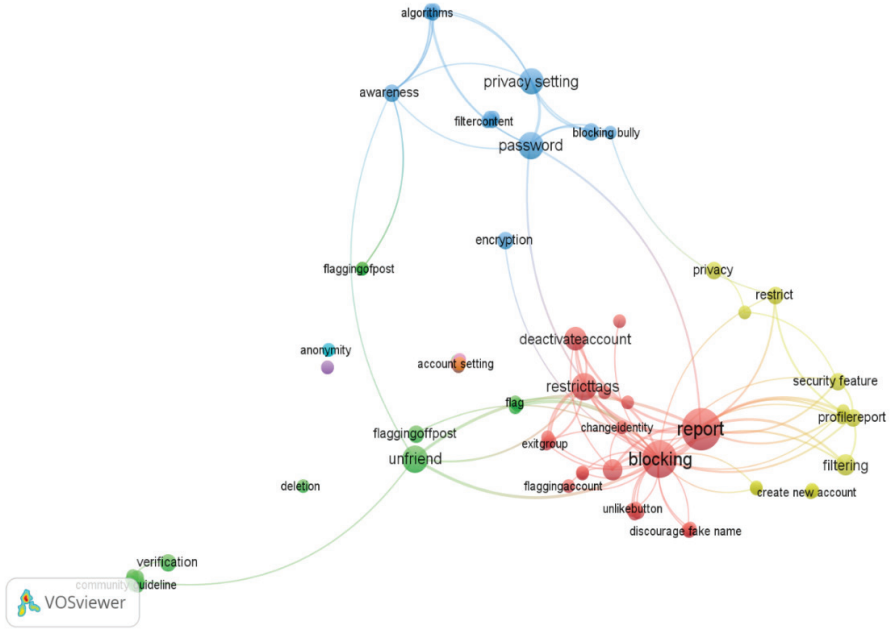

Figure 22: Facebook Strategies for curbing cyberbullying

Table 25: Facebook strategies for curbing cyberbullying

Strategies	Frequency	Strategies	Frequency	Strategies	Frequency	Strategies	Frequency
Report	17	Account setting	1	Fact checkers Facebook	1	Notifies	1
Blocking	13	Account use	1	Filter comment	1	Offensive content	1
Password	6	Algorithms	1	Filter content	1	Personal date	1
Restrict tags	6	Allow delete comment	1	Flag	1	Post enabled group moderator	1
Unfriend	6	Allow deletion	1	Flag comments	1	Privacy settings lack	1
Privacy setting	5	Anonymity	1	Flagging	1	Pseudo account	1
Deactivate account	4	Artificial intelligence	1	Flagging account	1	Pursue legal action	1
Change password	3	Blocking bully	1	Flagging of post	1	Real name	1

Strategies	Frequency	Strategies	Frequency	Strategies	Frequency	Strategies	Frequency
Filtering	3	Change identity	1	Freeze accounts	1	Relevant content	1
Awareness	2	Community guideline	1	Have report mechanism	1	Security	1
Deleting account	2	Community standard	1	Have terms and condition	1	Suspension	1
Encryption	2	Create new account	1	Hide content	1	Terms and condition	1
Flagging off post	2	Decline friend request	1	Hiding sensitive content	1	Translation	1
Privacy	2	Delete comment	1	Identification control access	1	Turn off comments	1
Profile report	2	Deletion	1	Integration	1	Turn off notification	1
Restrict	2	Discourage	1	Introduce password	1	Two step authentications	1
Security feature	2	Discourage fake name	1	Issues notification	1	Unfollow	1
Verification	2	Exit Facebook	1	Login alerts	1	Unfriend user	1
Able flagging	1	Exit group	1	Mass unfriending	1	Un like button	1
Account login	1	Facebook security feature	1	Monitoring	1	Un-tag	1

The deans of students were asked if they were aware of strategies used by Facebook to curb cyberbullying. It emerged that the deans were aware of blocking, reporting, closing or deactivating offending accounts, unfriending and unfollowing or disengaging. Figure 23 shows the strategies for curbing cyberbullying on Facebook that the deans of students were aware of.

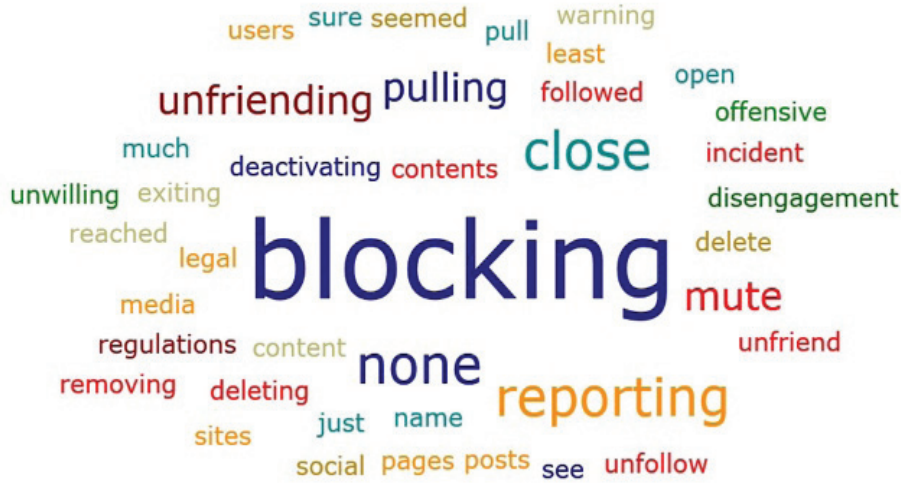

Figure 23: Strategies of Facebook for curbing cyberbullying that deans of students are aware of

4.6.3 Strategies used by Facebook users to curb cyberbullying

The respondents were asked to suggest what Facebook users can do to make their experience on the platform safe. Suggestions included vetting friends carefully and not befriending people one does not know well. They urged caution when posting information on the platform, tolerance of others online; and not posting private information on the platform. Figure 24 shows the strategies to curb cyberbullying suggested by Facebook users.

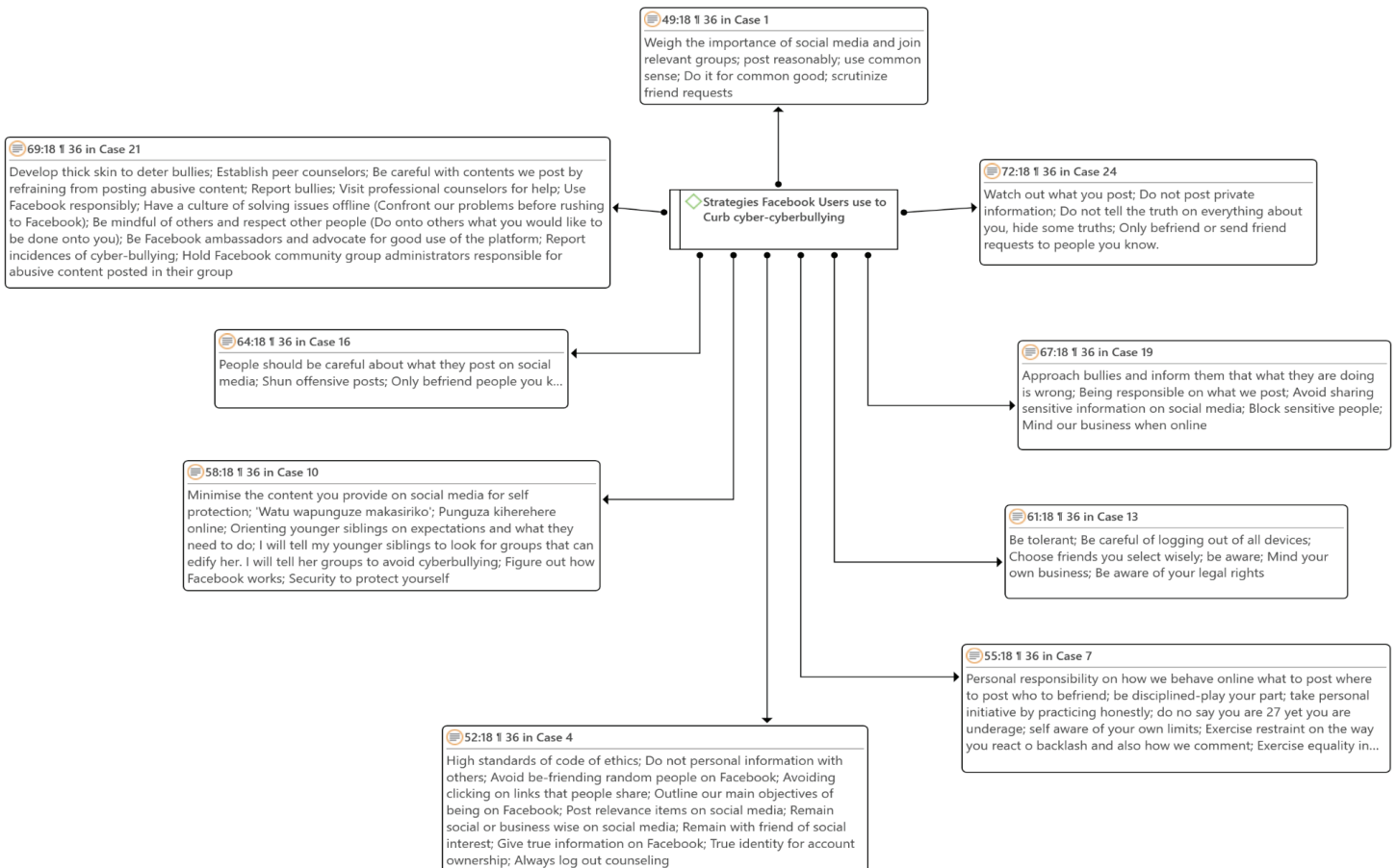

Figure 24: Facebook users' strategies to curb cyberbullying

4.6.4 University strategies to curb cyberbullying

The respondents were asked if they were aware of any strategies that their universities had instituted to curb cyberbullying among their students. They reported that the management of the universities had guidance and counselling offices for students, held training on ICT safety, had policies against cyberbullying, and took disciplinary action on persons caught bullying. Figure 25 illustrates the strategies used by universities to curb cyberbullying among students.

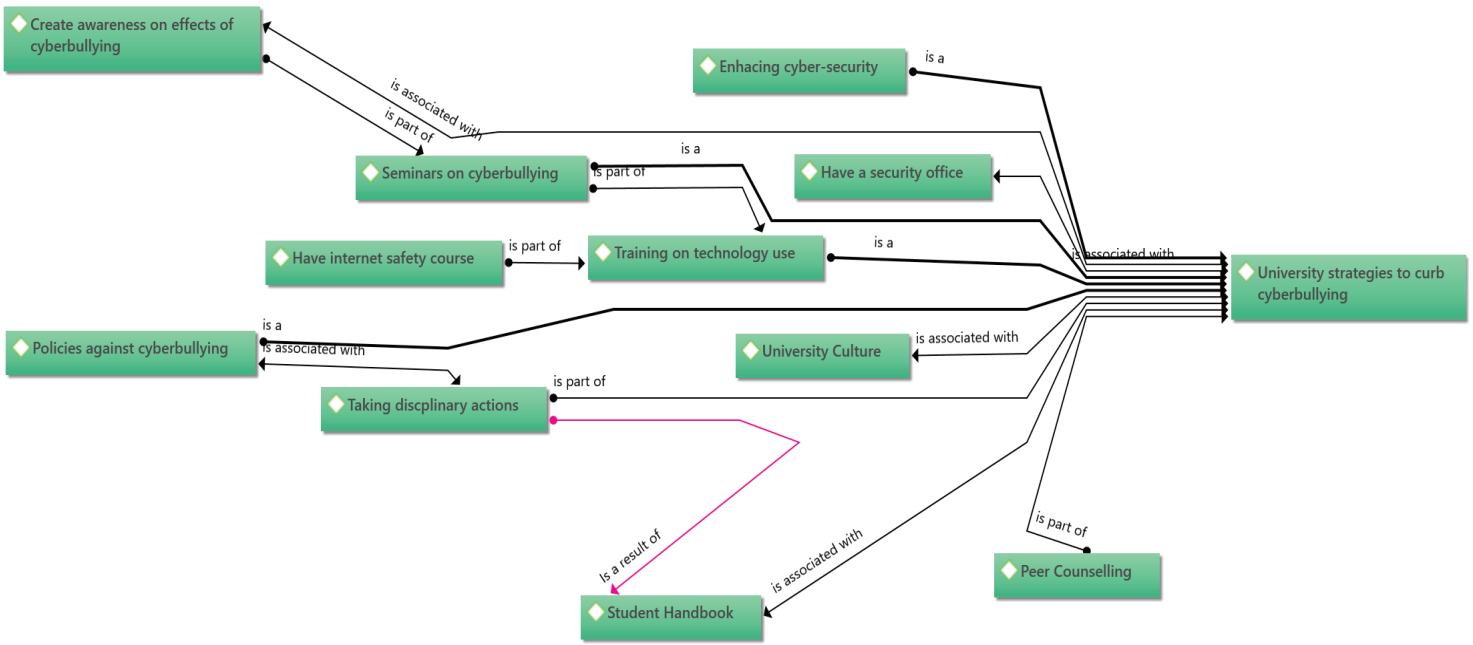

Figure 25: University strategies to curb cyber bullying among student

The respondents also discussed measures that their universities have taken or should take to support victims of cyberbullying. The majority agreed that there was guidance and counselling for victims. However, some guidance and counselling departments were not easily approachable by the victims and thus not effective. Suggestions were made that bullies should be fined, and the money given to the victims of cyberbullying. Figure 26 summaries the university strategies to support cyberbullying victims.

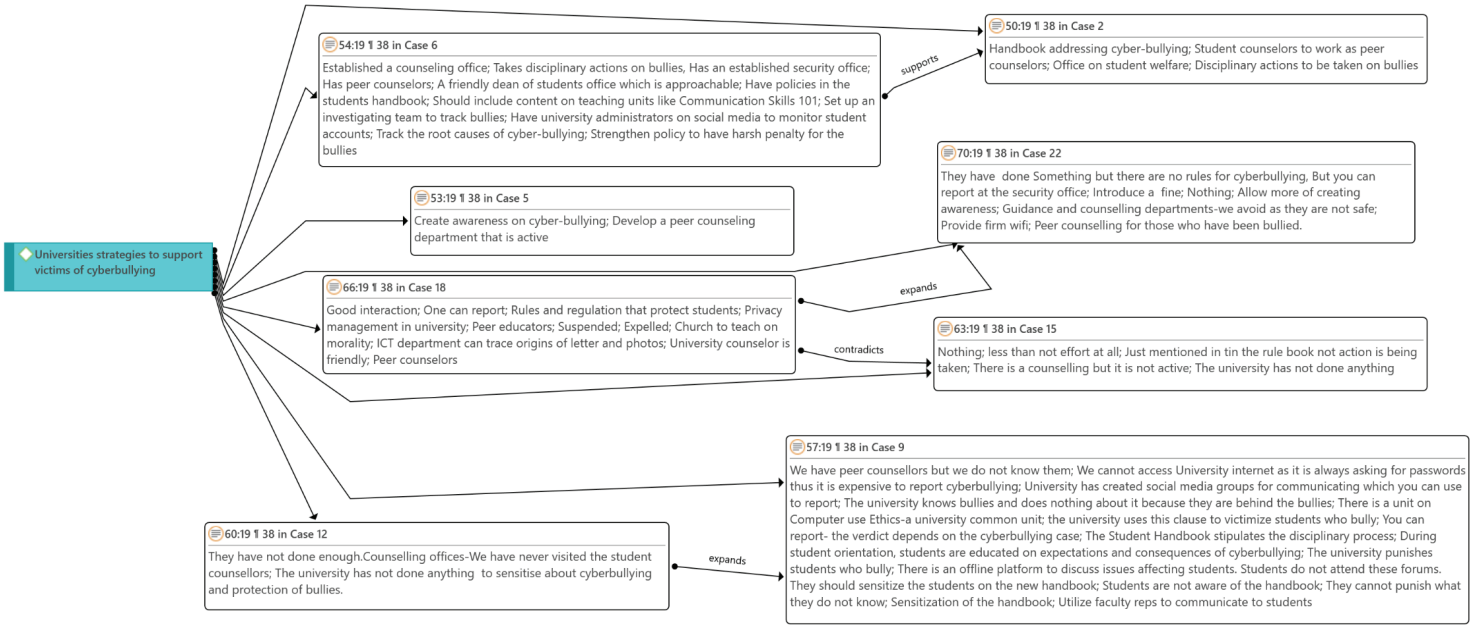

Figure 26: University strategies to support victims of cyber bullying

The deans of students were asked to discuss the strategies their universities used to deal with cyberbullying in their institutions. The strategies used by the universities to deal with cyberbullying in the universities include having student counselling units to advise affected students, and taking disciplinary action which included suspension or expulsion of bullies. They also mentioned that cyberbullying was included as one of the vices in the regulations in the student handbooks issued to the students when they go through the admission process. The deans also had reporting systems in place, such as having an open-door policy to encourage students to report issues to the dean's office. Some universities, however, did not have specific strategies and dealt with the vice on a case-by-case basis. Figure 27 shows the different strategies universities used to curb cyberbullying as discussed by deans of students.

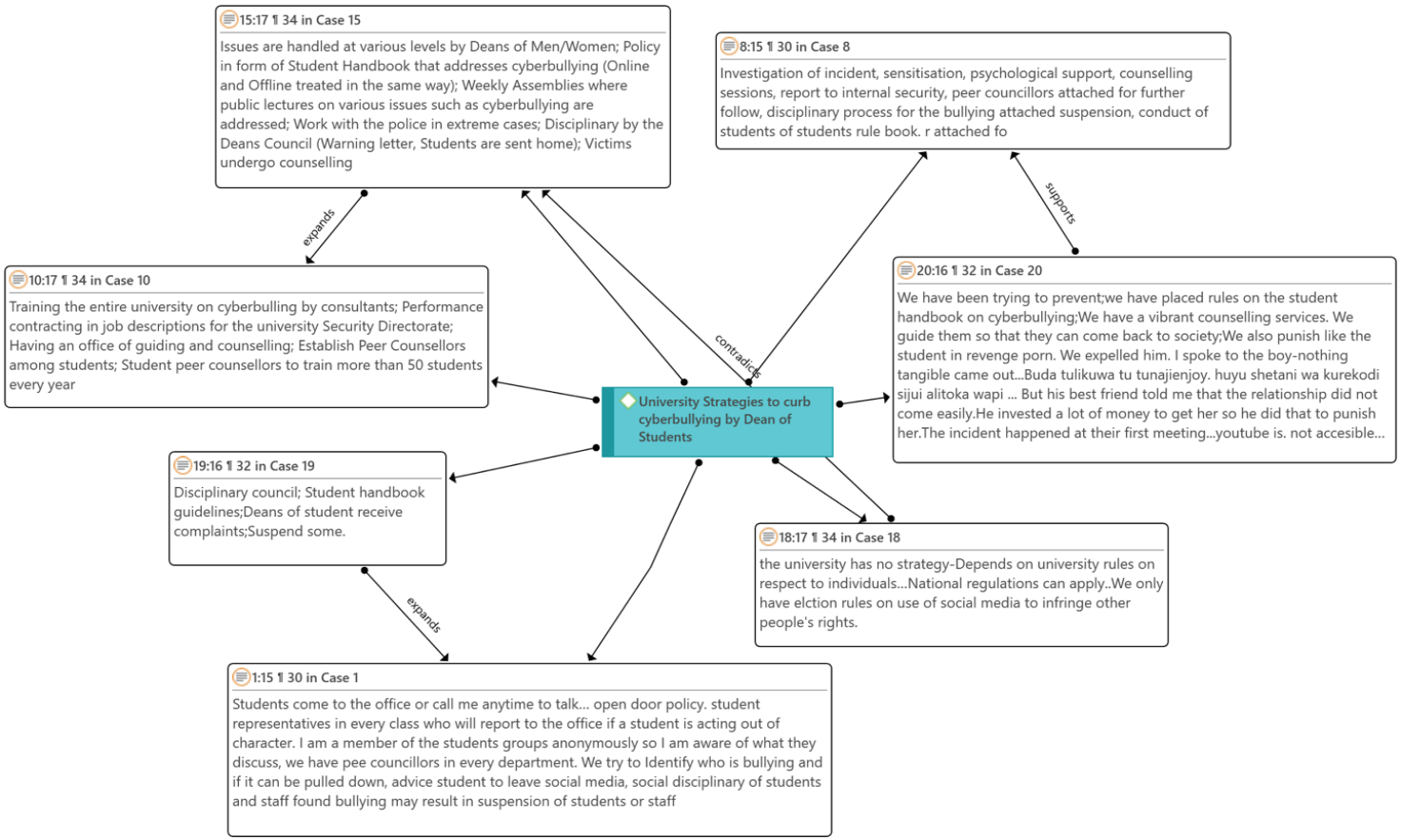

Figure 27: Strategies used by universities to curb cyber bullying as discussed by deans of students

4.6.5 Government strategies to curb cyber bullying

The respondents were asked if they were aware of the strategies the Government of Kenya has implemented to curb cyberbullying in the country as well as how to improve the government's response. It emerged that a majority of the respondents were aware of the existence of the legislation against cyberbullying in the form of the Computer Crimes and Misuse Act (2018) which was most referenced as the cybercrime act. However, there were concerns that the laws were either not being implemented or when implemented, were implemented unequally leading to politicians and government officials getting preferential treatment. They suggested that cyberbullies should be fined heavily and that all offenders should be prosecuted regardless of their standing in society. Other suggestions were that the government should create more awareness about cyberbullying and its effects. Figure 28 visualises the strategies the Government of Kenya has used against cyberbullying in the country.

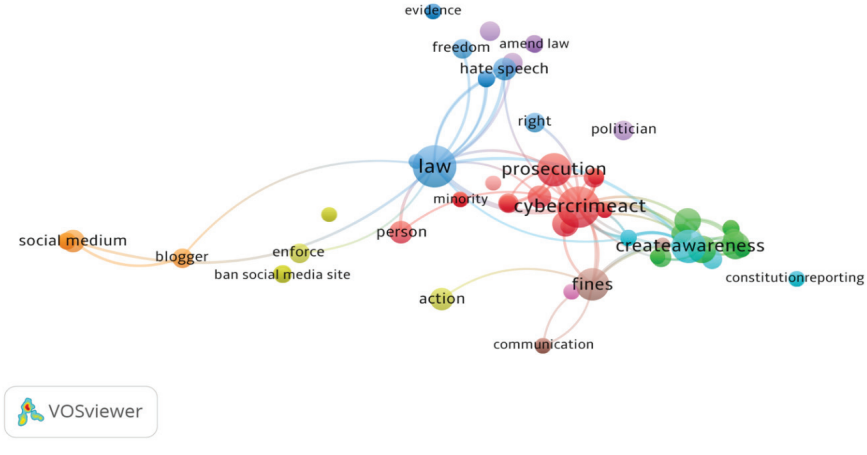

Figure 28: Government strategies to curb cyberbullying

4.6.6 Strategies used by the society against cyberbullying

The respondents were asked to suggest the role the general society can play in curbing cyberbullying in Kenyan universities. It emerged that to a large extent, the society has normalised cyberbullying. It was suggested that leaders in the society should be aware of cyberbullying and campaign against it. The respondents also suggested that parents should play a bigger role in monitoring social media use by their children and teaching them etiquette on how to behave online. Figure 29 shows the suggestions of how the society can help to curb cyberbullying in Kenyan universities.

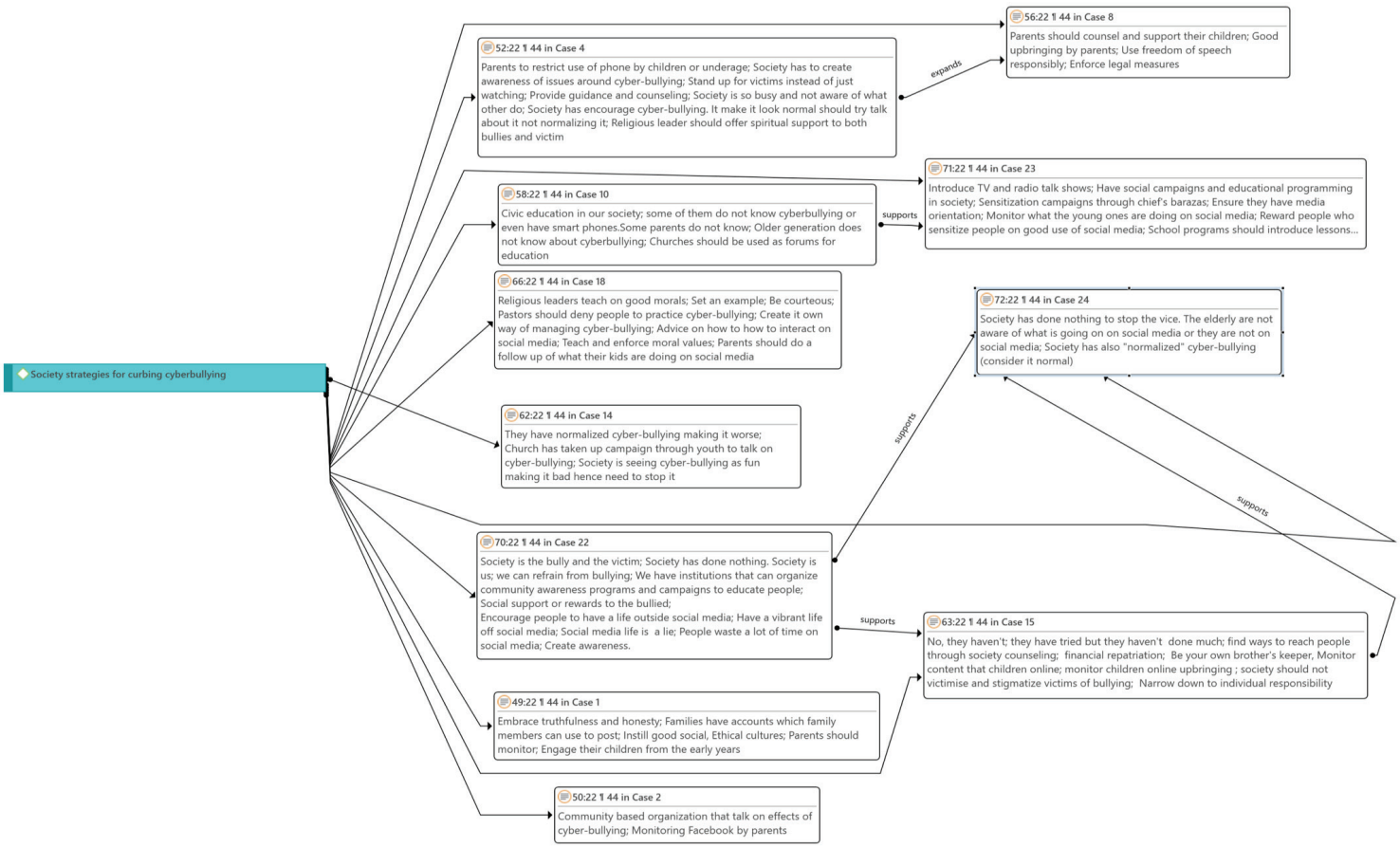

Figure 29: Society strategies to curb cyberbullying

4.6.7 General strategies to curb cyberbullying as discussed by deans of students

The deans of students were asked if they were aware of any general strategies used to curb cyberbullying. Most deans were aware of laws and legislations on cyberbullying, most notably, the Cybercrimes and Computer Misuse Act (2018). They also were aware that most platforms would allow one to report cyberbullying and deactivating offending social media accounts. Figure 30 shows the general strategies used in the efforts of curbing cyberbullying in Kenyan universities.

Figure 30: General strategies to curb cyberbullying discussed by deans of students

4.7 Effectiveness of the Existing Strategies on Curbing Cyberbullying on Facebook among Undergraduate Students in Kenya

The respondents were asked to gauge the effectiveness of the strategies they employed in response to cyberbullying. Most of them felt that the effectiveness of the strategy was dependent on the context of the bullying, the person being bullied and the type of bullying. The following are some of the responses reported verbatim:

> *"It will work for some instances, but it depends on the type of bullying, context of bullying, degree of bullying and your reputation in the society..."*
>
> *"All these measures are circumstantial; what works for me might not work for you..."*
>
> *"They are partially effective depending on the situation at hand..."*

"They are generally not effective unless there is a place to vent out - counsellors, peers, among others. For example, alcoholism is not a permanent solution...'

In terms of the effectiveness of the specific strategies, the reactions were varied with some respondents holding conflicting views on some of them.

Revenge or fighting back

"Revenge is not effective, but it will make them (bullies) fear you; if you win you will be a worse bully than them..."

"Victim bullying merely increases the number of victims and does not resolve the problem..."

"It needs stamina to engage the bullies online; fighting back creates more bullies..."

"Comeback prevents further attack..."

Physical confrontation

"Physical fights are effective as they teach the other person to respect you..."

"Physical fights work; I believe peace is achieved after war; if I fight you and I lose, I'll respect you..."

Ignoring or passive resistance

"Ignore them (bullies) if there are no further reactions from you, it frustrates the bully when they realise bullying you is not working..."

"People will always talk, thus learn to ignore..."

"Don't feed the trolls... engaging will fuel it further."

"Ignoring works best and it is somewhat effective..."

Effectiveness of Facebook strategies

A majority of the respondents 22 (92%) felt that the strategies that Facebook has employed are not effective. They were insistent that Facebook has not done enough to curb cyberbullying on the platform. Some concerns included the fact that although the platform allowed blocking, for instance, people blocked in one account are still able to create pseudo accounts and continue bullying more people. Similarly, while a victim could report or flag an offensive account, it takes long before the content gets deleted, or the account suspended. Only 2 (8%) of the respondents felt that Facebook had done enough to curb cyberbullying on the platform. These respondents were of the opinion that the problem was the people, rather than the platform, and that there were limits to which Facebook could control content on its platform.

17 (71%) of the deans of students believed Facebook is not doing enough to curb cyberbullying. Only 7 (29%) felt that Facebook had made sufficient effort to curb the vice on the platform.

Effectiveness of university strategies to curb cyberbullying

The deans of students were asked to gauge the effectiveness of the strategies applied by their universities. A total of 15 (62.5%) held the view that the strategies they applied in their universities were effective while 9 (37.5%) felt that the strategies they employed were not effective.

4.8 Suggested Strategies Which Can Be Used to Make Facebook Platform Safer from Cyberbullying among Undergraduate Students

The respondents were asked to propose interventions that Facebook could apply to curb cyberbullying on the platform. The interventions suggested were discussed under two main categories: technological interventions and non-technological interventions. Among the recommended technological interventions was the use of a verified identification system to register accounts (use of national ID numbers, birth-certificate numbers). The platform should also authenticate users to avoid people creating pseudo accounts. Similarly, creation of accounts should be restricted to one account per-person. Facebook should use filters to sieve out cyberbullying content. These filters can be guided by the use artificial intelligence and algorithms. Other suggestions included improving data security by enhancing two-factor-authentication, encryption and biometrics. Table 26 provides a summary of the technological interventions suggested for Facebook to curb cyberbullying while Figure 31 visualises the same.

Table 26: Technological Interventions suggestions to curb cyberbullying for Facebook

Technological intervention	Occurrences	Technological Intervention	Occurrences
Verified id	17	Disable comment	2
Authentication	13	Finger print log in	2
Filters	13	Restrict download	2
Single user	10	Automatic logout	1
Data security	9	Datamining	1
Monitoring	9	Delete post	1
Notification systems	6	Display registration detail	1
Algorithm	5	Encryption	1
Artificial intelligence	5	Fact checker	1
Age restriction	4	Feature	1
Biometric	4	Internet protocol address	1
Deactivation	4	Locators	1
Two step factor verification	4	Phone number	1
Face recognition	3	Social engineering	1
Filter	3	Time limits by Facebook	1
Private account	3	Warning system	1
Real names	3		

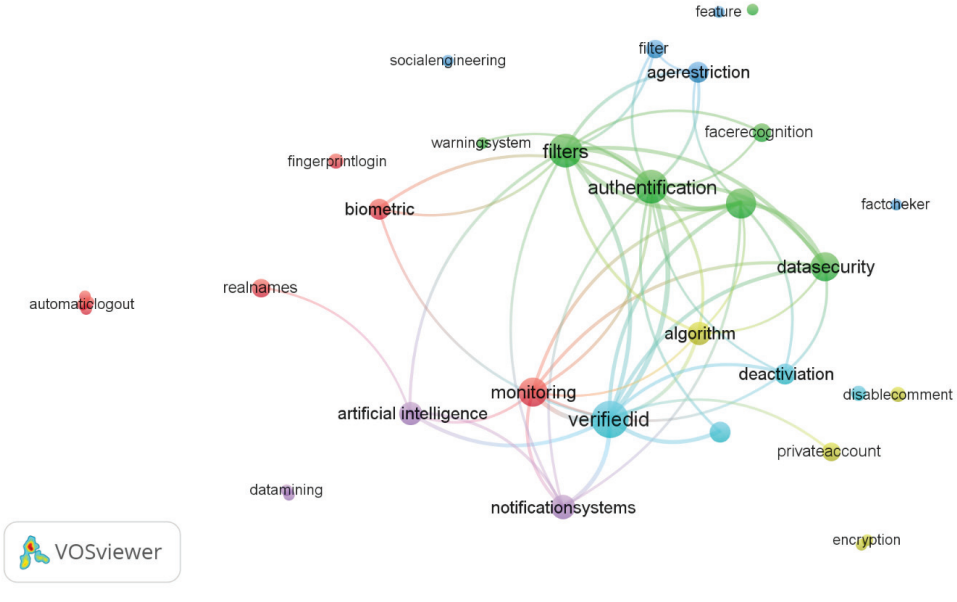

Figure 31: Technological strategies suggested for Facebook

The second category of interventions suggested were non-technical. They included the suggestions that Facebook should hold campaigns to create awareness about cyberbullying and its effects. Additionally, Facebook should have local offices in the country. This would make it more accessible to users who can make their complaints within the country of offence. As part of local integration, Facebook should work with governments to help them to enforce legal action or prosecution of cyberbullies in the country. Other suggestions included integrating cyberbullying and online safety education in the curriculum by the education system in Kenya. Figure 32 visualises the non-technological intervention.

Figure 32: Non-technological interventions suggestions to curb cyberbullying

The deans of students were asked to suggest non-technological interventions that can be used to curb cyberbullying on Facebook in their universities. They suggested increased awareness; users of Facebook should utilise the platform responsibly and be careful of what they post; sensitisation should be done through campaigns; and education on what cyberbullying is and its effects. Figure 33 shows the non-technological interventions to curb cyberbullying suggested by deans of students.

Figure 33: Non-technological interventions to curb cyber bullying suggested by deans of students

4.9 General recommendations by students

The main recommendations that emerged from users of Facebook as ways of curbing cyberbullying included enhancing online privacy and security and being selective of content you post online. It is the responsibility of Facebook users to maintain civility and etiquette online and there should be awareness about cyberbullying and its effects. Finally, legal action should be taken on cyberbullies. Figure 34 illustrates the recommendations from the respondents.

Figure 34: Recommendations for dealing with cyberbullying

4.10 Recommendations on roles of deans of students in curbing cyberbullying

Deans of students were asked to explain how they could work together to curb cyberbullying in universities in Kenya. They suggested that the Kenya University Deans of Students Association (KUDSA) would be instrumental in aiding them to curb the vice across all the institutions. The association can do this through developing uniform strategies and policies to be applied in the universities. The deans also suggested that they could collaborate and share experiences on cyberbullying in their universities.

Figure 35: Ways in which deans of students can work together to curb cyberbullying

5.

DISCUSSION OF FINDINGS

5.0 Response rate

This study involved data collection using questionnaires, interviews and FGDs. The representation of the respondents was drawn from the former provincial system of governance in Kenya. This was to ensure representation of breadth and depth of the population in the country. According to Fincham (2008), every research project should make sure its sample is representative of the population of interest. This current research concurred with the view of the author and made sure the sample represented the target population adequately.

According to Fowler (2013), there is no agreed standard for acceptable response rate. However, different organisations, especially federal agencies, require a response rate of over 75% for their research projects. This is in agreement with the studies by Bailey (2008) and Schutt (2018) that assert that research response rate should be 75% and not below 60%. Babbie (1973), and Mugenda and Mugenda (2012) concur that a response rate of 50% is adequate for data analysis. Mugenda and Mugenda (2012) further suggested that a response rate of 60% is generally good and that of 70% is excellent for data analysis. Though literature does not indicate any agreement of the minimum acceptable response rate for research, it is evident that there is a consensus that at least half of sample should have responded. The response rate for the questionnaire was at 63.3% while that of the interviews and FGDs was 100%. Overall, the response rate was 87.7%. This response rate was deemed adequate for data analysis in concurrence with the views of the researchers highlighted above.

5.1 Demographic characteristics of undergraduate university students in Kenya

According to Faria (2021), almost five hundred and fifty thousand (550,000) students were enrolled in Kenyan universities for the academic year 2020/2021. This was an increase from five-hundred and nine thousand (509,000) in 2019/2020. The eight percent (8%) increase could have been attributed to the growth in enrolment in the numbers of government-sponsored students and the approved government policy to absorb as many students as possible to universities (CUE, 2016). In addition, there have been growth in the number of public and private universities with advancement of constituent colleges to fully-fledged universities (CUE, 2016). The gender representation of the students' enrolment for the 2020/2021 academic year comprised three hundred and twenty-six thousand (326,000) male students while female students were two hundred and twenty-one (221,000). This

disparity between male and female enrolment has been persistent for academic years (Faria, 2021). A UNESCO document on different perspectives of higher education and women highlights the challenge of low enrolment by women in higher education and an absence of a gender-dimensioned curriculum (UNESCO, 1998). Rao (2003) asserted that the UNESCO conference of 1998 recommended that as from 2010 universities should make sure they address the gender disparity in Kenyan universities. In 2000, the Millennium Development Goals (MDGs) were developed. The MDG 3 emphasised gender equality and empowerment of women (World Bank, 2018). Onsongo (2011) asserted that the measure for the progress in terms of accomplishing the UNESCO and MDG 3 targets were based on educating more women and involving them in public policy. Mumiukha *et al.* (2015) asserted that there was no policy developed yet to address gender disparity although attempts have been made by some universities. These universities include Kenyatta University, Egerton University, Moi University and Maseno University. The universities have developed gender-based programmes and centres that cater for female advancement in education. Additionally, the Ministry of Education lowered the university cut-off points for female students which has contributed to a gradual increase in the female enrolment in Kenyan universities (Mumiukha *et al.*, 2015). According to World Bank (2018), there has been improvement in the male and female student enrolment in Kenyan universities which shows that they have been working towards achieving the MDG 3 of ensuring education equity to all genders. This study received a response of 65% male, 34.1% female and 0.9% non-entry on gender. The low response by females can be attributed to the fact that even at enrolment level, Kenyan universities have more male than female students (Faria, 2021). Similarly, Othieno *et al.* (2014) in a study on "*Depression among university students in Kenya: Prevalence and sociodemographic correlates*" confirmed that there are more male (61%) than female (39%) students in Kenyan universities.

In terms of age, the highest (72.8%) response was from students aged between 18-22 years while those aged 32 and above were the least. This can be attributed to the fact that these are young adults transitioning from their secondary school education to institutions of higher learning. It could also be because the research targeted undergraduate students most of whom join the universities direct from high schools. Most of these students are aged between 18 and 22 years. The findings of this study supported Odhiambo and Nyabwala (2015) who argued that the average age of a Kenyan youth when joining higher education is 19 years. Othieno *et al.* (2014) also found that the majority (60%) of university students

are aged between 20-24 years while those aged above 30 years are few (6%). The findings of this study contrasts those of a study by Maina and Kihoro (2017) which found that the majority of the learners in Kenyan universities are young adults aged between 25 and 29 years. This variation may be explained by the fact that the current study focused on undergraduate students only while Maina and Kihoro (2017) covered all levels of study in universities.

In terms of level of study, the respondents comprised students in their first to fifth years of study. The highest (31.9%) response was from the first-year students while the lowest (0.4%) was from fifth year students. There was a gradual decrease in the number of respondents by years of study (see Table 2). The pattern can be explained by changes of student expectations and realities of university life as they progress in the years (Hassel & Ridout, 2018). Onyambu (2019) explains that the transition rate between first year and second year increases while the transition rate between second year and third year decrease. Consequently, there are more second year students than any other years in the university. In general terms, therefore, there are more students at the lower levels of study since some of the students drop out, defer or repeat their studies. The students taking engineering or medical courses are the only ones who do more than four years of study and their number is quite low in Kenyan universities. This explains the 0.4% response rate. The overall response rate by year of study can also be explained by the fact that students at the lower levels of study are relatively freer than their counterparts at the higher levels. With a little more time to spare, students in the lower levels of study are likely to attend to other issues including responding to studies such as this.

The highest (38.8%) response of students in terms of course of study was social science and humanities while lowest (2.8%) was physical sciences. The social sciences comprised students undertaking courses like journalism, arts, music, business management and information sciences while physical sciences comprised course like physics, chemistry and pharmacy. This can be explained by the fact that there are more students enrolled in social sciences and humanities than in the STEM courses. Department of Education (2019) confirmed this data by stating that many degrees are conferred in business and social science related while the least are conferred in engineering and technology-related programmes. In addition, a study by CUE (2017) indicated that there are higher numbers of enrolment in business administration (23.8%), education (21.7%) and in social sciences while the least are in veterinary and natural science (5.13%). The findings of this current

study corroborate another study by the University of Sheffield International College (2015) whose data indicated that most of their students pursued social sciences as they are able to have flexible and better career prospects. Contrary to these, Nyamai (2021) indicated that there were more students admitted for STEM courses (66,661) than arts and humanities (56,170).

5.2 Demographic characteristics of deans of students in Kenya

The study found that there were more male (75%) than female (25%) deans of students in Kenyan universities. This study concurs with Onsongo (2011) who conducted a study which found that staff demographics in Kenyan universities management comprised more male than female genders. Similarly, Onyambu (2019) conducted a study which found that the staff in universities in Uasin Gishu County, Kenya consisted of more male than female gender. In addition, research conducted by CUE (2017) showed that the female distribution in academic staff was 33% while that of male was 67%. CUE (2017) explained that this representation in gender meets the constitutional requirement in the appointment of academic staff. All the deans of students had postgraduate qualifications. One of the requirements to be a dean of students is at least a Master's degree in any field (Career Point Kenya, 2021). It also stipulates that they should have a degree in education and/or counselling psychology. This confirms this research data where most of the deans of students had counselling psychology and others had education.

5.3 What is cyber bullying?

This study focuses on cyberbullying among university undergraduate students in Kenya. From the responses received during FGDs, it was clear that undergraduate students have a basic understanding of what cyberbullying is. They were able to articulate the fact that cyberbullying, unlike traditional forms of bullying, fundamentally occurs online. Additionally, they indicated that cyberbullying is the use of technology and the Internet to threaten, abuse, intimidate or harass another individual. This concurs with the definitions provided by other researchers (Campbell, 2005; Kowalski, Limber & Angaston 2012; Kowalski & Giumetti, 2017) who all define cyberbullying as an aggressive and repetitive use of digital and online communication to intentionally hurt or humiliate an individual or groups of individuals.

The defining characteristic of cyberbullying occurring in online platforms or cyberspace has wider reaching implications than simply the form in which the bullying occurs. In contrast to traditional bullying, cyberbullying is persistent,

pervasive and permanent. This can be attributed to the ubiquity of information technology coupled with easy and constant access of online platforms such as social media which means that a victim of cyberbullying cannot escape the bullying online unlike victims of physical bullying who can avoid their bullies. Conversely, victims of cyberbullying do not have this option as the bullying messages or comments are delivered to their devices. The digital nature of cyberbullying also means that it can occur anywhere, at any time and in any place since the nature of the Internet always makes it accessible. Additionally, once on the Internet, cyberbullying content can be nearly impossible to remove (Privitera & Campbell, 2009; Bullock, Wong-Lo & Gable, 2011; Tas'adi, Gistituati & Ananda, 2020).

Table 27: Difference between Cyberbullying and Physical bullying

Characteristic	Cyber bullying	Physical bullying
Proximity	In cyberspace and or via digital media the bully does not require physical proximity to torment the victim. Victims can therefore be bullied by bullies in foreign countries or states.	Only occurs when the bully and victim are in physical proximity of each other e.g., in school yards, dormitories, offices
Longevity	The bullying content once online is long lasting or permanent on the Internet and can be revisited or viewed over and over by the victim and other by-standers	Bullying activity is limited to the times during which the victim is within the physical reach of the bully.
Identity of bully	Internet anonymity means that most times the victim does not know who is bullying them. Additional victims can be bullied by strangers.	Victims know the identity of the bully since physical bullying requires face to face interaction and long-term interactions.
Audience	The audience is much larger. Bullying content can go viral and spread to viewers world-wide.	The audience is localised to those in immediate vicinity. Often bullies will target victims when they are alone and, thus, perceived as vulnerable hence further limiting the audience.
Form	Uses online or digital devices and platforms to communicate hurtful content to victim.	Uses physical intimidation or brute force to harass victim.

Source: Researchers, 2021

Langos (2012) cautions that not every unpleasant online interaction can be considered cyberbullying. He refers to instances where friends were either joking

or having heated online discussions about a topic on which they may disagree. Therefore, there is need to make a distinction between cybercrime and cyberbullying. Cybercrime is the use of network and information technology to commit a crime which may include fraud, identity theft, phishing, piracy or theft of intellectual property, hacking or cracking secure systems, and creation and distribution of malware, among others (Goldmann & Kaufman, 2009; Yar & Steinmetz, 2019). It is clear, therefore, that even though cybercriminals and cyberbullies may use similar tactics, such as impersonation, the motivations for cybercrime and cyberbullying differ. While cybercriminals use the Internet or digital technologies to perpetuate a fraudulent act, cyberbullies aim to emotionally hurt or cause distress to their victims. Another vice perpetuated online which is often confused with cyberbullying is hate speech. Hate speech is defined as any kind of communication that disparages a group of individuals based on their colour, race, gender, ethnicity, religion or nationality (Rangel *et al.*, 2021). Unlike cyberbullying, hate speech is targeted at a group of people in society and is based on a group identity. Cyberbullying, on the other hand, is focused on individuals and is often based on their individual characteristics or content shared.

Table 28: Difference between cyberbullying, cybercrime and hate speech

Difference	Cyberbullying	Cybercrime	Hate speech
Motivations	Fun, revenge, jealousy, intimidation	Financial gain, access to valuable information	Discrimination fuelled by prejudice, incitement to violence
Types/forms	Trolling, exposure, shaming, revenge porn, impersonation, Sextortion, exposure, cyberstalking	Hacking or cracking, spamming, phishing, cyber fraud, social engineering	Racism, tribalism, misogyny, homophobia
Targeted victims	Individuals perceived to be vulnerable or weaker than the bullies	Individuals or organisations that have valuable information or money	Groups of people in society who share an identifying characteristic such as race, ethnicity, gender, or sexuality.

Source: Researchers, 2021

5.3.1 What are the attributes of a bully?

Discussions about cyberbullying have been largely about victims; there are fewer discussions about bullies. During the FGDs, it emerged that most of the respondents agreed that cyberbullies can be female or male. They indicated that

both genders bully equally. This finding is supported by other research that indicate that cyberbullying is an indirect form of bulling that does not require direct confrontation of physical strength for intimidation. It is therefore easier for individuals who may be physically weak to be able to bully others online. Women and girls are, therefore, more likely to bully others online rather than in real life because they can hide behind the anonymity that the Internet provides and do not need to confront their victims directly, (Marcum *et al.*, 2012; Marr & Duell, 2021). This contradicts several studies that indicate that males are more aggressive and, therefore, are more likely to bully others online as well as physically, (Erdur-Baker, 2010; Underwood & Rosen, 2010; Lapidot-Lefler & Dolev-Cohen, 2015; Sun *et al.*, 2016; Sharma *et al.*, 2017; Livazovi & Ham, 2019).

When asked to discuss the attributes of a cyberbully, the respondents of the study indicated that they thought that cyberbullies where majorly intelligent, creative, arrogant, and idle (See Figure 1). The respondents acknowledged that cyberbullies often are intelligent and creative individuals judging by the unique and creative ways they used technology and messaging to disparage others, especially when trolling or creating memes. They also argued that it takes time to create and post content online. Thus, cyberbullies had a lot of time on their hands which they chose to spend online. Other terms used to describe cyber bullies include jealous, egocentric, self-centred, hateful, malicious, and confident among others (see Table 3).

Jealousy is perceived as a feeling of resentment hostility or bitterness against another individual because they possess something that one covets. Gordon (2020) argued that bullies, especially teenagers, compare themselves with others. This may lead to feelings of inadequacy that may develop into envy. This is exacerbated by the unrealistic picture presented by social media users who post only the highlights of their lives rather than the mundane, consequently giving the impression that they are doing well or better than their counterparts while the reality may be different. The bullies, therefore, use bullying as a tool to take away what they feel is undeserved joy or contentment being experienced by the victims. Stockdale *et al.* (2015) conducted a study on borderline personality disorder, jealousy and cyberbullying in adolescents and found that jealousy fully mediates the personality disorder and cyberbullying. They concluded that a respondent is more likely to bully others if they are jealous of them.

Egocentrism, also referred to a self-centeredness, is a characteristic in which an individual thinks only of themselves and acts without regard to the feelings or

desires of others. Wallner and Stemmler (2021) investigated the reasons behind cyberbullying among students and discovered that there is a correlation between egocentrism, low self-control and lack of empathy as factors which lead to acceptance of violence or aggression and, if supported by delinquent peers, would lead to cyberbullying. Rai, Smith and Svirydzenka (2017), in their study on egocentrism and cyberbullying, acknowledged that egocentrism can influence cyberbullying. They studied the existence of personal fable, which is the belief in one's uniqueness or invulnerability, and the imaginary audience, which is the psychological belief that many people are enthusiastically watching or listening to them even though this may not be the case. In their findings they showed that those adolescents with higher personal fables and high imaginary audience were likely to bully others online.

Malice or hatefulness is the desire to cause harm, pain, injury, or distress to someone. Respondents in the FGDs indicated that cyberbullies were malicious individuals who aimed to cause distress to their victims. Ndiege, Okello, and Wamuyu (2020) hold similar views with this finding. Their study of cyberbullying among university students in Kenya showed that 49.5% of the victims were sent malicious content with the aim of hurting their feelings or causing them emotional distress. This indicates that cyberbullying is a premeditated activity and that the bullies are aware of its effects on the victims. This desire to cause hurt or distress to the victim is likely to be the motivation behind some forms of cyberbullying such as exposure, revenge pornography, impersonation, trolling and flaming. With the exception of intelligence and creativity which were unique findings to this study, other researchers concur that bullies lack empathy, feel superior to others, are quick tempered and impulsive (Seigne *et al.*, 2007; Escortell *et al.*, 2020).

To create a personality sketch of a cyberbully, the attributes of a cyberbully suggested by the respondents were organised using the big five personality traits and judgement made as to where the cyberbullies would score highly or low in each of the personality trait. The attributes used were selected from Table 3, with only those attributes mentioned at least twice included. The big five personality traits include extraversion, openness, conscientiousness, agreeableness, and neuroticism (Cherry, 2021). Extraversion refers to the personality traits of an individual and how social or outgoing they are. An individual high in extraversion is energetic, talkative, and interactive while those low in extraversion are withdrawn or introverted. Openness as a personality trait refers to the individual's capacity to embrace change or try new things. Individuals high in openness are characterised by creativity, intelligence,

and curiosity while those low in openness are characterised by ignorance, resistance to change and pessimism. Conscientiousness is a personality trait of being careful or diligent. An individual with high conscientiousness is organised, self-driven, reliable, thorough and has self-discipline. Individuals low on conscientiousness are more easy-going, disorderly, impulsive, and unreliable. Agreeableness refers to how well an individual gets along with others. Individuals with high levels of agreeableness are helpful, kind, considerate, collaborative, and altruistic while those with low levels of agreeableness are selfish, manipulative, competitive rather than collaborative and lack empathy. Neuroticism refers to the disposition of the individual to experience negative effects such as anger, depression, and anxiety. Individuals with low levels of neuroticism are content, stable, and confident while those with high level of neuroticism are dissatisfied and distressed. From Table 3, the personality profile of cyberbullies emerges as an individual who is likely to have high levels of extroversion, openness and neuroticism coupled with low levels of agreeableness and conscientiousness.

Table 29: Personality sketch of a cyberbully generated from attributes of a cyberbully

Trait	Cyber bully attribute	Remarks
Extroversion	Attention seeking, social, confident, entertainers, famous, humorous, witty	High level of extraversion
Openness	Intelligent, creative, Smart, aggressive, courageous, curious, fearless, foolish, innovative, open -minded, opportunists, savvy	High level of openness
Agreeableness	Jealous, arrogant, Proud, disrespectful, conman, hateful, ill-mannered, inconsiderate, intimidating, cruel, immoral, inciters, self-centred, insensitive, liar, uncouth, egocentric narcissistic, lack of empathy, cunning, malicious, psychopathic	Low level of agreeableness
Conscientiousness	Idlers, careless, persistent	Low level of conscientiousness
Neuroticism	Sadist, cowards, Low self-esteem, envious, greedy, insecure, depressed, pessimist, fearful	High level of neuroticism

Source: Researchers, 2021

5.3.2 What are the motivations for cyberbullying?

The motivations for cyberbullying were discussed during focus group meetings and it emerged that most of the respondents felt that cyberbullies were motivated

by diverse reasons. To better discuss the motivations for cyberbullying, Varjas *et al.* (2010) categorises motivations for cyberbullying as either internal or external motivations. They define internal motivators for cyberbullying as those motivations caused by the emotional state of the bully. These may include redirected feelings, revenge, boredom, protection, jealousy, and seeking approval, trying a new persona, anonymity and disinhibition. Varjas *et al.* (2020) describe redirected feelings as the situation in which a cyberbullying victim redirects their anger and stress from the bullying and bullies others. This differs from victim bullying which is usually the victim counter-attacking the bully. In the case of redirected feelings, the victim does not bully back the individual who has bullied him/her but rather bullies someone else as a way of making themselves to feel better. From the findings of the FGDs, most of the motivations for cyberbullying are due to internal motivations (See Figure 2). The reasons given for bullying in the FGDs included seeking revenge, for fun, idleness (boredom) and for entertainment. These findings support those of Hamuddin *et al.* (2020) that the majority (70%) of the students who bullied others did so just for fun and that only a minority (8%) bullied others to get back for having been bullied. Victim bullying occurs when victims of bullying in turn target their oppressors and bully them back (Smith *et al.*, 2008; König, Gollwitzer & Steffgen, 2010; Baldry, Farrington & Sorrentino, 2017; Wang *et al.*, 2019).

External motivations for cyberbullying, on the other hand, are reasons for cyberbullying provoked by the characteristics of the cyberbullying victims or the situation that prompts the bullying behaviour. Varjar *et al.* (2020) came up with three external motivators. These are lack of consequences for cyberbullying behaviour, non-confrontational nature of cyberbullying, and the existence of difference to be targeted. Cyberbullies can be motivated to bully others if they face no consequence for their bulling. Findings from the study showed that bullies use anonymity on the Internet to evade consequences of the behaviour. Additionally, some of the bullies are motivated by economic gain. In such cases, the bullying behaviour is rewarded rather than punished. This will reinforce the bullying and the behaviour will persist.

The non-confrontational nature of cyberbullying makes it easier for the bully to target others online. Anonymity on the Internet provides a platform that enables the bullies to avoid direct confrontation with their victims. This creates an environment of disinhibition that may prompt an individual to cyberbully others. Additionally, the non-confrontational nature of the cyberbullying leads to deindividuation which

is the loss of self-awareness as a result of submersion in a group that may lead an individual into engaging in antisocial behaviour such as cyberbullying (Lowry *et al.*, 2016; Wright *et al.*, 2019; Wang & Ngai, 2020).

Varjar *et al.* (2020) posits that the existence of difference in the victims provides the bullies with a convenient target. These differences may be physical characteristics such as weight, height, complexion, or impairment. The differences may also be social, such as poverty, religion, or social status. These differences provide a target for the cyberbullying activities. This is often the case when individuals are body-shamed online as the bullies target easily observable characteristics of their victims that make them stand out from the rest of the crowd and then use these features as a basis to castigate them. The findings from the FGDs showed that bullies will target people who are different and stand out from the crowd.

5.4 Social media networks among undergraduate students

The quantitative data collected from the questionnaires to students showed that the students used a variety of social media platforms. The platforms used include Facebook, Instagram, Snapchat, Telegram, TikTok, Tinder, Twitter, and WhatsApp. As depicted in figure 2 in the previous chapter, participants in the FGDs also indicated the social media platforms they use. It emerged that the most popular platforms were Facebook, Twitter, Instagram, WhatsApp, TikTok and YouTube. This can be attributed to what Butt (2020) called social media's ubiquity in the lives of university students which has changed the students' communication patterns because they have become important tools for self-expression and self-presentation. Butt (2020) further avers that the presence of smartphones has contributed to the growing reliance on the Internet and social networking among university students.

Descriptive data from figure 4 in the previous chapter indicated that for Kenyan undergraduate students, Facebook (96.1%) and WhatsApp (95.7%) were the two most subscribed social media networks among the participants of any gender. The third most preferred social media network was YouTube (74.1%). This data mirrors a global study by Statista (2021) which states that Facebook is the most popular social media network in the world with 2.89 billion accounts. Further, although their research sample size is smaller, the current study's results on the most preferred social media networks mirror data from research conducted at Obafemi Awolowo University, Ile-Ife Nigeria. This research that targeted all undergraduate students at the Nigerian university surveyed 850 students - randomly selected across five

faculties. From the research, Tayo *et al.* (2019) found that social media platforms used by Nigerian undergraduates include WhatsApp (97%), Facebook (85%), Instagram (65%), YouTube (62%), Twitter (25%), LinkedIn (21%), Google Plus (15%), Snapchat (10%), and Skype (7%). Overall, while the Kenyan students in the current study ranked WhatsApp as their second most subscribed social media, their Nigerian counterparts ranked it first. This means that for Nigerian students, WhatsApp is the most popular social media networks.

A survey by Halaweh *et al.* (2020) involving 2100 undergraduate and postgraduate students drawn from 21 Egyptian universities found that most Egyptian university students are on Facebook, Twitter, YouTube, Google Plus, Instagram and LinkedIn. They further found that Facebook is the most popular social media network among Egyptian university students. This corresponds with the findings of the current study. Conversely, Pew Research Centre (2021) suggests that a majority (71%) of 18-to-29-year-olds in America use Instagram or Snapchat (65%), while 55% use TikTok. Maybe American 18–to-19-year-olds prefer Instagram because Cipolletta *et al.* (2020) argue that unlike Facebook that's geared towards building relationships, Instagram is built for self-promotion as its interface allows followers to like an image after which the number of 'likes' can be counted as popularity. Further, self-promotion as Molinsky (2013) suggests is a typical American culture because Americans are comfortable selling themselves and their accomplishments.

Statista (2020) avers that the most-used social media site among teenagers and young adults in the United Kingdom (UK) in 2020 was YouTube. Citing a survey carried out by Audience Project, Statista (2020) opined that 82% of 15-to25-year-olds said they used YouTube more making it the most preferred social media network than Facebook, WhatsApp, and Instagram among 15-to-25-year-olds. Maybe, as Mollinsky (2013) suggests, unlike Americans that overtly self-promote, the British find self-promotion so taboo that it is often met with ridicule. Perhaps in their self-effacing nature, they prefer to watch on-goings than participate in them. Additionally, Young (2019) reported that one third of British youth would prefer to be vloggers on YouTube when they are older than be astronauts.

In the current study Facebook (97.2%) had the highest percentage of subscribers among males while WhatsApp (95.8%) had the highest percentage of subscribers among females. The current study's results mirror those of a demographically heterogeneous online Itel survey that was conducted among 4,000 consumers across 13 states in India. The survey indicated that while women mostly used WhatsApp

on their smart phones, Indian men mostly used Facebook on their smart phones. In addition, Ladage (2013) had given four reasons why people prefer WhatsApp to other social media platforms. These included the idea that it is more private, more personal, more secure, and quick.

Further, the current study found that the least subscribed social media network was Tinder and Telegram. Chin *et al.* (2019) posit that Tinder is the most popular dating app in the world. Smith (2015) stated that 15 percent of American adults have used dating sites. A prevalence of 15% Tinder use was found in a survey of 1261 Spanish university students between ages 18 and 26. Telegram on the other hand, is a messaging app that has similarities with WhatsApp. Quoting the 2018 Quartz Africa Online Report, Mboua (2021) avers that WhatsApp is the market messaging app in Africa. Mboua (2021) continues to say that WhatsApp has a market penetration of 97% in Kenya. Macharia (2016) argued that while telegram was a better messaging app, WhatsApp was more popular. The article further argued that Telegram allowed users to send large types of files of any type up to 1.5GB, while WhatsApp limits users to 160 Mb files of specific file types; that Telegram is faster in sending and receiving files compared to WhatsApp; that telegram had a wider array of communicative emojis and gifs and that telegram was safer.

Moreover, gender disparities and discrepancies in social media use among university students is a common research interest. In one such research by Sana *et al.* (2021) states that boys mainly use social media for communication and interaction, while girls use social networking sites for educational purposes. In another one by Samaha *et al.* (2019), they observed that their male respondents were more likely to be addicted to social media than females. The researchers linked this to the Middle East social and cultural norms which could lead their female respondents to hide their identities and hide their social media usage behaviour and the fact that their male respondents used social media to make new friends and connection with people with similar interests. An assertion that Wenliang *et al.* (2019) back. They argued that general addiction studies indicate important gender-related differences such as epidemiology, social factors and characteristics, biological responses, progressions to dependence and medical consequences which significantly contribute to differences in addiction behaviour among the genders. Samha *et al.* (2019) also argue that female students' academic performance was more highly influenced by the usage of social media than that of male students. Similarly, research conducted among Ghanaian students by Asante (2020) found that male

students used Facebook, WhatsApp, and Twitter more than female students. The female students preferred Snapchat, Instagram, TikTok and YouTube than male students.

This study noted a low preference for Twitter. Twitter's low preference among Kenyan undergraduate students could be because of the phenomenon known as KOT (Kenyans on Twitter), who Ndonye (2020) characterises as undisputed cyberbullying champions. Further, Stoller (2017) also averred that Twitter has had severe problems with hate speech and aggressive trolling in America. The other possible reason Stoller (2017) gave for the low use of Twitter is the abysmally slow pace for new feature introductions which is something that could potentially be unattractive to the adventurous undergraduate students.

The study also noted that students aged above 22 years reported a low presence on social media networks. This could be attributed to the fact that some of them are working students, as Statista (2021) argued that 40 percent of Kenya's workforce is aged 15-29 years. The other reason could be that above 22 years heralds the beginnings of social commitments as partners and parents and thus they do not have the luxury of time to have significant social media presence. Pike *et al.* (2018) argue that the African continents' shifts in union formation are also reflected in Kenya as by 2014, the age at marriage had risen to 19.5 years for rural women and 21.5 years for urban women. Among men, the median age of marriage in 2014 was 19.5 years in rural areas and 24.8 years in urban areas.

Significant was also popularity of social media platforms vis-à-vis the courses undertaken by the students. Students taking Education course reported low number of social media networks use compared to other courses. As social media becomes more integrated into all aspects of a students' life, it is prudent that the current students harness and finesses these tools for personal, academic and interpersonal success. Making a case for the same, Ansari and Khan (2020) aver that social media use for collaborative learning had a significant impact on interactivity with peers, and teachers. They also argued that it bolstered positive online knowledge sharing behaviour which impact on students' engagement which consequently has a significant impact on students' academic performance. Thus, this study finds the low social media uptake among education students curious as the study established that students taking Science' and Engineering courses were the most active on social media.

5.5 Facebook use among deans and undergraduate students

As already reported, the findings from this study indicate that Facebook is the most preferred social media platform by university students in Kenya regardless of gender. The deans of students, however, preferred using WhatsApp despite the majority of them being on Facebook as well. In regard to gender and use of Facebook, this study revealed that the largest number of subscribers to Facebook were male students (97.2%) while females were mostly on WhatsApp (95.8%). However, a study conducted by Walton (2019) is of a different view explaining that 74% of Facebook users are mature females as compared to males at 62%.

A slightly higher proportions of female respondents, 5.9% versus 2.8% reported that they are not on Facebook. From the findings, the researchers concluded that Facebook was a more attractive social media to the students compared to other social media sites for a variety of reasons. It also appealed to users from different age groups and professionals. It could be that there were fewer females on Facebook compared to males. The finding from this study agrees with the opinions of Fatehkia *et al*. (2018) who did an online model with Facebook data and concluded that there was an Internet access and use gender gap index among the females and males for low-income countries at 0.76 implying that for every male who has an Internet access, there is a corresponding 0.76 female. This indicates that there is a lower Internet penetration for female at 24% lower than that for males. As a result, the number of female users on Facebook will be lower compared to males.

As opposed to social media sites like WhatsApp, Facebook is a much lively platform and is not as restrictive in content. WhatsApp, for example, is restricted to a group with a common interest and for one to communicate with another it has to be a direct one on one communication or be a member of a group of same interest. WhatsApp groups are also monitored and managed by administrators who may control the content posted in the groups. On the other hand, Facebook allows people to view or post content on another user's profile or groups who are not known to them or to groups they do not belong to. Because of this Facebook may be appealing to a younger audience.

The finding on the popularity of Facebook is also echoed by Emara (2017) who opined that Facebook is today the most popular social networking site because it allows people to communicate ideas and express their opinions on different issues and, as such, the use of Facebook continues to grow and, thus, people's interactions have significantly changed with the advent of social media sites.

Today, many students own a smartphone and mobile gadgets as explained by Lenhart (2015) who in his study found out that more than three quarters of teenagers either have or at least have access to a smartphone and another 30% have a basic phone, with only 12% teenagers aged between 13 to 17 reportedly not having any types of cell phones. This assertion is backed up by the Communications Authority of Kenya (CAK) (2019), which avers that Internet usage and, consequently, access to social media is driven by the availability of affordable mobile devices. Many mobile service providers are now offering free social media access to entice users to purchase data. CAK (2021) further states that as at July - September 2020 the total number of data/Internet subscribers in Kenya was at 59.8 million, with the figure registering a growth from the previous year.

The findings of this study are also in agreement with a study by Owino *et al.* (2016) who indicated that Facebook is the most popular social media platform in use in Kenya (Ndavula & Mberia, 2012; Owiny *et al.*, 2014; Kimemia & Mugambi, 2016; Kamau, 2017). Owino *et al.* (2016), however, indicated that Facebook usage is followed by Twitter. This contradicts the data found by the researchers which indicates that WhatsApp use is second to Facebook and not Twitter. The reason for current high use of WhatsApp, thereby putting it in second place as opposed to Twitter as cited by Owino *et al.*, could be due to the unpopularity of WhatsApp in 2017 when their study was being conducted owing to it being a new entrant. However, WhatsApp is fast becoming a more reliable and 'official' communication channel within the workplaces including universities. WhatsApp is a free social media with a two-step authentication making it more secure, reliable in terms of communication since it does not use the local service providers networks and can be accessed even on a Wi-Fi connection without Subscriber Identification Modules (SIM) cards provided by network providers. As such, the students may be using it as a way of getting information passed in WhatsApp workgroups by lecturers and university management at a lower cost. The respondents also indicated that Twitter is mostly used by the affluent or elite in terms of social class and mostly those who stay in the urban areas as opposed to the "ordinary" students who are the majority in universities. Walton (2019) is in agreement with the respondents indicating that the three social media sites namely Twitter, Facebook and Instagram have different demographic appeal among users and that Facebook has a broad appeal for all age groups whereas users of Instagram are younger and Twitter is favoured by affluent college graduates.

Although Facebook is not the only social media site, it is by far the most popular among students (Hargittai & Hinnant, 2008; Junco, 2012; Special & Li-Barber, 2012; Wesseling, 2012). Luedtke (2003) shared the same opinion by explaining that social network sites like Facebook have deeply penetrated people's daily lives due to technological changes and adoption. Universities are also having a presence on social media sites like Facebook. Many universities across the country have a Facebook account and as such students find themselves subscribing to the pages by default. Facebook and other social media sites are becoming predominantly used in college environment. It is currently more suitable for online interaction within universities (Al-Dheleai & Tasir, 2017). According to Ellefsen (2016), Facebook is popularly used by university students as their main social media choice and therefore they spend most of their time using it daily. The author expounds that Facebook is applied in higher education institutions almost all over the world. It is worth noting that Facebook began in 2004 as a Web service called thefacebook.com. It was created by a 19-year-old Mark Zuckerberg who was a student at Harvard University at that time. It was meant for Harvard University students to share information and maintain contact with each other thus providing a social interactive networking platform among university students (Brügger, 2015). It is, therefore, not surprising that its popular audience still remains among university students. Coincidentally, all the universities that took part in this study have a Facebook account which they use to interact with and provide information to the students. Thus, the findings of this research are in tandem with the researchers that Facebook is applied across many universities as both a social and communication tool. However, despite the popularity and use of Facebook among university students, researchers are yet to determine how it is applied as an innovative tool for engaging students in academic discussions (Hurt, Moss, Bradley, Larson, Lovelace, Prevost, & Camus, 2012).

5.6 Association of the number of Facebook friends by gender, age, and degree course

The findings from this research indicates that there was a disparity in number of Facebook friends in terms of gender, age and course taken. However, the number of friends on Facebook that the respondents had did not vary much between male and female participants. The male respondents had a higher percentage of friends on Facebook compared to their female counterparts with 7% of the males having more than 5000 Facebook compared to 6.2% among females. Thus, the female respondents reported a lower number of Facebook friends compared to the males.

Overall, both genders had more than 2000 friends on Facebook. In a study by Intel and Dalberg (2012), the researchers noted that 25% of females do not engage online and are thus not interested in using the Internet for socialising among others, and that females do not believe in deriving any benefit from its use and as a result they lack confidence and trust on the devices used to access the Internet as well.

Seidman (2013) argues that friendship or social belonging is one of the major motivators of Facebook use and that Facebook as a social media forum fulfils this sense of belonging to the students by allowing them to communicate and socially communicate with each other and is far witnessed among females in the way they engage socially than in men. As such, females would tend to retain their friendship more than males as this study found out. Konstam (2007), as cited in Zhang (2018), is in agreement with the views of Hagerty *et al.* (1996) stating that the involvement in virtual communities is a sure way young adults like university students can have a sense of belonging, especially among social groups.

The number of friendships that the respondents had on Facebook possibly correlated with the incidences of cyberbullying. Female respondents reported a lower number of Facebook friends compared to the males. This can be attributed to the well-being of females online, and, thus, they had lower incidences of cyberbullying. The gender difference in the number of friends exhibited by the genders may also be because males are not selective about who they friend and the activities they perform on social media sites like Facebook as compared to the females. However, the findinngs of this study are in contrast with that of Oberst *et al.* (2016) who explained in their study on gender stereotypes in Facebook profiles that females used Facebook more and had a higher number of friends on the platform than males because they have "lesser levels of personal well-being".

In a study by Tifferet and Vilnai-Yavetz (2014) to determine how each gender presents themselves on Facebook, they noted that both genders interactions on Facebook, such as the number of friends or the information they share, is not determined by their gender as compared to how they would present themselves offline. In addition, they note that this is more marked in females than in males and that what is presented on Facebook profiles in regard to gender stereotypes do not influence personal well-being, but rather, the high intensity Facebook use is what will bring a negative effect on their well-being. As such, there is no major difference in the way males and females portrays themselves online. By being protective on the content they post, they minimise the chances of being bullied. Oberst *et al.* (2016) supports

the views of Tifferet and Vilnai-Yavetz (2014) by arguing that well-being is dictated by: "personality dimensions: neuroticism (negatively), extraversion and openness (positively), gender (females reported lower well-being) and age (less well-being with age), Facebook use (negatively) and number of Facebook friends (positively), and also (positively) androgyny as well as altered presentation". These findings are reflected in this study that found out that females had less online presence, had fewer friends, have a lower age bracket on Facebook and interacts less compared to males. As such, they are less prone to suffer from incidences of cyberbullying compared to the males.

5.7 Associating unfriending or being unfriended by someone on Facebook by gender, age, and degree course

The findings of this study show that majority of the students had at least unfriended or had been unfriended by someone on Facebook. Lopez and Ovaska (2013) explain that unfriending on social media sites is becoming increasingly common with increased use and popularity of social media sites like Facebook. Therefore, what the students are going through by either unfriending or being unfriended is a not a new phenomenon as explained by Madden (2012) that many users of social media sites are applying or using the unfriend button more and thus disengaging with some of their friends on Facebook. Unfriending is termination of friendship or a sudden disengagement (Bevan *et al.*, 2014). Unfriending someone may make someone feel unwanted and excluded – a form of cyberbullying and this may not resonate well with the person who is being unfriended (Sibona, 2014) and may also affect the person's well-being both socially and academically. Sometimes those who have been unfriended may turn into bullies and bully those who unfriended them or impersonate someone popular so that they are accepted back by those who unfriended them. Lopez and Ovaska (2013) explain that unfriending is a hard, unsociable activity since it indicates a failure of friendship. It is harsh and impolite (Gashi & Knautz, 2016).

There were more males who had unfriended people compared to females. This can be attributed to the numerous friends that males had and the possibility of a fall out among them as reported by the respondents. It would also mean that the more friends one had on Facebook the less they would be in contact with them, as was given by the respondents as one of the reasons for unfriending others. Gashi and Knautz (2015) who opined that people communicate less with their friends who have not been in contact with them for long and that these ties may be broken if

it continues for long (Onat *et al.*, 2017). Female students having been unfriended less may show the opposite as they are likely to maintain a sense of social belonging compared to males. Onat *et al.* (2017) explain that friendship is a willing mutual interaction between two parties over a period of time and dictate the emotional and social well-being of the two over a varying degree of companionship, intimacy, affection, and mutual assistance. Thus, for a friendship to be attained over time, both parties should be able to express themselves well, be secure with each other and have self-identity. Should these be lacking then the friendship ties are broken.

The most dominant reason given for unfriending people of Facebook was a fallout among friends. From the findings, male students showed a higher tendency to fallouts than females and this may be attributed to the way males conducted themselves negatively online. As much as Facebook was intended to be a social and communication tool, the male students may have used the platform for social vices for example posting unwelcome or bullying content like revenge pornography, abusive content, outing among others more than their female counterparts resulting in them being unfriended and ejected from social groups. Sibona and Walczak (2011) outlined the reasons of being unfriended by other people on Facebook is because their content was not important, they could also be posting content which is inappropriate, and also spamming.

5.8 Facebook frequency of use among undergraduate students

The findings from this research indicate that most students reported to use Facebook daily while the frequency indicated as daily, sometimes while others said they use it on a monthly basis. The findings of this study are in agreement with that of Altaany and Jassim (2013) that indicated that students spend a considerably greater time on Facebook and that males are frequently on Facebook than females, spending more than 4 hours each day of use. Altaany and Jassim's findings is corroborated with the findings of Owino *et al.* (2016) who explained that the majority of social media users in Kenya visit their preferred platforms at least once every hour with the cumulative number of hours spent by users on social media standing at 10 hours per week.

This study which shows that a high proportion of male students reportedly use Facebook more times compared to female students. However, some students mentioned that they have never used Facebook. The frequency of using Facebook may lead to high number of social events on the platform including making of

friends as explained by Altaany and Jassim (2013) that the greater the time students spend on Facebook the higher the chance of making more friends. As discussed earlier, more friendship on Facebook increases the likelihood and prevalence of cyberbullying incidences. In terms of gender and Facebook usage, more males were reportedly to be online compared to females.

Aghazamani (2010) conducted a study and also noted that in relation to gender, education levels, and frequency of use of Facebook, male students spend more time on Facebook than the female users and this occurs on a weekly basis. Looking at these findings, the researchers can deduce that male's presence online at any given time is more than female's, and this may explain the high number of bullying incidents experienced by males in comparison to females. Similarly, Junco (2012) noted that there is a significant relationship between the higher levels of study, the technicality of courses taken and the time the students took online. The final year students and those aged 22 years and above spend more time online. Altaany and Jassim (2013), however, are of contrary opinion stating that final year university students do not necessarily spend more time than the first-year students. How students use social media networks is purely psychological and are strongly related the desire to communicate, socialise, actively take part in group postings, or form social relationships online (B□ltere□u & Balaban, 2010). As such there can be no prediction of exactly how frequent and how long students in general spend on Facebook but will be dependent on individual preferences and the benefit derived by being online. This explains why the most dominant frequency given by students for being online was "sometimes", meaning they could not predict exactly when they would be online. Debatin *et al.* (2009) explained this point when they concluded that the respondents who had held Facebook accounts for more than 2 years visited their accounts on a daily basis, checking their status three to five times daily and spending 5 to 30 minutes each time as opposed to once for a defined period of time. Similar, there are students who will log into their Facebook accounts and leave it open and active always. Facebook has become an intergral part of the daily routine and ritual of university students (Debatin *et al.*, 2009).

5.9 Association of leaving Facebook group by gender, age, and degree course and groups dynamics

Both female and male students were less likely to leave a Facebook group. However, this was not the same case for the age groups. Students who are aged 22 years and above were most likely to leave a Facebook group. Students taking courses

in education and natural sciences were less likely to leave a Facebook group. In contrast, those undertaking engineering and physical sciences had a higher tendency of leaving a Facebook group. Other researchers concur with these findings by explaining that there is a rising social media engagement by adolescents which could lead to long-term effects on the teenager's well-being (Kelly & Sacker, 2018). This agrees with Seidman's (2013) view that university students rank a sense of belonging so highly and is as important as their stay in campus and those who do not belong may feel lonely, neglected, anxious, and depressed and as such their mental health can be affected. Social relationship is one of the core interests of campus students on Facebook as indicated by the respondents when asked what they do on Facebook.

Social networking groups allow users to engage in computer mediated communication with a large network of friends and family (Emara, 2017). Booker, Kelly and Sacker (2018) support this notion in a study they conducted to determine online presence of teens. They noted that the use of social media sites increases with age while happiness decreases with age for both males and females. They explained that while socio-emotional difficulties decreased with age for males, they increased for females and that social media interaction increased with age during adolescence and the youth are not expected to reduce their use once they enter adulthood. Such interactions are predominantly exhibited by females who are looking for long-term relationships more than males as earlier discussed. However, Biernatowska *et al.* (2017) disagreed with the other authors by stating that males and females are involved in fan page groups in the same extent and both take part in discussions actively. These findings were contrary to previous studies (Wallace, 2001; Teo & Lim 2000) that argued that women's growing participation in public debates and societies could have an impact on a rebalancing of their contribution to online activities.

5.10 Major use of Facebook among undergraduate students

From the findings, the most dominant use of Facebook was entertainment, social networking, and news. Dating was notably a common use of Facebook among both genders. Facebook was initially established to offer social relations and interactions among university students. Frequent use of Facebook plays a critical role in enhancing daily interactions between people globally which can result in establishment and development of strong of relationship (Dumrongsiri, 2017)). The advent of mobile technology and social media sites has made dating more of

an online affair as opposed to physical. It also cuts across barriers and distance, making it a popular way of socialising among the teenagers.

This study also indicates that a higher percentage of females used Facebook for politics, compared to males. This study contradicts the findings of a study by Biernatowska *et al.* (2017) which noted that females more frequently than males are addicted to Facebook where they spend more time posting public messages, photographs, chat, follow agendas, and for education purposes. In contrast, the current study reveals that men are more likely to use social media and the Internet for dating purposes, making new friends, playing games, discussing and learning about events.

The findings from this study are in agreement with that of Emara (2017), who explained that Facebook status posts could be grouped into three main topics: social relationships and experiences, personal experiences, and expressing opinion and/or giving advice. The researcher further opined that a significantly larger number of females discuss social relationships and experiences as opposed to males. The implication of this outcome is that females maintain social relationships with an aim of intimacy with others while observing societal norms and are able to handle pressure from the same. Males, on the contrary, post about social experiences and may include things like obituaries, expressing gratitude to friends and criticising others' practices. Study by Corgi (2020) is in agreement with Emara's findings by explaining that people mostly use social media sites like Facebook and extend it by interacting face-to-face. Corgi observed that it is more dominant in females, thus contributing to the major differences in the genders when using social media sites like Facebook.

Previously, men had more access and used more types of technology than women as observed by Crocco *et al.* (2008). However, they noted that the shift to web-based computing does away with gender differences. Other researchers like Tu, Yen and Blocher (2011), however, were of a divergent opinion that both males and females actively participate in Computer-Mediated Communication (CMC) but both genders do not possess an equal level of online social presence.

5.11 Types of Cyberbullying

This study investigated the types of cyberbullying experienced by undergraduate students in Kenyan universities. The findings of the study in this regard are discussed here in the order of the highest overall occurrence of form of cyberbullying to the least occurrence form of cyberbullying as indicated on Table 16.

Shaming

Shaming is the act of subjecting someone to disgrace, disrepute or public humiliation, especially by public criticism. Cyberbullies often shame their victims by making derogatory comments about their appearance, body or behaviour. The findings of the study showed that shaming was the most prevalent type of cyberbullying experienced on Facebook by the students with nearly half the respondents, 45.6% (1,312), having experienced it. The findings also indicated that female students experienced shaming more than their male counterparts with 50.6% of the females having experienced shaming compared to 43.1% of males. Interviews with the deans of students also indicated that shaming was one of the prominent cases of cyberbullying reported to their offices. These findings are consistent with other research on cyberbullying which found that women or girls are shamed online for their looks or sexuality. This is referred to as body shaming and slut-shaming respectively (Poole, 2013; Webb, 2015). Van Royen *et al.* (2018) define slut-shaming as the act of attacking a woman or girl for perceived or real sexual activity and calling her a slut or other similar names. Slut-shaming is believed to be the result of the existing double standards that fuel gender stereotypes in which men are praised for their sexual proclivities while women are criticised for the same behaviour (Tanenbaum, 2015; Dobson, 2019; Havina, 2019). Given that this type of shaming is biased towards the female gender, it is not surprising the males do not experience shaming to the same degree as females.

Body shaming, on the other hand, is shaming based on physical appearance. This may take the form of making derogatory comments or insults about an individual's weight, complexion, height or dress sense (Schlüter *et al.*, 2021). Unlike slut-shaming, body shaming is experienced by both genders although there is admittedly less data available on body shaming experiences among men (Dimri & Mittal, 2018). From the FGDs conducted in this study, it emerged that some of the male respondents were body-shamed for not being "manly" enough or for having what are believed to be feminine features. Saxena *et al.* (2020) concur that men are shamed for not appearing masculine enough. This is linked to what is termed as the *Adonis Complex* that emphasises an unattainable muscular and fit physique as the ideal body type for men (Pope *et al.*, 2000). Overall, although men face their share of shaming, women or girls face the brunt of body shaming with most women being shamed for being fat or overweight, fashion sense or perceived lack thereof or having a dark complexion (Berne *et al.*, 2014; Orr, 2016; Stacey, 2017; Schlüter *et al.*, 2021). This was reflected in the group discussions where a female participant shared

experiences of being shamed because of her complexion. Another was shamed for a physical disability that made her legs to be of unequal length.

Shaming is prevalent on Facebook with users going as far as creating private groups with the express reason of shaming others. An example of such groups includes 'just stop being fat', and '530 fatties' which were created to shame overweight people. These groups were eventually taken down by Facebook but only after they had been brought to the public attention and featured as news stories in the media (Flam, 2014; Moss, 2014). In addition to fat shaming, there are Facebook pages that have been created to slut-shame women. An example is the 'Maga walk of shame' that shames mostly tourist women after a night out in Magaluf in Spain (O'Malley, 2018). Tyler (2021) acknowledges that there have been many pages on Facebook that slut-shame women which despite being flagged and reported were deemed as not having violated the policies of the platform and only shut down after petitions were started to stop them. Shaming, whether body shaming or slut shaming, is detrimental to the mental health of the victims and can lead to body dysmorphia, anxiety, depression and, even in extreme cases, suicide (Gordon, 2021; Naicker & Singh, 2021).

Impersonation

Impersonation as a form of cyberbullying usually involves the cyberbully masquerading as the victim and posting or sharing inflammatory or insulting content in the name of the victim (Willard, 2007). The findings from this study showed that 44.6% of the students had experienced impersonation on Facebook with 46.6% of males being impersonated as compared to 40.7% of the female students. From the FGDs, it emerged that most cases of impersonation occurred when cyberbullies gained access or hacked into their victims' social media accounts. Some participants in FGDs also admitted to impersonating others online by gaining access to their Facebook accounts because the victims forgot to log out of their accounts on shared devices and so they were able to access their information and post on their profiles. Another form of impersonation occurs when the bully uses the victims' images or names, sets up fake accounts and masquerades as the victim (Luik & Naruskov, 2018). Hinduja and Patchin (2009) classify impersonation as a fairly serious form of cyberbullying because once a bully impersonates a victim, they can ruin the victim's relationship with others, thereby damaging their reputation or getting them in trouble with the law (Hollá, 2014). This can be evidenced by the findings of Palladino *et al.* (2015) whose study established a significant correlation between impersonation and spreading of

rumours. Rumours can be used to destroy victims' reputation and their relationship with others. Additionally, impersonators may use the victims account to post racist or sexual or inappropriate comments. This can have an adverse effect on the victim's social standing and may even cost them their job if they are unable to prove the impersonation. Consequently, victims experience anxiety, anger, depression and may, in extreme cases, commit suicide (Johansen, 2021). Although there are numerous studies that indicate impersonation is a prevalent type of cyberbullying, there is little distinction in terms of the gender of the victims (Naruskov *et al.*, 2012; Peebles, 2014; Langos, 2015; Pieschl *et al.*, 2015).

Facebook admitted to having 116 million active fake accounts on its platform in the last quarter of 2018. It also claimed to have taken down 90 million fake accounts during the same period and deleted 1.7 billion fake accounts in 2018 (Nicas, 2019). The number of deleted fake Facebook accounts rose to 5.4 billion in 2019 (Fung & Garcia, 2019). On its transparency page, the platform states that it deleted 4.8 billion fake accounts in 2021 with 1.8 billon accounts being deleted during the months of July, August and September alone (Meta, 2021a). It is clear from this that impersonation is rampant on the platform. Armstrong and Richter (2020) estimate that 16% of Facebook accounts are fake or duplicates of existing accounts. It can be concluded from the foregoing that impersonation is a challenge on the platform and the measures taken to reduce it have not been effective.

Blackmail

Also referred to as extortion, blackmail is where a cyberbully threatens to release potentially embarrassing information about the victim unless a demand is met (Kanwal & Jami, 2019). The findings of the current study showed that 39.4% of the respondents experienced blackmail on Facebook. Both male (39.6%) and female (38.9%) respondents experienced blackmail nearly to a similar extent. Similarities can be drawn with studies by Kopecký (2016, 2017) which showed that blackmail was a type of cyberbullying that affected 8-6% of children in the Czech Republic.

A variation of blackmail as a form of cyberbullying is sextortion. This is where a bully threatens to expose or share sexual images or videos of the victim unless certain demands are met. These demands may include demands for money, more explicit images or other favours (Wolak *et al.*, 2018; Patchin, & Hinduja, 2020). From the study, sextortion was indicated as a form of cyberbullying by 4% of the respondents. Studies have shown that sextortion begins as a seemingly innocent request for personal pictures that quickly escalates into demands for more.

Moreover, intimate photos of a victim can be taken without their knowledge or consent and threats are made to share them (Angrove, 2015; Hong *et al.*, 2020). Khanna (2021) reports a case of 45 Facebook users who were being blackmailed by an extortionist who sent friend requests to victims and once they were accepted used the victims' profile photos and other images to create fake obscene videos. Wolak and Finkelhor (2016) conducted a survey on sextortion of 1,631 persons aged between 18 and 25 years and found that 90% of the respondents experienced sextortion through Facebook. They further found out that more females (83%) than males (17%) were affected. In 45% of the cases, the extortionists carried out the threats to share explicit images of the victims. 24% of the victims were severely affected emotionally and sought medical help while 12% of those targeted had to move to get away from the shame and embarrassment of having their sexual images shared with their friends, family, colleagues, and the public. Similar experiences were narrated in the FGDs of the study where a student who was a Christian Union leader had her nudes shared among the university community and had to transfer to another university to escape the stigmatisation and embarrassment.

The seemingly low occurrence of sextortion can be attributed to the fact that most victims of sextortion do not report the crime because of shame and guilt. Often, they will report it when they are no longer able to pay the extortionist or if the extortionist goes ahead and releases the explicit materials regardless of payment by the victim. Wolak and Finkelhor (2016) held similar views on the low rate of reporting of sextortion. They stated that only 20% of the victims reported sextortion and they did this only after the images had been posted online. According to Hopkins and Solon (2017), sextortion on Facebook is widespread. Facebook had to assess 54,000 potential sextortion or revenge porn cases monthly in 2017 and shut down more than 14,000 accounts per month because of the vice. Sextortion on the platform is possible because of the anonymity one can attain by creating pseudo accounts and, as indicated earlier, the fact that Facebook is plagued with fake or duplicate accounts.

Exposure and outing

Exposure as a form of cyberbullying occurs when a bully exposes information about a victim without their consent or knowledge. This may take the form of sharing the address or contacts of the victim on a public platform or other sensitive information such as their health information. Outing is similar to exposure and only differs in that the information being shared is about the sexual orientation of the victim.

It is usually targeted at persons identified as lesbian, gay, bisexual, transgender or having queer (LGBTQ) sexual orientation. The findings of this study showed that 37.2% of the respondents experienced exposure of their information online while only 15.9% have experienced outing. Another student narrated having her phone number shared online without her consent; she consequently had to field calls from strangers. In the FGDs, experiences were narrated where the HIV status of a victim was exposed online without his knowledge or consent. There is a dearth of data to support this finding from other research as the majority of studies on cyberbullying did not include exposure as a form of cyberbullying but rather discussed the exposure of victims and bystanders to cyberbullying online (Katz *et al.*, 2014; Pabian *et al.*, 2016; Kashy-Rosenbaum, & Aizenkot, 2020).

Facebook has been accused of inadvertently outing users on its platform by sending targeted advertisements for LGBTQ activities. Stokel-Walker (2019) stated that Facebook, through its algorithms, collects private data from users for advertisers. The data collected extends beyond the platform itself and may include cookies from other websites visited by the user. This information is used for targeted advertisement. Consequently, persons determined to be gay by the algorithm are targeted with advertisements about gay events and other related material whether or not they have made their sexual orientation public on the platform. Halliday (2013) reported that researchers after studying 58,000 Facebook users in America were able to infer to an accuracy of 88% if a Facebook user was homosexual by using only public 'likes' data on their profile pages, even if the individual did not explicitly expose his sexual orientation on the platform. This inadvertent outing is especially dangerous in parts of the world where homosexuality is frowned upon or considered illegal as this may lead to them being prosecuted or harmed (Halliday, 2013; Stokel-Walker, 2019).

Cyberstalking

Cyberstalking refers to the use of technology to repeatedly harass or pester an individual with content that is often inappropriate or disturbing and leaves the victim feeling distressed and anxious (Hinduja & Hopper, 2019). It is characterised by persistent communication even after the victim has explicitly refused or rejected past communication from the bully. The findings from the respondents showed that 36.6% of the students had experienced cyberstalking. Experiences of cyberstalking were also narrated during the FGDs with participants narrating experiences where they received persistent unsolicited communication despite having blocked the

offenders. The occurrence was higher in females (43%) than males (33.3%). This could likely be because women are often perceived as more vulnerable than men, especially in instances of physical stalking. Wood and Stichman (2018) in their study on stalking of campus students in a university in Midwest America were able to show a positive correlation between perceived vulnerability and stalking. This correlation possibly carries on to online stalking as well.

Gordon (2021) concurs that cyberstalking is a main form of cyberbullying and states that 40% of Americans have experienced cyberstalking. According to Hango (2016), 17% of the population of young people in Canada have experienced cyberstalking. Sheridan and Grant (2007) held similar views that females are more likely to be cyberstalked. On the contrary, Paullet *et al.* (2009) as well as Strawhun *et al.* (2013) found that males were more likely to be victims of cyberstalking than women. According to a report in *The Mail Online* (2011), 33% of victims cyberstalked are men. It was further stated that Facebook made it easier for women to follow former lovers on the platform and they can use the platform to leave unwanted messages to their ex-partners with ease that would have been difficult to do if they were to stalk their victims in real life. Sheridan and Grant (2007) further clarified that while women are more likely to be stalked in real life, men are more likely to be stalked online. They also attributed this to the convenience of the Internet and technologies that make remote monitoring possible. Reyns (2019) found that there was no discernible difference in the rates of cyberstalking between men of women.

Alkawaz *et al.* (2020) conducted a study on Facebook use and e-stalking and found out that 83% of their respondents posted identifying information on their Facebook accounts which included their real names; 75% shared their dates of birth; 69% uploaded their real profile pictures; and 67% shared the names of the universities they were currently enrolled in. Additionally, 64% had used the Facebook location tagging feature and 20% of their respondents hand their privacy settings set to public. The vast amount of personal information uploaded by users on the Facebook platform makes it easy for stalkers to gather information about their victims which they can use to stalk them offline as well. Additionally, Daspe *et al.* (2018) in their study of 1508 Facebook users found that Facebook jealousy was a significant mediating factor between Facebook use and intimate partner violence. They explained that Facebook jealousy is the envy that users feel when they realise that other people's lives on Facebook are more interesting or joyful than theirs. In the case of intimate partner violence, this envy is often exhibited when

individuals see that their ex-partners have moved on and are having a seemingly good life without them. Leahy (2017), in a law review on the difference between private and social media, gave numerous examples of cyberstalking on Facebook and concluded that Facebook was a major avenue for stalkers, especially because it does not have privacy settings for public accounts. Thus, stalkers can search and keep track of victims through their public information even if all other privacy settings are applied. The effects of cyberbullying on victims can be extensive. Most victims will exhibit depression and anxiety and will have to make changes to their work and social life which may have economic implications such as quitting a job and moving to get away from the stalker (Worsley *et al.*, 2017).

Trolling and flaming

Tolling occurs when an individual makes deliberate attempts to provoke reactions from others, often by sharing inflammatory comments. Flaming, on the other hand, is similar to trolling and only differs in that it involves posting insults, profanity and abuse as responses in online discussions (Golf-Papez & Veer, 2017). The quantitative data of this study showed that 31.8% of the respondents have experienced trolling on Facebook. It was also evident that the male respondents experienced more (33.1%) trolling than female respondents (29.2%). Only 15.8% of the respondents had experienced flaming. Hong and Cheng (2018) in their study on the correlations between online trolling behaviour among university students in Taiwan and personality traits found that online trolling was more common in students who frequently post on Facebook than in those who do not. Sanfilippo *et al.* (2017) studied seven trolling cases on different online platforms and noted that trolls on Facebook did not hide behind anonymity to troll others but were comfortable enough to do so with their known identity. Lewis (2021) was of the opinion that Facebook algorithms deliver the highest returns when content excites extreme emotions such as anger which often leads to more engagement on a page. The algorithms, therefore, reward rather than punish trolling on the platform. Chant (2021) concurs that the Facebook's own algorithms were pushing trolling content to users.

March and Marrington (2019) conducted a qualitative study on Internet trolling and concluded that trolling is, indeed, a bullying behaviour. Trolls use any environment they can make public comments to create controversy or deliberately elicit bickering. There have been correlations made between trolling and dark humour with most trolling content having a humorous slant, for example in the case of memes (Dynel, 2016; Navarro-Carrillo *et al.*, 2021). This ties in with the findings in the FGDs that

indicated that one of the main reasons for cyberbullying was for fun. Golf-Papez and Veer (2017) admitted that despite the prevalence of trolling as a form of cyberbullying, there has been few studies done on it. Aside from the findings of this study, there were no distinctions made between the genders affected by or engaged in trolling.

Catfishing

This occurs when an individual misrepresents themselves in their online dating profiles. The catfishes create fake accounts on Facebook and use them to approach their victims. Pseudo accounts enable individuals to lie about their gender, age and appearance. This latter comes to light when the victim meets them in real life (Lauckner *et al.*, 2019). The findings of this study showed that only 23.4% of the respondents had been subjected to catfishing on Facebook. There was no significant difference between the experience of males (22.8%) and females (22.5%). The study also found that most (93%) respondents used social media for dating (see Table 16.) This finding lends credibility to the occurrence of catfishing because it happens in the context of online romantic relationships. An earlier study by Toma and Hancock (2010) on the prevalence of catfishing found that 80% of the respondents who used online dating sites put content on their profiles that was contrary to their observable characteristics. Catfishing and sextortion are linked with extortionist creating fake personas and fake accounts which they use to entice victims once the victims take the bait they are persuade or pressured into sharing intimate information with the catfish and latter blackmailed.

Revenge porn

This involves the sharing of explicit images of former lovers online without their consent or knowledge as a way of getting back at them for a failed relationship (Tungate, 2014). The quantitative findings of the study showed that only 20.6% of the respondents in the study had experienced revenge pornography on Facebook. The rate of occurrence was equal between both genders at 20.6%. Interview with deans of students also revealed that cases of revenge pornography were among the cyberbullying cases reported to their offices. This could be attributed to the grave consequences of revenge pornography on a victim's reputation and their mental health. Therefore, they are driven to report its occurrence to the authorities. Additionally, unlike sextortion where the demands are made prior to sharing images online, with revenge pornography the aim is to hurt the ex-partner and not to extort them (Bates, 2017). Branch, Hilinski-Rosick, Johnson and Solano

(2017) conducted a study among college students in the United States and found that 10% of their respondents had experienced revenge pornography. Contrary to the findings of the current study, they also found that the victims of revenge pornography were predominantly female with males being the main perpetrators.

Revenge pornography is also linked with sexting which is the sending of sexual messages as well as nude photos or videos to intimate partners. In cases of revenge pornography, the bully shares these sexts online to shame or degrade their former partner. Englander (2015) in a study of sex-texting and revenge pornography among 1,320 adolescents in Massachusetts noted that 27% of the teens admitted to sexting. The behaviour was equally prevalent in both genders (27% male; 27.5% female). Englander and McCoy (2017) in a later study on the same population established that more than 50% of the "sexters" in 2015 reported that their images had been shared without their knowledge or consent. While this study did not investigate the occurrence of sexting among students, cases of revenge pornography narrated during the FGDs demonstrated the linkage as the explicit images that were latter shared by the bullies were initially voluntarily shared with them by the victims via sexting.

Exclusion

Exclusion as a form of cyberbullying occurs when individuals are ignored in online forums or groups. This may include barring the victims from joining a group or removing them from a group and thus isolating them from the online community (Hang & Dahlan, 2019). The findings of this study showed that only 19.4% of the respondents experienced exclusion on Facebook. Exclusion was higher among males (20.2%) than females (17.8%). Related findings showed that 31.9% of the respondents were unable to join a Facebook group while 11.6% had been removed from a Facebook group. The main reason for being removed from Facebook groups was a fallout with the administrators of the group or for holding differing ideologies (See Table 13). Facebook group administrators have the powers to admit users into a group or block them from the group. They are also able to moderate content and delete comments made on the group page. Some administrators abuse these powers and are dictatorial in the group, banning or excluding those who do not agree with them (Raquel, 2018). Hitherto this study, there has been little literature on exclusion as a form of cyberbullying. No distinction has been made between exclusion and the other forms of cyberbullying in the existing literature (Hinduja & Patchin, 2009; Hollá, 2014; Naruskov *et al.*, 2012).

Warning wars

Warning wars are a tactic used by online bullies who abuse the in-built security features of a social network platform to make false reports on a victim resulting in their account being closed or deactivated (Mueller, 2012). The findings of the study showed that only 16.8% of the respondents have been involved with warning wars on Facebook. There was a disparity between the frequency of occurrence of warning wars among male respondents (18.9%) and the female respondents (12.6%). Thus, the male students were more likely to face warning wars than their female counterparts. Warning wars are a particularly serious form of cyberbullying because they turn the social media platform service providers into unwitting accomplices to the cyberbullying (Gordon, 2021). To prevent this, Facebook moderators must go through each report on a flagged account before deciding to act on the content flagged. This may take time and action may be taken on the account between 24 hours or three days (Dwebb, 2021).

Vigilantism

Vigilantism is a form of cyberbullying where individuals perceived to have committed a social *faux pas* or crime are publicly harassed or derided and condemned. The study showed that only 13.4% of the respondents in the study had experienced vigilantism online. There is a dearth of literature on vigilantism as a form of cyberbullying. However, Dunsby and Howes (2019) conducted a study which showed that 26% of their respondents had liked or shared posts that name and shame individuals. Another study by Chia (2019) indicated that the media plays a role in encouraging online vigilantism in the way they frame news stories about individuals' wrongdoing. Vigilantism on Facebook is widespread with accounts created to name and shame what is believed to be wrong behaviour or unpopular sentiments. Examples of these accounts include "that's it, I am wedding shaming", and "that's it, I am nail shaming". These are groups created for users to call out what they feel is inappropriate or tacky behaviours in weddings they have attended, or in the nail shaming group, vent about poorly done manicures and difficult clients (Ellin, 2020).

5.12 Prevalence of Cyberbullying among Undergraduate University Students in Kenya

Statistics on the prevalence, nature, or consequences of cyberbullying in Kenyan universities were previously unknown. However, from this research, the respondents indicated that cyberbullying frequently occurred on social media and is becoming a

global pandemic. From the questionnaires and FGDs conducted with the students, the majority of the students indicated that cyberbullying occurs most of the time with the figure given at 80%. All the 24 deans of students in an interview concurred that cyberbullying indeed occurs among the students and that some of the deans had even been cyberbullied by the students. The majority of the deans of students were of the opinion that cyberbullying was increasing and getting worse as indicated in Figure 11 on the previous section of this report. The current study found that cyberbullying was becoming rife and a great concern among undergraduate Kenyan students. This study thus supports another study done by Olweus (2012) who termed cyberbullying as a "global pandemic". However, Olweus argued that cyberbullying, as much as it occurs, is just but an overrated phenomenon. Another study by Molluzzo and Lawler (2014) on the perceptions of students and faculty of Pace University in the United States agreed with Olweus that cyberbullying is not such a serious issue.

This acute sense of cyberbullying could be attributed to several factors. First, the respondents indicated that they were spending more time online on a daily basis. Thus, this could lead to their chances of being bullied. The increased access to mobile devices which the students use to access Internet and social media sites is also a factor because it enhances their presence online. This study reinforces the findings of a report by CAK (2019) indicating that many youths, including university students in Kenya today, own smart phones and mobile gadgets and have a great presence online as explained by Internet consumption and consequently access to social media. CAK (2019) further claims that the high Internet usage is as a result of affordable mobile devices and offers of free social media access by mobile service providers. The claims by CAK could be true, especially considering that some universities in Kenya today provide free Wi-Fi to students which they can be using to access Internet. Kemp (2021) agrees with CAK that Kenya has a high mobile penetration which they use on the Internet. The high Internet usage will automatically lead to many connections online, especially on popular social media like Facebook, and the more connections the students have the higher the incidents of bullying that will be reported (Masin & Foubert, 2014).

Students mainly use social media platform for social relationships like dating. These social relationships are mostly conducted on Facebook being the most dominant social media sites where the youth have a presence (Owino *et al.*, 2016; Ndavula & Mberia, 2012; Owiny *et al.*, 2014; Kimemia & Mugambi, 2016; Kamau, 2017). In cases of a fallout in the relationships, one of the couples can seek revenge online

resulting in the most prevalent types of cyberbullying as indicated by the students: shaming, impersonation, blackmail, exposure, cyberstalking and revenge porn. These types of cyberbullying are strong indicators of what a jilted lover would do. Correa, Hinsley and De Zúñiga (2010) opined those males and females interact differently on social media and thus likely to encounter different forms of bullying. They further explain that whereas male users will socialise to get information their female counterparts will be more focused in relationships building and thus will exhibit stronger relationships with less incidences of bullying compared to males.

The findings in this study also shows the severity of the occurrence of cyberbullying and that it knows no boundaries regarding the victims. This can be attributed to the number of friend connections that males have compared to females on social media, especially Facebook. More males who apparently had more friends in this study are reportedly being cyberbullied more compared to females. This finding supports that of a study conducted by Statista (2020) that indicated that more males than females experience online harassment. However, Faucher, Jackson and Cassidy (2014) argued that women are more likely to experience cyberbullying and thus is in conflict of opinion with the findings of Statista (2020). The fewer incidents of cyberbullying among females compared to males may also be attributed to the presence of more males than females online as found in this study. However, Wang *et al.* (2009) argued that middle school female students were more likely to be bullied than their male schoolmates. The study by Wang *et al.*, however, focussed on middle school which is equivalent to High School level in Kenya. If this is to be compared to the status in Kenya it is arguable that the scenario may change when these students join university and as such may not be a very good reflection of which of the genders is more prone to cyberbullying as opined by Hinduja and Patchin (2010) that there was no significant difference in cyberbullying among the genders. Plan International (2020) also share a view that females experienced online harassment more and that cyberbullying was driving them off social media networks. If this is the case and the trend continued, then that would explain the presence of fewer females compared to males on social media networks as found out by the researchers in this study.

The incidences of cyberbullying by gender could also be as a result of the engagements each gender had on Facebook. Most of the respondents indicated that they use Facebook for dating, business, academics and social networking in that order. A higher percentage of females were using it for the top four mentioned

functions than males yet more males were being bullied than the females. This can be attributed to how males conduct themselves on online relationships which results in bullying incidents. Chances are that ladies conduct themselves more maturely online as opposed to the males as attested by (Chickering & Reisser, 1993; Foubert *et al.*, 2005) who explained that females by nature have mature social interactions than males and this maturity is exhibited from an early stage in life and become more tolerant as they enter into adulthood in their college life. Seidman and Miller (2013) are also in support by indicating that females are more conscious of what they publish on social media and thus may review the outcome of their posts and consequently, adjust the content before posting as compared to men. Nadkarni and Hofmann (2012), however, disagreed with Chickering and Reisser (1993) and Foubert *et al.* (2005) explaining that interactions among genders on social media like Facebook is not based on gender but on individual personalities, self-esteem, social demographics and cultural upbringing. Therefore, arguing that either males or females are prone more to cyberbullying does not hold true.

The respondents also indicated that they know of friends or family members who had experienced cyberbullying thus compounding the fact that cyberbullying goes beyond the universities and Facebook. This indicates the high level of prevalence of cyberbullying on Facebook. It also affects different age groups as this study found out. However, the most affected age group as per the study are those aged between 22 – 32 years. In universities in Kenya, this will be dominantly students who are about to finish their courses or are pursuing courses that take longer than the usual 4-year bachelors courses such as medicine and engineering. This finding supports a study conducted by Statista (2021) in America showing that adults who engage in social networking had experienced cyberbullying and that the adults are aged between 18 and 29 years old. Lobe *et al.* (2021) in another study of cyberbullying in Europe found out that children aged 10-18 years have already encountered cyberbullying. In this regard if the findings in the study are to go by in Kenyan situation, then cyberbullying may originate earlier before the students join campus and that by the time, they are in universities they may just be extending the vice or they continue to suffer from it.

The frequency of experiencing cyberbullying incidences among the students on Facebook was found out to be "Sometimes" exhibited by a higher proportion of females compared to males followed by "Monthly" "Weekly" "Daily" and "Hourly" respectively. This finding corresponds with the number of times students log into

their Facebook accounts as was indicated by the respondents on the questionnaire. Daily use of Facebook was reported and as such, the more the students logged on their accounts the higher the rate of bullying they experienced. Regular use of social media platforms may most probably lead to formation of more relationships and as already discussed the more relationships formed online the more friends and more incidents of cyberbullying. Use of Facebook intensely may lead to lower quality of interpersonal relationships as opposed to less use. This is supportive of findings by Masin and Foubert (2014) and Johnson (2006) who opined that as the regular use of social media networks like Facebook rises, the higher the chance of people developing less mature and interpersonal relationships. As such there is a strong correlation between relationships in peers and Facebook intensity use and also the use of Internet and cognitive development.

5.13 Effects of Facebook Cyberbullying on the Social Life of Undergraduate Students in Kenya

Facebook has become an important communication space for undergraduate students in Kenya. Its advantages abound. Unfortunately, Facebook use has exposed the students to cyberbullying. Further, cyberbullying has been found to disrupt the social lives of the students. This section of the report will thus discuss effects of Facebook cyberbullying on the social lives of undergraduate students in Kenya.

Data from other cyberbullying research studies also indicates that Facebook cyberbullying disrupts the social lives of cyberbullying victims by leaving in its wake untold psychological, physiological, and psychosocial effects on their social lives. Akcil (2018), Hoff and Mitchell (2009) and Kaspersky (2021) aver that the psychological effects include anger, increased stress, mental health issues, loneliness, and low self-esteem. The psychosocial effects include social phobias and social anxieties, being withdrawn and being socially marginalised among their peers. Kaspersky (2021) further illustrates the specific ways Facebook cyberbullying disrupts the social lives of its victims. These include becoming quieter and more withdrawn; avoiding friends and social events; isolating oneself more than usual; losing interest in activities that one would normally enjoy; expressing dark thoughts; suicide ideation; and abusing drugs or alcohol.

In the current study, data from the FGDs indicated the effects of Facebook cyberbullying on the social lives of undergraduate students in Kenya, including suicide ideation, poor mental health, poor physical health, substance abuse, poor

academic performance, social alienation, economic loss, victim bullying, suicide ideation, depression, low self-esteem, anger, stress, social withdrawal, stigmatisation, mistrust, stress, fear, and loneliness. Moreover, as shown by Figure 14, the effects of cyberbullying on the social lives of students as observed by deans of students were suicide ideation, depression, low self-esteem, and anger.

Cyberbullying on Facebook by its nature leaves the victims discountenanced, especially if they experience shaming or are victims of revenge porn. The effects of revenge porn are permanent because it is difficult to delete Facebook digital footprints. Thus, the initial effect could be intense shame and loss of dignity as one's nudes are all over the Facebook which could give way to anger and even suicide ideation and alcohol abuse. The victim might also feel judged. In worst scenarios, their classmates could disinvite them from in-groups and social activities which might make the victims to feel isolated and ostracised.

The respondents aged above 22 years thought that victim bullying (29.1%) and substance abuse (27.4%) were very serious effects of cyberbullying. Perhaps more than the younger respondents, the older respondents have witnessed and are aware of the ravaging effects of substance abuse hence the concern. Moreover, a cross-sectional study among female college students in America that investigated cyberbullying, depression and problem alcohol use by Selkie *et al.* (2015) found that cyberbullying increases the odds of substance abuse, especially for the bullies.

The Committee on the Biological and Psychosocial Effects of Peer Victimisation (2016) also argued that the risk factors for bullying and bully victimisation, such as social difficulties, negative community influences and academic struggles, are also risk factors for substance abuse. Additionally, Kassel *et al.* (2013) opine that emotionally distressed individuals graduate from moderate to excessive substance use. This is because they use substance abuse as a coping mechanism.

In the current study, questionnaire responses from respondents aged above 22 years indicated that the effects of suicide ideation (41.9%) and poor physical health (42.8%) are not serious effect on the social lives of the victims of cyberbullying on social media sites like Facebook. Simultaneously, the male respondents indicated poor physical health (40.8%) as not having a serious effect on the social lives of the victims. Perhaps, because poor physical health symptoms like sleep disorders, gastrointestinal problems and eating disorders are not visible to the respondents, they thought of it as not serious. Say, in the case of a fat shamed victim, they could resort to unhealthy eating habits in to get the societally idealised weight size. In

fact, Marco and Tormo-Irun (2018) argued that cyber victimisation is associated with eating disorders and weight pre-occupation in adolescents. Further, research on sleep quality among teens by the University of Buffalo (2019) found that teens that had experienced cyberbullying were more likely to suffer from poor sleep and depression.

In the current study, the respondents aged 22 years and below perceived suicide ideation (41.5%) and economic loss (37.5%) from Facebook cyberbullying as a not serious effect on the social lives of victims. Relatedly, 34.1% of the female respondents also indicated economic loss as not serious effect. Perhaps, the respondents aged below 22 years and the female respondents view economic loss as not serious because economic loss is not visible. Yet Starshell Student (2019) argued that since Facebook cyberbullying leaves the victim with short to long term mental illnesses that will need therapists and counselling. It introduces financial loss to the victim and victim's family. The article further argued that if the victim and victim's family decide to sue, they will lose money to a lawyer.

The male respondents in the current study (44.4%) indicated that suicide ideation did not have a serious effect on victims of cyberbullying. Nevertheless, a study linking cyberbullying to self -harm, suicide and suicide ideation by John *et al.* (2018) argued that young people under 25 years who are victims of cyberbullying are more than twice as likely to self-harm and enact suicidal behaviour.

Generally, education students do not exhibit effects of cyberbullying. It is also evident that engineering students, applied sciences students, natural sciences students and physical sciences students have exhibited effects of cyberbullying. This research estimates that because the education students take courses in sociology and human psychology, they are already aware of healthy coping strategies and the skills of tackling strenuous changes in their social lives. Healthy coping mechanisms are life skills that a university student needs to navigate life. However, a study by Emilda (2015) averred that among the college students studying arts, science, medicos, engineering and education courses, the medical students demonstrated better life skills in total. Perhaps, the results of the current study that Education students do not exhibit effects of cyberbullying cannot be uniformly applied in all learning institutions in the world.

The qualitative data displayed on Table 18 revealed that overall, the respondents indicated victim bullying (29.8%) as a very serious effect on the victims of cyberbullying. The male respondents too thought that Facebook victim bullying

(27.7%) had very serious effects on the social lives of the cyberbullied. In victim bullying, the bullies and some bystanders continue to cyberbully the victim way after the event happens. This causes double stigma and emotional strain on the victim.

In a study among public primary school students aged 10–12 years old, Navarro *et al.* (2012) suggest that learners who fear negative evaluation, have interpersonal difficulties, and lack appropriate social skills have an increased likelihood to be victim bullied. Thus, among children, to prevent victim bullying EDC (2013) suggests that the victim learns assertiveness. Assertiveness is the middle ground between the undesirable extremes of aggression (where the feelings and rights of others are violated) and submission where one's own feelings and rights are violated. Perhaps the Kenyan undergraduate who is victim-bullied needs to become assertive.

5.14 Effects of Cyberbullying on the Academic Life of Undergraduate Students

Cyberbullying affects undergraduate students and the academic institutions they are affiliated to in myriad ways (Faryadi, 2011). Watson *et al.* (2010) asserted that even with the knowledge of cases around cyberbullying, not much has been done to assist the victims so as to be able to get back to their normalcy in terms of their academic performance. Indeed, Yousef *et al.* (2015) argue that cyberbullying has a significant relation to poor performance of undergraduate students. The findings of the current study indicated that cyberbullying has very serious effects on the academic life of the students. More than a quarter of the male (28%) and female (31.5%) students rated the effects of cyberbullying on their academic life as very serious. The interviewed deans of students also indicated that both the victims and the perpetrators of cyberbullying tend to perform poorly academically.

The findings of this study are supported by Faryadi (2011) who investigated cyberbullying and academic performance of university students in Malaysia and found that most (70.8%) of their respondents indicated that cyberbullying affects victims' academic performance negatively. Other researchers (Grinshteyn & Yang, 2017; Glew *et al.*, 2005) also conducted studies on the effects of cyberbullying on students and found that both the academic performance of the victims and bullies declined. In addition, a study by Strøm *et al.* (2013) revealed a negative effect of cyberbullying on the academic performance of students who experience it. A study by Hong *et al.* (2014) confirmed that victims of cyberbullying get low grades and sometimes may be at risk of discontinuation from academic programmes for not

attaining the requisite pass marks. Cyberbullying usually affects students' mental and physical health and in turn affects their academic performance (Shariff, 2008). Although cyberbullying can lead to poor performance by victims and perpetrators, the strongest effect happens to be on the victim (Kowalski & Limber, 2013). Nonetheless, scholars such as Woods and Wolke (2004) hold the view that cyberbullying does not affect the academic life of either victims or bullies.

According to Keppens *et al.* (2019), absenteeism in school is rampant among young adults in schools, be it traditional bullying or cyberbullying. They further explained that students with low attendance in school tend to have low academic efficacy, poor results and low self-esteem. A study by Whitman (2016) on the link between cyberbullying and absenteeism found that when cyberbullied, students in institutions of higher learning tended to miss classes compared to traditional bullying where the institutions can manage the physical confrontations that come with it. Cyberbullying comes with anonymity that makes it difficult for the victims and institutions to know who the perpetrators are and can lead to low class attendance (Whitman, 2016). Victims of cyberbullying not only have a higher rate of absenteeism but also have higher dropout rates (Carney & Merrell, 2001; Smith & Slonje, 2010). Ericson (2005) asserted that the students tend to feel humiliated and insecure and hence fail to attend classes. A study by Gump (2005) revealed a negative correlation between missing classes and final grades of students. The results of the study indicated that students who are cyberbullied tend to miss classes and, in the end, they get poor grades. Bauman, Toomey and Walker (2013) found that victims of cyberbullying experienced extreme absenteeism and withdrawal in class which impacted their academic performance. Reid (2013) asserted that absenteeism is usually related to social issues affecting the students. These issues can be substance abuse, stealing and bullying - both traditional and online. Even if cyberbullying happens in an online environment, it can tremendously affect the physical behaviour of the victims and be manifested through absenteeism.

The FGDs and interviews with the deans of students indicated that the undergraduate students miss classes as a consequence of cyberbullying. Patchin and Hinduja (2017) conducted a study which found that 10% of students in the United States of America fail to attend school consistently because they were bullied. The findings of that study indicated that most of the students who were bullied online were also bullied in school physically. They felt unsafe at school because they thought the perpetrators would do more harm to them. Victims of cyberbullying also were reported to miss school more since they feared for their safety and could

not focus on their studies (Kowalski *et al.*, 2014; Bissonette, 2009). Some students also avoid school to evade the continuity of cyberbullying and also because they feel insecure, humiliated and fearful to attend school (Ericson, 2001).

Kowalski *et al.* (2012) asserted that cyberbullying also leads to victims' poor mental health which also leads to reduced concentration in class. Difficulty in concentration is linked to a poor focus. During FGDs, the students explained that most of the time, victims of cyberbullying tend not to concentrate in class and withdraw in class participations (see Figure 15). Findings from interviews with the deans of students also confirmed the same (see Figure 16). The findings concur with research by Choucalas (2013) which found that the students who were cyberbullied had a difficult time concentrating in class. They were also not able to complete assignments given to them and did not attend classes regularly. In another study, Tjavanga and Jotia (2012) asserted that quite a number of students (62%) who had been bullied had a tendency of not paying attention in class and would not participate at all. The victims would always be thinking of the people who bullied them.

Currently, universities are experiencing high rates of dropout (Tuero *et al.*, 2018). Dropping out can be termed as changing courses, changing universities and/or deferring studies for some time (Aina, 2013; Heublein, 2014). Gury (2011) argued that dropping out of school indicates that a student is no longer part of the university for the time they have indicated, which may be up to two years or more. The findings of the current study found that students tend to drop out of school and defer studies because of being cyberbullied. Bernardo *et al.* (2020) and Dobarro *et al.* (2017) conducted studies which confirmed that cyberbullying can lead to the victims dropping out of university. This is because cyberbullying tends to have negative impacts on the lives of the victim. This can be violence, suicide, suicide-ideation and at some point, dropping out of school (Willard, 2007). The victims may feel that they do not want to meet the people who bullied them and in turn stop attending classes. Some may defer their studies for some time in order to get to terms with the situation and get a better grip of the way forward.

5.15 Strategies to Curb Cyber Bullying

The study also investigated the different strategies for coping with cyberbullying. There are different categories of strategies to deal with cyberbullying: those used by the victims, those employed the users of Facebook, and those provided by Facebook itself. The effectiveness of these strategies was also investigated.

Victims' response to cyberbullying

Cyberbullying victims responded to it using a variety of strategies. From the quantitative data collected, it was clear that the victims employed multiple strategies to deal with the vice, depending on the context and type of cyberbullying that they faced. Strategies discussed include passive resistance, enhancing online privacy, flagging, or reporting the bully, seeking legal redress, having anti-bullying campaigns, seeking counselling, seeking social support, disengagement and victim bullying.

Passive resistance

Passive resistance is where the victim ignores the bullying. The victim does not respond to any comments or take any further action to stop the bullying. The findings of the study showed that 24.9% of the respondents felt that passive resistance was a strategy they would apply. This was also corroborated in the FGDs where the participants mainly suggested ignoring bullies as a strategy to deal with the bullying (see Figure 17). Machackova *et al.* (2013) studied the effectiveness of copying strategies for cyberbullying among Czech children between the ages of 12-18. They found that that 72% of their respondents decided to ignore the cyberbullying. Sittichai and Smith (2018) in their study on coping strategies for cyberbullying among children aged 12-18 in Southern Thailand, also found that 40.9% of their respondents chose passive resistance as a strategy of coping with cyberbullying. Studies by Machackova *et al.* (2013) as well as Sittichai and Smith (2018) were conducted among adolescents. However, other studies among young university students (Orel *et al.*, 2017) showed that passive resistance was employed sparingly. Erişti and Akbulut (2019) compared reactions to cyberbullying between high school and university students in Turkey and found that the younger respondents (high school) used avoidance strategies such as passive resistance more than the older respondents (university students). They attributed this to the fact that university students are more mature and have more autonomy hence are able to take an active response to cyberbullying than teenagers. There was a slight variation with respect to age and use of passive resistance as a strategy to cope with cyberbullying. The findings of the study showed that 21.0% of respondents aged above 22 years felt that passive resistance was effective while 24.3% of those less than 22 years old felt that passive resistance was effective. Additionally, 28.1% of the older students felt that passive resistance was not effective at all while only 26.5% of the younger students felt it was not effective. This gives some credence to the view that maturity

imbues individuals with greater confidence and thus they are more likely to choose to act rather than ignore the bullying. Despite the use of passive resistance, most respondents (52.5%) of the respondents felt that passive resistance or ignoring the bullying was not effective or only effective to less extent. Participants in the FGDs felt that ignoring the bully would make them more determined to elicit a reaction and thus increase the bullying. It is clear, therefore, that despite the popular advice to "not feed the trolls", ignoring cyberbullies is generally not an effective strategy. 51.4% of the females felt that the strategy was not effective, or effective to a less extent, as compared to 53.1% of the males. This is likely because males are more aggressive and are more likely to fight back or try to counter-attack when bullied than females (Zsila *et al.*, 2019).

The use of passive resistance as a coping strategy despite its perceived ineffectiveness could be attributed to the idea that victims of cyberbullying sometimes believe that cyberbullying is a part of life and would not end regardless of action taken. They therefore decide to "let it go" and move on. They are aware that ignoring it does not stop the bullying behaviour, hence it is ineffective to that extent, but they choose not to engage their emotions trying to respond to the bullying (Agatston *et al.*, 2012).

Enhancing online privacy

Enhancing online privacy as a strategy to cope with cyberbullying includes actions that would deny the bully access to the victim. This may take the form of blocking the bully, unfriending them, hiding or changing vital private information (phone number, full names, address) from the public. The findings from this study showed that enhancing online privacy was the most preferred response to cyberbullying with 28% of the respondents suggesting it as a strategy. This sentiment was replicated in the FGDs with the participants touting blocking as a convenient and fast way to deal with cyberbullying. Numerous studies have identified blocking as a main coping strategy against cyberbullying (Machackova *et al.*, 2013; Orel *et al.*, 2017; Sittichai & Smith, 2018; Heiman, Olenik-Shemesh & Frank, 2019). Enhancing online privacy was seen as the most effective response to cyberbullying with 79.8% of the respondents stating that the strategy was effective either to a moderate or great extent.

Age was not a differentiating factor as more than 50% of the respondents both below and above 22 years rated the strategy as effective to a great extent. The effectiveness

of enhancing online privacy as a strategy for coping with cyberbullying could be attributed to reducing exposure of the victim to the bullies as well as denying the bullies content to fuel the bullying activity, such as photos, status updates, comments and much more. This is contrary to studies that show that despite being conscious of the need for online privacy and security younger Internet users take active steps to protect privacy far less often than older Internet users (Sheehan, 2002; Kaiser, 2016; Zeissig *et al.*, 2017). On the contrary, Kezer *et al.* (2016) in their study of online privacy on Facebook and age found that older users are less likely to share private information on Facebook and also less likely to take measures to enhance their privacy on the platform because they only share what they want known.

Young and Quan-Haase, (2013) examined privacy settings on Facebook and determined that in addition to default privacy settings that allowed users to determine who could view their content, Facebook also enables users to reject friendship requests from strangers, un-tag images and block content from users they do not wish to communicate to. By so doing, Facebook supports the strategy of enhancing online privacy.

Reporting bullies or flagging bullying content

Victims of cyberbullying can choose to react by seeking help from authority. This may take the form of reporting the bullies to the administration in the case of university students or to the social media platform administrators or platform managers. The findings of the current study showed that 24.5% of the respondents selected flagging content or reporting bullies as a strategy of coping with cyberbullying. Numerous studies have shown reporting or flagging content as a preferred strategy of dealing with cyberbullying (Sittichai & Smith, 2018; Mallmann, *et al.*, 2018; Sittichai & Smith, 2018). Studies among teenagers showed that there was a marked disparity between the genders when it comes to reporting bullies or flagging bullying content with females being most likely to do so than males (Li, 2006; Schneider, O'Donnell & Smith, 2015; Kasahara *et al.*, 2019). In the contrary, the current study showed that males (26.1%) were more likely to report or flag cyberbullying content compared to females (21.0%). The strategy was deemed to be largely effective by 67.2% of the respondents who stated that it was effective to a moderate or a great extent. There was a slight disparity considering age with 62.4% of the respondents aged above 22 years stating that the strategy was effective to a moderate or great extent compared to 55.8% of those aged below 22 years. Orel *et al.* (2017) posit that given the level

of maturity of older students was likely to influence their choice to work together with those in authority to resolve their problem as compared to younger students. Additionally, younger users of Internet fear reporting to their parents or persons in authority that they are being cyberbullied because they believe that older people do not understand technology and social media use, and also because they fear that their access to Internet will be restricted or curtailed by those in authority (Addington, 2013; Cassidy *et al.*, 2013; Wozencroft *et al.*, 2015; Gordon, 2021).

Seeking legal redress

Seeking legal redress is a strategy in which a victim of cyberbullying can take legal action against the bully. This may include suing the bully or reporting him/her to the law enforcers such as the police. The findings of this study showed that only 24% of the respondents felt that seeking legal redress was a strategy they would employ to cope with cyberbullying. Fegenbush and Olivier (2009) suggested taking legal action as a strategy for preventing and intervening with cyberbullying. However, they acknowledged the fact that most of the provisions of the laws against cyberbullying are countered by the freedom of expression laws, thereby making it difficult for the victims to get justice. Additionally, anonymity on the Internet makes it difficult for victims to know the real-life identities of their abusers to be able to serve them with legal notices (Auerbach, 2008; Turbert, 2008). Despite these challenges, 58.2% of the respondents felt that seeking legal redress is effective to a moderate or great extent. Compared to findings to other strategies in this study, this was relatively low.

Facebook allows law enforcement personnel to request information on users to help them prosecute persons who have violated the law. To do this they must provide proof of identification a valid warrant and a government issued email address.

Anti-bullying campaigns

Anti-bullying campaigns are awareness strategies that educate individuals about cyberbullying as well its forms, effects, intervention, and prevention strategies. Anti-bullying campaigns are not strategies that would be applied at an individual level but rather at institutional or community level. The findings of this study showed that 26.4% of the respondents felt that anti-bullying campaigns are a suitable strategy that can be used to curb cyberbullying. Cunningham et. al (2015) studying the effectiveness of anti-bullying campaigns in Canadian universities suggested that anti-bullying advertisements or information should make use of

famous personalities and should emphasise the effects of cyberbullying on victims They also suggested that the campaigns should encourage the victims to report cyberbullying incidents and seek help. Savage *et al.*, (2017) conducted a study on cyberbullying victimisation intervention messages on perceived susceptibility and perceived severity of cyberbullying among college students in a university in southwestern United States and found that the intervention messages were effective in reducing severity of cyberbullying. 65.8% of the respondents felt that anti-cyberbullying campaigns would be effective to a moderate or great extent in curbing cyberbullying. Several studies have shown the creation of awareness and the existence of an anti-cyberbullying programme to be effective in reducing the occurrence of cyberbullying. The content of the cyberbullying awareness campaign should also include information on how victims can cope with cyberbullying (Savage *et al.*, 2017; Gaffney *et al.*, 2019; Tanrikulu, 2018; Leung *et al.*, 2019; Vandebosch, 2019).

Seeking counselling services

Victims of cyberbullying can seek therapy to deal with the effects of cyberbullying which may include anger, depression and even suicide ideation. The findings of this study showed that 25.5% of the respondents would seek counselling or therapy to help them to cope with the effects of cyberbullying. Elbedour *et al.* (2020) asserted that school psychologists play a big role in advocating for and supporting victims of cyberbullying. Johnson *et al.* (2016) concurred that the most effective way to deal with cyberbullying, as a university, is to work collaboratively with counselling centres, counselling faculty and other counsellors in the community. On the overall, 54.1% of the respondents felt that counselling is effective to a moderate or great extent. More females (70.1%) felt that counselling was effective to a moderate or great extent than males (65.2%). This finding supports studies that show that females are more likely to seek therapy for mental health issues such as depression or loneliness than males (Warren, 1983; Wiseman *et al.*, 1995; Liddon *et al.*, 2018). Counselling helps victims to deal with the effects of cyberbullying on their mental health by helping them deal with anxiety, depression, anger, stress and suicide ideation caused by cyberbullying. This finding supports studies that show that counselling and therapy are effective ways of dealing with depression and stress among university students (Bahrainian *et al.*, 2014; Et all, 2015).

Social support

Seeking social support is whereby a victim of cyberbullying seeks support and advice from peers, colleagues, or friends to help them to cope. Anecdotally referred to as the "tell someone approach", it involves sharing experiences with peers who can empathise and encourage the victim. Unlike seeking therapy, social support involves peers who are not necessarily trained as counsellors. The findings of this study shows that 25% of the respondents indicated that social support is a strategy for dealing with cyberbullying. Social support received offline from family and friends is instrumental in reducing loneliness of the victim and helps to reduce anxiety and depression (Akturk, 2015; Cho & Yoo, 2017; Hellfeldt *et al.*, 2020). 50% of the respondents felt that social support was effective to a moderate or great extent. The option of seeking social support to deal with cyberbullying was higher among females (65.9%) than males (58.6%). This can be attributed to the behaviour of the females of being more relationship-driven than males and often having close or best friends from whom they receive social support at such times (Offen, 2012). Shaheen *et al.* (2019) held similar views with the findings of this study and stated that males need more social support from family than females because they are less likely to share their problems with others even with close friends and are more likely to try and solve them on their own. This is because males are more competitive than collaborative in nature and thus to admit that they have a problem is viewed as admitting weakness; this makes them reluctant to seek help form peers. Sherrod (2018) posits that while women seek confidantes in their relationships, men seek for partners in adventure in their friendships, consequently women receive more emotional and social support from their friends than men do.

Disengagement

Disengagement is a strategy of dealing with cyberbullying through avoidance. This may take the form of deactivating social media accounts or leaving social media groups or even going completely offline. 23.6% of the respondents of the study felt that disengagement is a viable strategy to combat cyberbullying. Interviews with the deans of students also showed that deactivating social media accounts was a viable strategy to curb cyberbullying. Abaido (2020) conducted a study on cyberbullying among university students in United Arabs emirates which found that 84.6% of university students refused to limit or deactivate their social media accounts because of cyberbullying. Most of them felt that deactivating their accounts would not solve the problem. Additionally, most social media networks would not

immediately delete an account but would take two weeks after the request before the account can be closed. In the meantime, the bullying will continue. Facebook allows users to deactivate their accounts which hides the account profile from the public and ensures the account is not searchable. However, messages earlier sent to the account remain visible on friends' accounts and if messenger is not deactivated the individual will still receive messages from the platform. To delete a Facebook account takes 30 days before all data related to the account is deleted (Meta, 2021b). It is therefore not surprising that 54.4% of the respondents felt that disengagement was not effective or moderately effective as a strategy to combat cyberbullying.

There was a disparity in in the use of disengagement by age of the respondents. It emerged that only 45.6% of the respondents under the age of 22 felt that disengagement was effective to a moderate or great extent compared to 51.0% of respondents above 22 years of age. This disparity could be attributed to the fact that younger respondents are more involved in social media as evidenced by these findings. Table 7 showed that respondents under the age of 22 had more Facebook friends than respondents above the age of 22. Additionally, females also had more friends than males on Facebook. This lends further credence to the finding that only 19.1% of the females felt that disengagement was effective to a great extent as compared to 23.5% of males. Given the high level of involvement in social media, it would be difficult for them to leave.

Victim bullying

Victim bullying occurs when a victim decides to fight back and bully their oppressors. Victim bullying can also take the form of physical aggression towards the bully if the bully is known to the victim and is accessible offline. Only 22.7% of the respondents indicated that they would fight back by bullying their oppressors. Data from the FGDs also support this finding as participants indicated that revenge was a major motivation for bullying and that fighting back would reduce or prevent future bullying (see Figure 17). König *et al.* (2010) held a similar view that a common reason for bullying was to revenge bullying. There was no significant difference between the females (18.3%) and males (20.5%) in terms of perception of effectiveness of victim bullying. This is contrary to other studies that showed that men are more likely than women to fight back or retaliate when bullied (Fegenbush & Olivier, 2009; Liddon *et al.*, 2018). Caroline and Michael (2017) conducted a study on victim bullying on Facebook and established that there was significant correlation between victim bullying and anonymity on Facebook, Facebook use and

the use of Facebook features to follow victims on the platform and comment on their posts. They concluded that these features, especially anonymity, encourages victim bullying on the platform.

What Facebook users can do to curb cyberbullying

This study investigated the strategies which Facebook users to curb cyberbullying. It was clear from FGDs and interviews with the deans of students (see Figure 18 and Figure 19) that users of Facebook were familiar with the features on Facebook that can help to curb cyberbullying. These include being able to flag and report offending content, unfriend users, leave groups, deactivate, or close Facebook accounts (see Table 12).

Flagging on Facebook allows one to alert Facebook about offensive or objectionable content on the platform. Anyone who comes across objectionable content on the platform can flag the content. When flagging content on the platform, one will have to state the reason for the action. For example, it may be because it contains nudity, hate speech or threats. The reports will be reviewed by Facebook moderators to confirm that the reports are justified then action is taken to delete the content or suspend the account. Users can also report fake accounts or accounts that are impersonating them as well as groups or pages that are in violation Facebook policies (Melendez, 2018). The process of reporting is relatively simple and anonymous. Thus, users do not have to fear retaliation for reporting abusive persons on the platform (Meta, 2021d). Despite this reporting, there have been complaints that Facebook takes too long to review the reports and even when it does, content that is objectionable is deemed as not violating the policies of the platform (Thronton, 2011).

Facebook also allows users to block communication from other users. Once blocked the individual will not be able send messages to or view the content of the person who has blocked them. This makes blocking a quick and convenient way to stop communication with a bully. This is, consequently, one of the most used features on Facebook for coping with cyberbullying (Dredge *et al.*, 2014). The effectiveness of blocking is, however, diminished by the existence of fake accounts as bullies can create a fake account and send friend requests to their victims using pseudo accounts. Facebook also allows users to unfriend others. However, this is less effective than blocking because it only removes the person from your friend list but they will still be able to access your public profile and see any posts made

on mutual friends' posts (Khillar, 2018). Facebook groups have administrators and moderators. Administrators are the persons who create the group. They are responsible for the privacy settings of the group; they also accept or decline member applications to join the group; and they evaluate content being shared on the group to ensure it does not violate Facebook's policy and set community guidelines. To help them with the tasks, they appoint moderators who can help to review content of the members and moderate the content shared on the group page. They have the power to block or remove group members who violate the community guidelines (Grover, 2021). Users also have the option of leaving groups if they do not like the content being shared in the groups. The challenges with Facebook moderators or administrators are that they can user their powers on the group to suppress or harass users by removing their comments or blocking them from groups without a legitimate reason (Saggio, 2016).

Facebook also gives users the option to delete their Facebook account temporarily or permanently. One can deactivate their account which is fast and easy to do and hides the account from the public as well as friends although one can still receive messages on Facebook messenger while the account is deactivated. If a user chooses to delete the account, the action will first deactivate the account and then delete all content related to it during a period of 30 days. The effectiveness of these strategies was largely perceived as low since most respondents in the FGDs felt that Facebook had not done enough to make its platform safe. Most studies on the responsibility of social media networks state that the companies can make a difference by creating appropriate bullying-deterring policies and effectively implementing them (Milosevic, 2016). Facebook has extensive community standards that articulate the position of the organisation on among other things violence and criminal behaviour, online safety, objectionable content, integrity and authenticity, intellectual property protections and protections for minors (Meta, 2021c). The implementation of these policies has, however, been the challenge for the platform. Abaido (2020) suggested that social media networks cannot be blamed for cyberbullying but rather users should utilise the platforms responsibly. Facebook users suggested that individuals should screen their friends list and refrain from sharing private information on public platforms as a way of taking individual responsibility for their own safety online and reducing the likelihood of them being bullied (see Figure 20). This view is echoed in numerous studies on prevention of cyberbullying (Machackova *et al.*, 2013; Erilti & Akbulut, 2019; Sittichai & Smith, 2018; Heiman, Olenik-Shemesh & Frank, 2019). On the contrary Fan, Yu and Bowler (2016) were of the opinion

that social media platform interfaces should be designed in an empathic manner to reduce the by-stander effect in social media platforms users who tend to ignore online bullying when it does not involve them directly. The nature of social media networks being virtual means that there is a level of disinhibition created among users, especially if they are able to hide their identity on the platform. Additionally, a bully is not able to directly see the effects of their bullying on the victims and may assume that the bullying is of no consequence. Empathic social media would address this by eliciting empathy from users as they post or view content. This includes having empathy nudges such as asking the user if they are sure they want to post content that may be hurtful may cause the user to pause and reconsider posting that content. Instagram uses empathic nudges to ask users to rethink their posts and have found it to be largely effective in reducing trolling on the platform (Bryant, 2019). For empathic designs to work, they need to be supported with artificial intelligence that will filter the content users intend to post or have posted and remind them to be kind to one another (DiFranzo *et al.*, 2018; Phillips, 2015).

Strategies used by university authorities to curb cyberbullying

The Internet has become a necessity for learning and teaching in universities. The use of the Internet and blended learning requires the students to spend more time online hence increase their use of social media (Abaido, 2020). Cheung (2021) suggested that universities need to be cautious with the online activities that their students participate with the introduction of online schooling due to COVID-19 pandemic. This is because there has been a surge of cases of cyberbullying. Gordon (2020) asserted that during the COVID-19 pandemic most students increased their engagement in social media platforms like Facebook, TikTok, and FaceTime which in the end increased the prevalence of cyberbullying. The highest online cyberbullying risks were shaming and exploitation. Gordon (2020) further indicated that there has been a seventy percent (70%) increase in cyberbullying of which 40% has been through gaming platforms while 30% through social media. In addition, a study by Patchin (2021) on cyberbullying during the pandemic found that many students (22.6) had been cyberbullied during the pandemic in 2020 compared to previous year (17.2%). Cheung (2021) also indicated that most of the activities that many students do not realise they are perpetrating cyberbullying by doing certain things online. For instance, they make "innocent" comments only to realise later that these actions or comments are tantamount to cyberbullying. The situation is further exacerbated by the rapid dissemination of posts on social media.

The findings of the current study obtained from the FGDs and interviews with the deans of students indicated that universities have strategies that they use to curb cyberbullying on Facebook. Some of the strategies were policies that govern their response to cases of cyberbullying; seminars and training on safety on the Internet; a student handbook that highlights issues of cyberbullying; and guidance and counselling services, among others. Cheung (2021) echoed these strategies and explained that universities can use the following mechanisms to curb cyberbullying on Facebook: (1) universities should have policies that provide guidelines on cyberbullying issues; (2) have campaigns that create awareness of cyberbullying; (3) conduct trainings to assist students on how to carry themselves in the online platform; (4) have the curriculum updated to cover issues of cyberbullying; and (5) educate on social media use.

Guidance and peer counselling

The students and their deans touted guidance and counselling as the best strategy to assist victims of cyberbullying on Facebook. Paolini (2018) argued that counsellors play an important role in curbing cyberbullying by working with the victims and their peers to control and rebuild confidence in the victim. They can also work with the bully to understand their motivations and help them to deal with the issues. They can also develop initiatives that can help both the victim and bully to learn (Sabella *et al.*, 2013). In addition, peer counsellors can also be used to sensitise the students on salient issues around cyberbullying on Facebook because victims tend to be more open to other students than to the counsellors. Carter (2013) suggested that involving peer leaders helps to facilitate free communication, enhance delivery of counselling services, and create an environment where the victims are able to feel safe.

The findings from the FGDs indicated that guidance and counselling was perceived as an effective strategy of dealing with cyberbullying on Facebook. Nonetheless, some respondents felt that some of the counselling offices were unapproachable to get help from because they were either having unfriendly staff or were located in places that the student did not feel safe to visit. Research by Agatston *et al.* (2007) indicated that students tend not to report or look for help in cases of cyberbullying because they felt the people who should assist them were not welcoming. Research done by Mishna (2008) found that peer counselling has positive results when dealing with bullying.

Creating awareness and seminars

Creating awareness was suggested as a strategy that university management are using and improve to curb cyberbullying. The students and their deans explained that the moment people are aware of the harm that cyberbullying has, they tend to be sympathetic. Educating students on cyberbullying is a critical strategy of dealing with cyberbullying. There is need to conduct more anti-bullying campaigns and seminars to increase awareness about the vice (Kraft & Wang, 2009). Clifford (2016) explained that being aware of a situation is a strong tool to assist in managing it. She suggested that there is need to talk about cyberbullying in university classrooms and allow the students to discuss the cases they know and how they can be managed best. Beside universities creating awareness, it is also the role of the government and society to work together with the universities to combat cyberbullying. There have been organisations that have been established to raise awareness on cyberbullying to students, academicians, parents and stakeholders in order to combat cyberbullying in the United States. Examples of such organisations are "End to Cyberbullying (ETCB)"; Cyberbullying Research Center; "StompOutBullying.org" and "StopBullying.gov" (Paullet & Chawdhry, 2012). All these organisations are outside the university system and are managed as non-governmental agencies (Campos, 2018). "End to Cyberbullying (ETCB)" is a non-profit organisation created to prevent or reduce cases of cyberbullying in the United States. It works through creating awareness about cyberbullying by sharing stories of the victims and how they were hurt and what has been done for them to return to normalcy (Campos, 2018). According to Patchin and Hinduja (2021), the founders of Cyberbullying Research Center, the organisation was created to provide information about the nature, degree, reasons and consequences of cyberbullying in the United States. "StopBullying.gov" is an organisation that works with different government agencies in the United States to assist create awareness as well as prevent and respond to cyberbullying (Health Resources and Services Administration [HRSA], 2021). Some of the departments it works with include Department of Education; Department of Justice; and Department of Health and Human Resources. StompOutBullying.org was founded by Ellis in 2005 to help in hosting events and providing information about cyberbullying (Ellis, 2005). They also offer support to the victims virtually.

Policies on cyberbullying

Most universities in Kenya have policies that they use to tackle issues of cyberbullying. Respondents from FGDs and Interviews indicated that some of

their institution use an open-door policy where a student can go to the dean's office and report any bullying and seek help. The universities also use student handbooks that contain rules and regulations that students should follow as well as the corresponding punishment in case one is found perpetrating cyberbullying. Clifford (2016) suggested that universities need to have firm policies concerning technology use as well as the consequences of breaking the rules. These should be well known by the students. With the policy there is control on behaviours online as everyone knows the repercussion of not following them. Research by Hinduja and Patchin (2014) on preventing and responding to cyberbullying in universities in the United States found that institutions that have implemented policies on cyberbullying make their students feel safer as they know that in case of any liability caused, there is a document to protect them. Hamburger *et al.* (2011) asserted that it is one thing to have the policy but entirely another to implement it effectively. They explained that universities often face myriad challenges while implementing such policies. They suggested that universities need to have comprehensive plans on how best to curb cyberbullying using appropriate deterrent policies.

Respondents from the FGDs and interviews indicated that their universities have policies indicating that if a person is found guilty of cyberbullying, they face disciplinary actions. The disciplinary action could either be suspension of studies or expulsion while others indicated that they would want the bully to pay the school fees of the victim. For example, in a case where a victim leaves a university due to cyberbullying on Facebook for some time, the bully should pay the fees when they get back. They further indicated that even though there would be fines to the bully, the victim will not fully feel contented hence it is not effective. Bauman (2015) argued that having a clear policy is an effective strategy though instilling punishment may only work for a limited time; it is likely not to give a long-lasting solution to the vice. The punished bully may get angry and retaliate more bearing in mind that social media thrives on anonymity.

Training on Internet safety and cybersecurity

The students and deans of students suggested that training on Internet safety can help both the students and educators to deal with cyberbullying both as a preventive measure and a coping mechanism. When students are educated on the safety measures to take online, they will be keen on what they post and share on their platforms. According to Ochoa (2011), safety measures like biometric login and updating privacy on social media are some key elements in managing cyberbullying

online. Bauman (2015) argued that digital literacy is an effective strategy to curb cyberbullying. Kim *et al.* (2017) confirmed the view that there is need to conduct Internet-based training on cyberbullying. Being aware of cybersecurity issues has a significant impact on the safety levels of social media users. McCrohan *et al.* (2010) explained that users that are able to protect their passwords, for instance, experience limited cases of cyberbullying. Training social media users on how to keep their accounts safe helps in minimising security threats that come in any online platform. In addition, a study by Onyema *et al.* (2021) on cybersecurity awareness found that there is need for education on how to behave online, especially in the new technological world. This is because of increasing use of the Internet and cyberbullying cases (Onyema *et al.*, 2021). In addition, those people who understand how to stay safe in the social interactions on Facebook are less likely to be cyberbullied (Kwan & Skoric, 2013). This is because they make sure their personal information is private and they do not share their credentials to anyone. The organisation Terranova Security in May 2021 indicated that cyberbullying in social media is continuously sprouting and hence the need for constant training to students and faculty members to help them acquire the skills to keep up with the changing technologies and forms of bullying (Terranova Security, 2021).

Strategies government and society can use to curb cyberbullying

The participants in the FGDs and key informant interviews were aware of some of the strategies that the Government of Kenya has put in place to curb cyberbullying. Most of them pointed to the legislations such as the Computer Misuse and Cybercrimes Act of 2018. The respondents also indicated that the government's strategies are not effective in dealing with cyberbullying on Facebook because the government only took action if the victim of bullying is a prominent person. The strategies are explained in detail hereunder.

Legislations

Section 27 of the Computer Misuse and Cybercrime Act of 2018 deals with cyber-harassment but it does not directly delve into issues around cyberbullying. This makes it vague in handling cyberbullying. Nzomo (2017) argued that cyberbullying in Kenya has been an issue that needs to be checked and dealt with. In addition, Nzomo (2017) argued that Kenya has not given much attention to the cyberbullying issue on Facebook and other social media platforms. Mostly, the law is followed when victims hurt themselves through suicide. Laibuta (2020) stated that the

Kenyan law does not directly stipulate how one should be dealt with if they are found perpetrating cyberbullying. With different types of cyberbullying, different laws can be used to support charges. For example, in case of revenge porn, one can sue using an argument of breach of privacy or defamation depending on the intensity of the damage done (Laibuta, 2020).

Article 31 of Kenya's Constitution (2010) indicates that each person has a right to privacy. In addition, Article 33(3) provides that though citizens have a right to freedom of expression, one should also respect the right of privacy and statuses of others. For instance, if one shared images person aged 18 and below, there is the Sexual Offences Act, Section 11(1) which indicates that any person who commits an indecent act with a minor are guilty. This means that they can face the law and if convicted can be jailed for ten or more years. In the case of blackmail, trolling, cyberstalking and vigilantism, Section 238(2) of the Penal Code can be used to sue for intimation with the intent to cause harm.

From the foregoing, it is evident that the Government of Kenya has provided various laws that can be used in case of cyberbullying. However, the only challenge is the fact that the laws are not specifically tailored for cyberbullying. Nonetheless, the Kenyan situation is not unique. In South Africa, they recently finalised the Cybercrime Act 19 of 2020 to deal with cases of cyberbullying but it is still yet to be actualised (LegalWise, 2021). Some of issues the Act criminalise are inciting messages in social media and disclosure if intimate images, messages of identifiable person without their consent. The Act will work closely with Child and Justice Act 75 of 2008 in cases of minor's abuse on social media. Nigeria has the Cybercrime Act of 2015, Criminal code Act and Penal Code that assist to deal with issues of cyber bullying (Adediran, 2020). Tanzania also came up with Section 23 of The Cybercrimes Act of 2015 that rule in case of cyberbullying (Zenda, 2019). Uganda also developed Computer Misuse Act of 2017 that govern in terms of cyberstalking and offensive communication in social media. In the United Kingdom, for instance, there are also no direct laws to deal with cyberbullying (Myers & Cowie, 2017). The vice is dealt with under the Protection from Harassment Act (1997), Malicious Communication Act (1988) and the Public Order Act (1986). Although schools in the United Kingdom have a legal duty to develop in-house policies to prevent any form of bullying, universities have no such requirements (Myers & Cowie, 2017). In United States there are no federal laws that govern cyberbullying though each state has their own laws that prohibit cyberbullying.

Moral self-view

The ability to differentiate right and wrong behaviour is termed as moral self-view or morality (Campaert, et. al., 2017). Through moral engagement, a person is committed to social relations that are considerate to others. The data from the study indicated that there is need for the society (families and churches) to work together to build generations that uphold moral values. Bullies of any form, be it traditional bullies or cyberbullies, lack moral sympathy and feelings (Gini, Pozzoli & Hauser, 2011). In addition, studies indicate such bullies are egocentrics who lack moral inspirations (Caravita *et al.*, 2009; Gini *et al.*, 2007).

Parents should make sure that they follow and monitor what their children do online. They should also be keen to check on any changes, like disengagement, in their children. In case they report any cyberbullying, the parents should make sure they talk with the kids and inform them to block the bully and disengage. In a study by Meter and Bauman (2018), young adults who presented characteristics of immorality were more likely to be bully. Pornari and Wood (2010) reported that there is an association between morality and cyberbullying. Spiritual leaders have the moral responsibility to train the youth on how God wants them to treat each other. They should also be taught on how to create a safe online environment for learning and communication (Taylor, 2011).

Research by Harrison (2015) on virtue and morality perspectives of cyberbullying found that students who follow the theory of virtue ethics always are determined to follow the ideals of character and value in Facebook as well as when offline. They always hold high discipline, compassion and humility. He argued that whereas it may be easier to bully online, due to the anonymity, the actual decision to bully or not depends on the person's moral principles. In addition, research by Sun *et al.* (2020) found that there is a significant positive correlation between students' immorality and cyberbullying. A common case of failure to use moral values that led to cyberbullying in social media and suicide involved Sara Drew and Megan Meier (Cohen-Almagor, 2020). Sara and Megan were friends but at some point, they had a fallout based on Megan talking ill of Sara. Sara's mother and her workmate created a male fake account on Myspace using the name 'Josh' and requested Megan to connect. Megan accepted the request and they both started an online relationship. One day, Josh told Megan that he does not want to be friends with her because of rumours that she was not a good friend (Pokin, 2007; McFadden & Fulginiti, 2008). Megan wanted to know why Josh had said that but the reply was more

hurting. This led to her to tell him that he was the kind of person a lady would commit suicide for (Steinhauer & Meier, 2008). She went ahead and committed suicide that day. Sara's mother and her workmate were to blame and ethically guilty for instigating the issues that led to Megan death. They were two adults who did not use their moral judgement to assist two teen girls to solve their differences rather than resort cyberbullying.

5.16 Technological Intervention to Curb Cyberbullying

Technology can be used to curb cyberbullying or deal with any form of harm in the digitally networked world (Van der Zwaan *et al.*, 2014). However, Van der Zwaan *et al.* (2014) further argued that it is not possible to measure the effectiveness of technology in curbing cyberbullying. This is because most of the technological advancements have not been fully developed to deal with cyberbullying. Nonetheless, they can be adopted to provide social cues of cyberbullying. Some of the technological interventions that respondents suggested were: use of machine learning (algorithms and artificial intelligence); filtering; data security; privacy and authentication.

Machine learning (algorithms and artificial intelligence)

According to Chester (2019), cyberbullying happens in an online platform hence the need to use technology to curb it. Machine learning is the way forward to assist prevent cyberbullying. It entails the use of algorithms and artificial intelligence to detect cases of cyberbullying like hate speech and block them from being visible to users and hence managing cyberbullying. Studies have been done on how machine learning can be used to detect cyberbullying (Reynolds *et al.*, 2011; Yin *et al.*, 2009). The researchers explored how machine learning is applied to detect hate speech and harassment on social media. Most of the researchers develop algorithms that detect content online and classify it based on set rules on the crawlers that determine if it is cyberbullying or not (Van Royen, 2016). Recent studies have added perspectives of use of social media information such activities they undertake online, posts, gender, age, friends as points of reference to develop algorithms that detect cyberbullying (Nahar *et al.*, 2014). In addition, there have been network-based systems that use the frequency of use of social media to capture the relations between bullies' and victims' conversations (Chatzakou *et al.*, 2017; Squicciarini *et al.*, 2015). Researchers such as Van *et al.* (2018) developed a linear Support Vector Machine algorithm (SVM) classifier model which detects cyberbullying indications

from both English and Dutch language (Chang *et al.*, 2011). The algorithm is also able to detect the victim, bully and onlookers in any case of cyberbullying.

Through machine learning we can recognise suicide-ideation which is based on emotion artificial intelligence (AI) (Gujral, 2019). Emotion AI entails checking human feelings using machines that are neural represented or based on face and voice recognition. Though AI anti-hate speech algorithms are being developed, they have a long way to go because of lack of differentiation when it comes to what constitutes hate speech. Though Facebook introduced "Deeptext" in 2016 as a tool that assists in managing online harm, there is still more that needs to be done because AI cannot work alone to assist curbing cyberbullying (Abdulkader & Zhang, 2018).

Machine learning algorithms are mostly integrated in the platforms like Facebook and Instagram to assist manage cyberbullying (Bayern, 2017). Bayern also argued that these technologies sometimes may fail to detect some of the cyberbullying incidents because some users may use slur names, nickname, sheng and local languages. In addition, a feature like "DeepText" can be easily switched off, hence not assisting in countering cyberbullying. Davidson (2017) concurred that the use of machine learning may not stop cyberbullying but may assist potential victims to feel a bit safer.

Filtering

This entails removing or blocking harmful or inappropriate content. Research done by Hunter (2000) on applications used to filter web content found that most applications are able to filter 75% inappropriate content on web. Filtering does not necessarily mean all the harmful content is managed though it does control incoming and outgoing content in a platform. Filtering sometimes can be difficult because the technology may not be aware of topical words that are used by social groups as a form of bullying. Researchers have advocated for the use of a trained algorithm that is able to filter words and content from even local dialects (Chester, 2019). According to Grieshop (2018), Facebook has a feature named "Facebook purity" (F.B. purity) that enables its users to filter content using Facebook automated image and content classification system. The challenge with the system is that it only works on computer systems and not on smartphones. In addition, users can filter content on Facebook by using filter extensions on browsers. An example of the extensions is "Social fixer" which can be installed on browsers to filter content on Facebook (Grieshop, 2018).

Digital monitoring apps

The other suggestion that the respondents from FGD gave was use of digital monitoring tools. The tools are able to monitor communications online and highlight cases of cyberbullying. Available research indicates that being able to monitor content does not mean there will not be cases of cyberbullying (Mesch, 2009). The software tools only manage content restrictions and blocking. They only work with the assumptions that the social media users will know they are being monitored and behave ethically online. The challenge with the monitoring software is privacy as what can be termed private information will still be collected. A study by Teague (2021) how to take control of one's privacy online using the Off-Facebook activity tool indicated that Facebook uses monitoring apps to track their users' behaviour. After knowing users' behaviour, they are able to personalise adverts targeted to each user. Teague (2021) also explained that the challenge with the monitoring apps on Facebook is that users mostly turn them off making it difficult to track any cases, including cyberbullying. In addition, Jones (2021) asserted that parents can install "FamiSafe" app to enable them to monitor their children's activities on Facebook and other social media platforms. The app has to be installed in both the parent's and children's devices to work. FamiSafe crawls Facebook content and also enables its users to add words to monitor and be notified whenever the same are used by their children or people addressing them.

Authentication

The FGD respondents suggested that there is need for verification of users of Facebook. They indicated that Facebook can set software tools like face recognition, biometrics and age restriction as ways of authenticating who their users are in case of any incident. Age restriction technologies that limit interactions between adolescents and grownups online are already developed. Age restriction usually takes information from private databases that already have data though it is usually difficult to determine the integrity of the datasets (Awadallah & Samsudin, 2021). The restrictions do not target any specific forms of cyberbullying; they only deal with limiting pseudo-accounts and reducing anonymity (Bertino & Sandhu, 2005). Gebel (2020) indicated that users of Facebook are able to set a two-step authentication system that can assist in reducing hacking and impersonation on Facebook. In addition, Facebook has age restriction in their setting which stipulates that all its users be at least 13 years old to be able to create a Facebook account (Facebook, 2019). The challenge with this restriction is that most users

are not honest about their age and there is no document required for verification as they only ask the users to indicate their birth date and year. Facebook also has "DeepFace" facial recognition system that assists them to identify users with digital images (Zuo *et al.*, 2019; Simonite, 2014). DeepFace notifies Facebook users when their images are posted on the platform and allows them to either accept or remove the photo immediately (Chowdhry, 2014). Recently, Facebook after rebranding to "Meta", indicated that they will remove DeepFace because of privacy issues involved in authenticating users (Hill & Mac, 2021).

5.17 Non-technological interventions to curb cyberbullying on Facebook

This research elicited discussions on non-technological interventions that Facebook can use to curb cyberbullying on its platform. There were lots of suggestions in this regard. These could be grouped into four main categories: awareness and sensitisation programmes, indigenisation and social proximity, government collaboration and Internet literacy.

Awareness and sensitisation programmes

Cyberbullying activities online majorly occur on social media platforms. However, the effects of the bullying are far reaching to both the online and offline lives of the victims. Recognition of the severity of the vice has grown over time with more research being undertaken on the same. This has led to the creation of awareness campaigns and sensitisation programmes on cyberbullying by governments and institutions, mostly schools, which have been largely effective (Tanrikulu, 2018; Gaffney, Farrington, Espelage & Ttofi, 2019). However, there has been little sensitisation or awareness creation on the social media platforms themselves. The social media networks have policies and terms and conditions about the use of their services, but these terms and conditions are only availed to users at the time they are creating new accounts and are often written in legalese which most users ignore (Chanana, 2018). The recommendations put forth suggest that social media networks should take a more active role in creating awareness about cyberbullying on their platform. Examples of how to do this include creating public service announcement using online safety advertisements to raise awareness about cyberbullying and advising victims on how to report and protect themselves while on the platform.

Indigenisation and social proximity

Respondents of the study acknowledged that the social media networks they use are run by global companies that are based in foreign countries. This lack of geographical proximity means that the communication between the users and the companies are prone to suffer delays which is a problem when a quick response is needed. Facebook is a multinational company that serves users all over the world from its central headquarters in California in the United States. This means it lacks geographical proximity to most of its users. Additionally, there is cultural dissonance between the company and the users. This is often made much more apparent with language barriers occurring when Facebook users converse in local dialects that cannot be automatically translated or filtered. This has been acknowledged as existing language gaps that would make it difficult to understand the context and content of shared information thus making it difficult to respond appropriately (Debre & Akram, 2021; The Economic Times, 2021). To counter these challenges, recommendations were made for Facebook and other social media companies to have local offices in Kenya. Along similar lines, the company should hire local personnel who understand the local dialects and are better placed to interpret the context of discussions online. This will help to identify instances of cyberbullying. Further suggestions linked to localisation of the social media companies include the existence of a toll-free helplines that would enable users to seek help faster. It can also go further and have Internet safety ambassadors on their platforms and in institutions such as universities to bring the corporation closer to the users.

Government collaboration

The respondents in the study further suggested that Facebook can collaborate with the Kenyan government to prosecute cyberbullies. The participants acknowledged that Facebook and other social media companies lack the necessary jurisdiction to prosecute offenders on the social media platforms, especially if the crime or offence occur across borders (Cartwright, 2016; El Asam & Samara, 2016). This led to suggestions being made for social media companies to work closely with local governments to enable the speedy prosecution of cyberbullying offences by providing the necessary access to data that may be used as evidence in the courts of law but are only accessible to Facebook. Local governments can in turn help Facebook with verification and authentication of the identities of user accounts to reduce anonymity online.

Internet literacy

Respondents in the study acknowledged that the Internet is a major resource in the modern age. Its benefits outweigh the challenges that it brings and cyberbullying is among the challenges. However, there is need for users to be educated on how to use the Internet safely. Internet literacy refers to the acquisition of technical and reflective skills that would enable users to navigate cyberspace safely (Stodt, Wegmann & Brand, 2016; Bauer & Ahooei, 2018). This may include trainings on cybersecurity, online privacy, and netiquette (Internet etiquette). Given that the nature of cyberbullying is such that it occurs in cyberspace, and large part of it is made possible because social media users are lax about their cybersecurity, and often share private information, it is important that Internet literacy is taught to users at a young age. Suggestions by respondents, therefore, included having Internet literacy embedded or integrated into the educational curriculum and taught in schools and universities.

6.

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This study investigated the types, prevalence and effects of cyberbullying among undergraduate university students in Kenya as well as how they currently cope with the effects of the vice in their academic and social lives. From the findings and discussions, the conclusions and recommendations of the study are presented in this chapter.

6.1 Conclusions

The conclusions of the study are presented here in four subsections based on the major objectives of the study:

Types of cyberbullying

This study confirmed that most undergraduate students in Kenya's universities had experienced different forms of cyberbullying. It also emerged that those who did not have a personal brush with cyberbullying knew a classmate who had experienced some form of cyberbullying. Outing, exposure, exclusion, impersonation, catfishing, cyberstalking, trolling, flaming, vigilantism, shaming, blackmail, revenge porn and warning wars were the specific types of cyberbullying that undergraduate students in Kenya had experienced.

This study also found that shaming and impersonation were the types of cyberbullying that the majority of the students experienced. Cyberbullying through impersonation was higher among males than females, while shaming was higher among female students than the male ones. Body shaming was the most prevalent type of shaming that the students experienced. The female students were mainly denigrated on their weight and skin colour while cyberbullies shamed the male students for bearing non-masculine looks.

Impersonation was primarily witnessed in incidents where bullies hijacked students' social media profiles to pass off as them or in incidents where they had befriended people online who had impersonated Kenyan celebrities and politicians. Blackmail and sextortion proceeded from impersonation. Blackmail saw some cyberbullies demand favours, mostly monetary, from the students so as not to be bullied. On sextortion, the victims were asked to give sexual favours to cyberbullies. Blackmail and exposure were the second most experienced types of cyberbullying in both genders. Exposure saw some of the students' grades, health status, relationship status and phone numbers published online.

Vigilantism and warning wars forms of cyberbullying were experienced more among male students as compared to females. The male students attracted vigilantism more as they were prone to wear their (national or university) political, social, and economic views on their sleeves and fearlessly expressed them on social media. It is for the same reason that they experienced warning wars. On the other hand, cyberstalking was higher among female respondents as compared to male respondents. Cyberstalked female students felt overwhelmed and scared because of the incessant unrequited attention from men. Cyberstalking was often accompanied by unsolicited explicit photos from the cyber hackers.

Revenge porn was found to be a very consequential type of cyberbullying. Revenge porn had the victims' nudes exposed when romantic relations had grown sour. These often went viral, causing untold indignity and shame to the victims. Victims of revenge porn often suffered suicide ideation. Trolling was found to be an insidious type of cyberbullying. This is because it often began as harmless fun and memes, but its effects reverberated. For instance, a student lost an election bid because he was trolled: he was called 'womaniser' on social media. In outing, some closeted students were outed. This type of cyberbullying not only shames them but also places their lives in danger. The last type of cyberbullying the Kenyan undergraduate students experienced was flaming. It saw the victims receive invectives that are meant to make them recoil during online engagements.

Therefore, this study concludes that diverse forms of cyberbullying are witnessed among undergraduate students in Kenyan universities. The type of cyberbullying experienced depends on one's age, gender, physical attributes as well as political or social opinions. The bullies calculate their activities to injure their victims the most.

The findings from the study on the types of cyberbullying is similar and tallies in nature with those reported in the United Kingdom and the United States where cyberbullying victims are known to suffer from sextortion, blackmail, shaming, sharing of explicit content, exclusion among others. As such, the researchers can conclusively reveal that there is a commonality in the types of cyberbullying being meted online across the globe. What mostly drives the bullying and types stems from the social relationships between females and males and when they part ways or one party is rejected, the scores get settled online through bullying. How the victims react to or cope with incidents of bullying is also similar. For example, the notable reaction across the United Kingdom and United States and reported cases in Africa is depression, low self-esteem, withdrawal, suicide ideation, and, on serious

levels, suicide (which is reportedly common in the United States). As such, the researchers conclude that a universal approach towards dealing with cyberbullying can be adopted since the cases and the reactions from the victims are the same.

Prevalence of cyberbullying

This study concludes that cyberbullying indeed occurs among the youth in Kenya and particularly university students. The rate at which it occurs is higher at around 80% with victims being both genders, but predominantly female students experiencing it more than the males. As a matter of fact, all the participants in the FGDs had experienced cyberbullying either in person or knew a friend who had fallen victim to cyberbullying. This was attested to by the deans of students who were interviewed and confirmed that it was getting worse in their universities. Cyberbullying is increasingly on the rise and it is becoming a global pandemic affecting people across nations. This acute sense of cyberbullying could be attributed to the fact that the vice is becoming more common with the increasing use of mobile phones and ease of access to the Internet. It also occurs due to social interactions, especially relationships that students commit to online. As much as cyberbullying occurs across many social media platforms, the most dominant social media platform on which the vice is mainly meted is Facebook, followed by Twitter.

The most prevalent forms of cyberbullying that students experience include body shaming experienced more by the females than the males, followed by impersonation; a vice that cut across the genders but realised more by men. Other frequently experienced forms of bullying are blackmail and exposure. It also emerged from the study that many people may be perpetrating the vice unknowingly, especially in the form of trolling which many of the participants viewed as "normal" and fun to do. As such, many students do not view it as a form of bullying. Despite this view among the participants, many still agreed that cyberbullying is a serious social vice affecting them both socially and academically. The researchers also conclude that the incidences of bullying rise with the increase in the number of friends that the victims had on social media and the level of interactions. More males were notably interactive and had more friends than females. Because of this, they experienced incidences of bullying more.

Frequency of use of social media platforms, and notably Facebook, also leads to high prevalence of cyberbullying. Those who used the platform daily are prone to bullying incidences as compared to those who use it occasionally. The frequency of encountering cyberbullying incidents on Facebook in most students was

"sometimes" meaning once in a while incidence of cyberbullying is experienced by the students. However, "Monthly", "Weekly", "Daily" and "Hourly" incidents were also experienced but were less common in that order. Therefore, this study concludes that at any given time, female students are more prone to bullying on Facebook than male students.

In terms of age, students aged between 22 and 32 years are prone to incidents of cyberbullying more than students in other age brackets. University admission is usually pegged at around 18 years of age meaning that those above 22 years are either final year students or are undertaking technical courses that require more than 4 years to complete. As such, students pursuing education, applied sciences and natural sciences courses are less likely to be affected by cyberbullying than those undertaking engineering and physical sciences. On this, the study concludes that due to their prowess in handling digital devices, those undertaking engineering and physical sciences have a higher presence online and thus their likelihood of either bullying or being cyberbullied on Facebook is equally high.

From the study findings, the researchers can conclude that the prevalence of cyberbullying among university students is higher than reported in the studies carried elsewhere. For example, most studies carried in Europe indicate that the bullying incidences are at around 37% - 45% while those done in Asian countries and other developing nations indicate approximately 70%. The findings on this study indicated that the prevalence of cyberbullying is at 80% in Kenya and the figure is reportedly increasing with rising incidents of cyberbullying in universities in Kenya. This is compounded by the growing uptake of mobile phones and access to affordable Internet connections by the students. Kenyans are well known as online bullies, especially on Twitter, and consequently they have earned a name, Kenyans on Twitter (KOT), where they have been reported to have bullied the current Kenyan President who was forced to close his Twitter handle. As such, this study finds Kenya to be one of the countries with the highest prevalence of cyberbullying.

Effects of cyber bullying

This study confirmed that the social effects of cyberbullying on Facebook include suicide ideation, poor mental health, poor physical health, substance abuse, social alienation, economic loss, victim bullying, depression, low-self-esteem, stress, social withdrawal and stigmatisation. The most serious social effect of cyberbullying was suicide ideation for females and victim bullying for both genders. The least serious effects were suicide ideation for male and economic loss for female students. In

terms of age, all the students between 22 years of age and 32 years reported that victim bullying was the most likely effect of cyberbullying on Facebook. The study concludes that cyberbullying affects undergraduate students' social lives and needs immediate intervention to mitigate it. This is because most of the effects can lead to students causing harm to themselves or others.

The study also confirmed that the effects of cyberbullying on the academic lives of undergraduate students were poor academic performance, absenteeism, lack of concentration, discontinuation and dropping out of university. Therefore, the study concludes that cyberbullying greatly affects the academic performance of bullying victims. This effect was exhibited by poor academic performance of the students which was noted by the deans of students as a serious issue. Both male and female students, regardless of their age, felt that if they were cyberbullied on Facebook, their academic performance dwindled because they tended to withdraw from class events fearing that they may meet the bully. The study, therefore, concludes that cyberbullying on Facebook can affect undergraduate students' performance. This study also concludes that students and deans of students are aware of the social and academic effects of cyberbullying on Facebook.

Coping mechanisms

The study established that cyberbullying among undergraduate university students in Kenya is rampant. Consequently, students and staff must deal with the vice. To do this, there are strategies that are applied by the victims when they are bullied, the university administration when cyberbullying cases are reported to them, and Facebook when cyberbullying occurs on their platform. Additionally, given the global nature of the Internet and social media, there are strategies to curb cyberbullying at a governmental level and in the society in general. The main findings of the study on strategies of coping with cyberbullying show that victims of cyberbullying use multiple strategies to counter the cyberbullying. These include passive resistance, enhancing online privacy, reporting, or flagging bullies, joining anti-bullying campaigns, seeking counselling services, seeking social support, disengagement and victim bullying. The study concludes that enhancing online privacy is the most effective coping mechanism for victims. By blocking or unfriending bullies, the victims were able to stop repeated exposure to bullying content. Reporting and flagging bullying content, either to the platform administrators or to the university administration, through the offices of the deans of students was also considered as being largely effective. The least effective strategy for coping with cyberbullying was victim bullying. This is because when

victims begin to bully others, it escalates the behaviour rather than reducing it. Age of the cyberbullying victims also influenced their choice of coping strategy. Older students (above 22 years old) were more likely to take active measures to counter cyberbullying including reporting to authorities and disengaging or leaving the social media platforms. On the contrary, younger students (below 22 years) were more likely to choose passive resistance and ignore the bullying and would not consider leaving the social media platforms as a solution to cyberbullying.

The strategies applied by universities when cyberbullying activities were reported to the deans of students include providing guidance and counselling services to the victims of cyberbullying, creating awareness on cyberbullying as a vice, training students of Internet safety and cyber-security, and having policies that allow for disciplinary action to be taken on cyberbullies. All the universities had a students guidance and counselling unit. However, not all the universities had peer counsellors. It also emerged that despite students acknowledging that counselling is helpful and effective in dealing with cyberbullying, they felt that the guidance and counselling units in their universities were neither welcoming nor safe. The study concludes that even though all universities had guidance and counselling units, the students did not use the services optimally because they did not feel welcome, safe or were not aware of them.

The strategies employed by Facebook to curb cyberbullying on its platform include the mechanisms for flagging and reporting offensive posts, blocking, managing privacy settings, unfriending, deactivating, or closing accounts. The study concludes that both students (as users) and deans of students are aware of the features Facebook has put in place to curb cyberbullying on the platform. However, they felt that Facebook had not done enough to make the platform safe.

At the government level, the study found that there were laws that have been enacted to address cyberbullying. These include the Computer Misuse and Cybercrime Act (2018) as well as privacy laws, and defamation laws. The study concludes that while the laws to prosecute cyberbullying exist, they are not specific to the types of cyberbullying that exist. Additionally, the burden of proof lies with the victim as the bullies are often anonymous. Furthermore, most respondents felt that the laws were enforced on a preferential basis and only those of a high status in society had their cases taken seriously.

At the community level, the study found that the society at large has normalised cyberbullying as an everyday occurrence and little support is given to those afflicted.

There is a low level of awareness about cyberbullying and its effects on victims in society. It is suggested that the family plays an important role in raising the children and if the children are not raised to behave properly, these bad habits and vices are carried on to the Internet and express themselves as deviant behaviour such as cyberbullying. Religious leaders also have a role to play in upholding moral living and counselling the youth, thereby encouraging them to be upstanding members of society.

Respondents suggested technological and non-technological interventions that can be applied by Facebook to curb cyberbullying on its platform. Among the technological interventions suggested are application of machine learning or artificial intelligence to identify and filter cyberbullying content on the platform; strengthening the authentication process for logging into the platform using verified identification; biometrics and two-factor-authentication; and improving data security on the platform by encrypting data. Non technological interventions suggested include having awareness and sensitisation on cyberbullying performed on the platform; having local Facebook company offices to make the co-operation more accessible to local users; collaborating with governments to provide vital information on cyberbullies to aid their prosecution; and supporting Internet literacy in schools and universities to enhance appropriate etiquette.

6.2 Recommendations

Based on the findings of the study, several recommendations are hereby given on how to address cyberbullying on Facebook among undergraduate students in Kenya's universities.

Types of cyberbullying

The following are recommendations to mitigate the types of cyberbullying incidents on Facebook faced by undergraduate students in Kenya.

1. Cyberbullying is a deviant behaviour that is a symptom of poor morals. Therefore, this study recommends that the society should be on the forefront of providing the foundation for moral upbringing. This study considers parents, teachers, extended family, and friends as society. In several African philosophies, one was not human at birth but became human by living in a culturally-dictated, morally-acceptable way and by actively participating in cultural rites. Thus, in African philosophy, bullies are not human beings as they would be viewed as bankrupt, morally. Further, African philosophy

dictated that a person builds relationships on *Ubuntu* where the next human being is seen as an extension of oneself. Therefore, to bully someone would be to bully self. Consequently, the Kenyan society led by parents and guardians should lead a cultural change in which Kenyan students' upbringing is ideally steeped in the African philosophies on becoming. Ubuntu must be encouraged among Kenyan undergraduate students. This will mean caring for the next social media user as if it were oneself and speaking out whenever someone is cyberbullied.

2. Self-governance: Self-governance is inculcated in the students by parents, guardians, university administrators and lecturers. Currently, there is a dearth in self-governance awareness. The students must be taught how to regulate offline and online interpersonal relations. To prevent revenge porn, for instance, this study discourages the taking and sharing of nudes among students.
3. Radical self-love and self-acceptance: Aesthetics matter but aesthetics cannot trounce personal freedom. True freedom begins when the individual radically accepts every quirk on appearance, personality, and sexual orientation. This means that any social commentary that is meant to shame must be deflected by radical self-love. It is the responsibility of Kenyan parents and guardians to affirm their children's self-image. Thus, the undergraduate students in Kenya must be encouraged by parents and guardian to develop radical self-love and radical self-acceptance of things they cannot change to ward off body shaming.

Prevalence of cyberbullying

From the findings of the study, the study offers the following recommendations to mitigate the prevalence of cyberbullying incidents on Facebook in Kenyan universities:

1. Cyberbullying sensitisation programmes: To counter the prevalence of cyberbullying incidents, students should be made aware of prevalence of cyberbullying through a sensitisation programme. This sensitisation can be carried out at the university level, societal level and through social media platforms like Facebook. Currently, universities conduct sensitisation programmes through the university student leadership, posters and organising events. Thus, the office of deans of students can spearhead cyberbullying sensitisation programmes through organising

events in conjunction with students' leaders, class representatives and peer educators. Facebook is currently running COVID 19 sensitisation adverts and warnings. The company could embed in their interfaces warnings and messages on cyberbullying.

2. Cautious activities online: The Facebook platform is for social interactions but users of Facebook should minimise their interactions online, especially with people they do not know since the more interactions with people you may not know, the higher the likelihood of being bullied. The users should also be mindful of their social commentary on other people's posts. Sometimes, someone's post or comments on another person's post is what will elicit reactions which may lead to cyberbullying incidents.
3. Awareness of technological interventions: Facebook Africa could organise safety seminars in all universities in which users should be made aware of technological interventions currently available on social media platforms like Facebook. Facebook safety seminars can first be conducted to all the university class representatives and faculty representatives who will then organise faculty safety seminars for the rest of the students. The interventions include the options and a variety of measures like blocking or unfriending the bullies, reporting the bullies to Facebook, and flagging bullying content. As much as Facebook has enabled these on its platform, some students were not aware of their existence.
4. Policies on cyberbullying: University authorities should take the vice seriously and develop policies against cyberbullying which are entrenched in the students' code of behaviour exemplified in the student handbook. They may also integrate courses on cyber etiquette in the curriculum.
5. Legislation on cyberbullying: The government should spearhead a fair and just enactment of Kenyan cyberbullying laws and ensure that they are followed and perpetrators are punished based on the severity of the reported incidence. Legal interventions were one of the least mentioned strategies by the students since the majority were not aware of any laws on cyberbullying and they felt that the law was only used to punish cyberbullies of politicians and their associates. Further, the laws on cyberbullying should be consolidated. The legislation tapestry that constitutes cyberbullying laws in Kenya is made up of non-specific legislation ranging from privacy laws, defamation laws, cybercrime laws and many others which makes it

complicated to prosecute cyberbullying. The Government of Kenya can borrow from Sweden which was the first country to have specific laws against cyberbullying. Other countries like Belgium and Singapore have sweeping laws that cover sexual harassment, violence and cyberbullying.

6. Facebook policies: Facebook should come up with concise policies that can easily be understood and followed, especially on the terms of engagement on its platform. The policies should be brief and to the point as opposed to the current lengthy policies that many users do not bother reading.
7. Discourage pseudo accounts: Facebook should discourage the use of pseudo accounts which many use to hide their identities and as such make it easy for them to perpetrate the vice. Many incidents of bullying were reportedly committed by those who were using pseudo accounts and even those who were bullied and sought revenge opened pseudo accounts which they used to counter the attacks on their bullies.
8. Non-technological mitigations: Facebook can take steps towards indigenising their network in the country. This includes having local offices or representatives that are accessible to citizens. They should also have local translators who will be able to translate local dialects and prevent languages barriers that may prevent effective filtering of cyberbullying content. The other non-technological measures to counter the vice could be to run promotional activities like rewarding healthy, fair, and just use of their social media platforms through Facebook ambassadors selected from university students like Google does. These ambassadors mentioned above will carry the Facebook image.

Effects of cyberbullying

Based on the effects of cyberbullying on undergraduate students' social and academic lives, the study makes the following recommendations:

1. Strengthen university counselling departments: University administrations in Kenya should set up effective counselling departments. The counselling departments should act as the centre where both the bullies and victims are talked to and rehabilitated to make them feel they belong to the university community. professional This will ease feeling lonely and withdrawal from classes of the victims of cyberbullying. The counselling departments can also link to the students (both victims and bully) to professional counselling outside the university for extreme cases that they may not be able to handle. The students felt that some of their counsellors were not friendly, approachable

and trustworthy. Yet, the counselling department is ideally supposed to run the university's health and wellness centres. The health and wellness centres in universities should be involved directly in mitigating the effects of cyberbullying. They should take an active role in preventing and managing social effects of cyberbullying like poor mental health, poor physical health and substance abuse. They should also hold the information provided to them by either the bullies or victims with utmost privacy and confidentiality to enhance the effectiveness of the strategy. Lastly, the department of counselling in the university can then set up a centre of cyberbullying prevention and intervention. The centre will assist in conducting frequent assessment on prevalence of cyberbullying in the university and mitigating the issues caused by the cyberbullying. In addition, the centre can review the student handbook to include issues directly on cyberbullying and punishments attached to bullying. The centre also can work as point where both the bully and victim are mediated and in the end the class attendance will improve which will reciprocate to academic performance.

2. Suicide helpline: University administration in conjunction with the university counselling department and the government crisis centre should set up a toll-free suicide helpline where victims can call and seek help. This will assist with the many cases of suicide ideation and prevent possible suicides by victims of cyberbullying. The helpline can also have a dedicated email address or a chat box. This can allow privacy and confidentiality if the victim feels uncomfortable sharing their challenges physically.
3. Cyberbullying prevention campaigns: The effects of cyberbullying as indicated by undergraduate students and their deans were so severe. There is need to have cyberbullying prevention campaigns to create awareness against the vice. Universities should come up with seminars where the students are spoken to about the effects of cyberbullying. Information is power; with the knowledge about what the effects of cyberbullying are, the students can embrace and exhibit good behaviour on online platforms. The universities can also come up with brochures or web publications that talk about the effects of cyberbullying and how to avoid or cope with them. In addition, the universities that have radio and/or television stations can use these platforms as avenues where they sensitise the listeners about cyberbullying and promote good behaviour online. They can paint a picture of a bully and that of victim.

4. Strict follow-up on absenteeism cases: The universities administration through deans of faculties and department heads should make sure they have a way of identifying those who attend and fail to attend classes even with blended learning. With this, they will be able to know when and why certain students fail to attend classes and assist them based on the challenges they are experiencing, especially if related to cyberbullying.
5. Cyber safety and cyberbullying prevention in eLearning environments: With the high cases of cyberbullying on online platforms, university administration should provide healthy e-learning systems. They also need to educate students on cyber safety. Due to COVID-19 pandemic, there are more cases of blended learning in universities in Kenya. This has led to more cases of cyberbullying even beyond Facebook. There is need to educate students on how to behave online to avoid perpetrating or falling victim to cyberbullying. The university should teach the students that social engineering is a reality on social media. As such, some social media posts on sports' results, art, politics, ideologies, and religion are intentionally meant to rile people so that they can respond.

Coping mechanisms

There are recommendations which should be considered by the students, university administration, Facebook, Government of Kenya, and the society. These are explained hereunder.

Undergraduate students and users of social media should:

1. Not perpetuate a cyberbullying culture by sharing cyberbullying content on their social networks instead they should counter the vice by reporting and flagging cyberbullying content and not just be uninvolved bystanders.
2. Seek help if cyberbullied. This includes reporting the bullying to the university administration and the social media platform administrators. They should also be ready to talk to peers and seek social support from family and friends. Where need be, they should not shy away from seeking therapy to alleviate the effects of cyberbullying.

University administration should:

1. Collaborate with other universities to tackle cross-university bullying. The Kenya Universities Deans of Students Association (KUDSA) would be

instrumental in forging the partnership between the universities so that they can share best cyberbullying prevention practices; create crosscutting policies and resolve cyberbullying issues between students at different universities. KUDSA can also hold Facebook safety campaigns in their institutions.

2. University administration should partner with Facebook and have Internet safety ambassadors for the platform selected from among the students. This could be an African Facebook Goodwill Ambassador Programme with ambassadorial opportunities. These ambassadors can work closely with local Facebook teams to: organise and host events to bring awareness to Facebooks' safety products and brand; help Facebook to better understand Kenyan campus culture; test Facebook products and features; and be a source of knowledge for each university about Facebook products. These ambassadors could serve from the day of appointment to graduation day upon which other goodwill ambassadors would be appointed. They could choose the ambassadors from student government as those tend to be very popular among their schoolmates. It could also be students running popular Facebook groups that the students are privy to. This way, Facebook will gain valuable feedback on the use of the platform from the ambassadors that will help them to improve their services.

Facebook should:

1. Conduct awareness and sensitisation on cyberbullying on the platform. This could take the form of an informational video before an individual is allowed to sign up for an account on the platform. The video should include information about the features that Facebook has to prevent cyberbullying as well are the reporting mechanisms that victims can use if they are being cyberbullied. A video would be more effective than written terms and conditions which most users acknowledge but do not read. This is because visual multimedia communication is more engaging and attention grabbing than written communication.
2. Require users to verify their accounts using valid identification. This may be through the use of relevant national identification numbers or passport numbers. The use of a number can be supplemented by biometric scans which Facebook can use to authenticate the user. This will reduce the disinhibition caused by anonymity on the platform and cut down on the creation of pseudo accounts.

3. Improve security on the platform by requiring two-factor-authorisation for log in as well as providing options for biometric logins. This would reduce cases of impersonation and hacking of user accounts.
4. Adopt an empathic design to prompt reflective choice of users. This can be used along with filtering features and when potential cyberbullying content is detected the user can be prompted to rethink their content before posting.

The Kenyan Government should:

1. Should create awareness and sensitise citizens about cyberbullying and its effects. The sensitisation programs should include information about how victims can seek help if they are bullied online. This should also create awareness on the laws that cyberbullying is prosecuted under and the penalties for cyberbullying if convicted. This may help to deter citizens from cyberbullying each other.
2. Encourage responsible online participation by embedding ICT literacy and Internet literacy in the educational programmes in the country. The current ICT and Internet literacy educational programmes do not have cyberbullying specific teaching materials. These will prepare young users for the virtual environment they encounter on the Internet and help them to navigate the cyber-sphere safely.

Society should:

1. Social media users have normalised cyberbullying. Therefore, the government, parents, university administration should discourage the norma of cyberbullying as an inevitable part of the online experience. They should castigate cyberbullies and cyberbullying behaviours rather than being passive bystanders or sharing cyberbullying content.
2. Step up intentional and redemptive social support to victims of cyberbullying through family and community initiatives rather than stigmatising them. This will help reduce feelings of alienation in and depression in the victims.
3. Provide or organise opportunities for physical social interactions for the youth to help them form strong friendship bonds in real life as well as reduce the time they spend online. This may include community sports events, clubs, volunteers' groups, or training workshops.

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APPENDICES

Appendix 1: List of Accredited Universities in Kenya

Accredited Public Universities in Kenya			
S/No	University	Year Formed	Year Accredited
1.	University of Nairobi	1970	2013
2.	Moi University	1984	2013
3.	Kenyatta University	1985	2013
4.	Egerton University	1987	2013
5.	Jomo Kenyatta University	1994	2013
6.	Maseno University	2001	2013
7.	Chuka University	2007	2013
8.	Dedan Kimathi University	2007	2012
9.	Kisii University	2007	2013
10.	Masinde Muliro University	2007	2013
11.	Pwani University	2007	2013
12.	The Technical University of Kenya	2007	2013
13.	Technical University of Mombasa	2007	2013
14.	Maasai Mara University	2008	2013
15.	Meru University	2008	2013
16.	Multimedia University of Kenya	2008	2013
17.	South Eastern Kenya University	2008	2013
18.	Jaramogi Oginga Odinga University	2009	2013
19.	Laikipia University	2009	2013
20.	University of Kabianga	2009	2013
21.	Karatina University	2010	2013
22.	University of Eldoret	2010	2013
23.	Kibabii University	2011	2015
24.	Kirinyaga University	2011	2016
25.	Machakos University	2011	2016
26.	Murang'a University of Technology	2011	2016
27.	Rongo University	2011	2016
28	Taita Taveta University	2011	2016
29.	Cooperative University of Kenya	2011	2016
30.	University of Embu	2011	2016
31.	Garissa University	2011	2017
Accredited Private Universities in Kenya			
32.	University of Eastern Africa	1989	1991
33.	Catholic University of Eastern Africa	1989	2013
34.	Scott Christian University	1989	1997
35.	United States International University	1989	1999
36.	Africa Nazarene University	1993	2002

37.	Kenya Methodist University	1997	2016
38.	St. Paul's University	1989	2007
39.	Pan Africa Christian University	2007	1989
40.	Kabarak University	2002	2008
41.	Strathmore University	2007	2013
42.	Africa International University	1989	2011
43.	Kenya Highlands Evangelical University	1989	2011
44.	Mount Kenya University	2008	2011
45.	Great Lakes University of Kisumu	2005	2012
46.	Adventist University	2005	2013
47.	KCA University	2007	2013
48.	KAG - EAST University	1989	2016
49.	Daystar University	1989	1994

Appendix 2: Introduction letter

Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook

INTRODUCTION LETTER

Prof. Tom Kwanya
tom.kwanya@gmail.com
0717318853

Dear Respondent,

We, Prof. Tom Kwanya, Angella Kogos, Lucy Kibe, Erick Ogolla and Claudior Onsare, are from the School of Information and Social Studies at The Technical University of Kenya. We are conducting a study to investigate the nature, prevalence and consequences of cyber-bullying on Facebook among undergraduate students in Kenyan universities. As representatives of other students, we invite you to participate in this study as a respondent. We wish to assure you that the information you provide will be held in confidence and will only be used for the sole purpose of this study. We also guarantee that your participation in this study is voluntary and you may withdraw at any time without any consequences whatsoever to yourself. We thank you in advance. Do not hesitate to contact the Principal Investigator using the contacts provided hereunder if you need further information and/or clarification.

Prof. Tom Kwanya
Principal Investigator
0717318853
tom.kwanya@gmail.com

Appendix 3: Respondents information sheet

Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook

RESPONDENTS' INFORMATION SHEET

Study title: Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook.

What is the purpose of the study? The purpose of the study is to examine cyber-bullying and it effect on undergraduate's students in Kenya.

Why have you been asked to take part? You have been asked because you are an undergraduate students or dean of students who can be able to identify with cyber-bullying and indicate strategies to cope/curb cyber-bullying.

Do you have to take part? No. Participation is voluntary. If you have to withdraw from the study before it commences there will be no repercussion to you or your institution. You can withdraw by contacting the principal investigator on email. If you decide to withdraw all your data will be destroyed and will not be used in the study.

Will your participation in the study be kept confidential? Yes. You will remain anonymous in the whole process of the study. Any extracts from what you say that are quoted in the study will be entirely anonymous.

What will happen to the information which you give? The data will be kept confidential for the duration of the study.

What will happen to the results? The results will be presented in the study. They will be seen by Facebook. The report may be read by students and other individuals in the area of cyber-bullying. The study results will be published in a research journal, conference papers, booklets and brochures.

What are the possible disadvantages and risks of taking part?

It will take up part of your study time.

What are the possible benefits of taking part?

Your contribution will help generate content to inform on cyber-bullying effects and how to curb/cope with the effects.

Who has reviewed this study? The research team has reviewed the study.

Who is organising and funding the research?

The research is organised by a team from The Technical University of Kenya led by Professor Tom Kwanya. The research is funded by Facebook.

Any further queries? If you need any further information, you can contact the Principal Investigator using the contacts provided hereunder.

Prof. Tom Kwanya
0717318853
tom.kwanya@gmail.com

If you agree to take part in the study, please sign the consent form.

Appendix 4: The Informed Consent Form

Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook

INFORMED CONSENT FORM

I ..... agree to participate in the research study.

I have read and understand the attached participant information sheet and by signing below I consent to participate in this study.

I understand that I have the right to withdraw from the study without giving a reason at any time during the study itself.

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that anonymity will be ensured in the write-up by disguising my identity.

I understand that confidentiality will be keep at utmost level and the research responses will only be used for the purpose of this research.

Signed .....

Date .....

Researcher's signature .....

Appendix 5: Debrief Form

Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook

DEBRIEF FORM

Dear Participant:

Thank you for participating in this research study. The purpose of this research is to gain an understanding of cyber-bullying in Facebook using a case study of undergraduate students in Kenya. Your participation will help researchers to gain more insight into types of cyber-bullying that undergraduate students in Kenya experience on Facebook; prevalence of cyber-bullying on Facebook among undergraduate students in Kenya; effects of cyber-bullying on Facebook on undergraduate students in Kenya; strategies that exist to curb cyber-bullying on Facebook among undergraduate students in Kenya and effectiveness of the existing strategies on curbing cyber-bullying on Facebook among undergraduate students in Kenya.

In the event you have any concerns regarding the questions presented to you in this study, you may want to seek clarifications or discuss any of them with the research team. You may contact the Principal Investigator using the email address or phone number given below. Once again thank you for your participation.

Sincerely,

Prof. Tom Kwanya
0717318853
tom.kwanya@gmail.com

Appendix 6: Student Questionnaire

Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook

SECTION A: DEMOGRAPHICS DATA

1 Gender

☐ Female ☐ Male

2 Age

☐ Below 18

☐ 18-22

☐ 23-27

☐ 28-32

☐ Above 32

3 Course and level of study

Please, indicate the course you are pursuing and the year of study you are currently in.

.....

.....

.....

4 What social media networks do you use? (Kindly indicate with (P) as appropriate).

Social media networks			
Facebook		Snapchat	
Twitter		Tiktok	
Instagram		Tinder	
WhatsApp			

Others .....

5 Are you on Facebook?

☐ Yes ☐ No

6 How many friends do you have on Facebook?

☐ 0-1000

☐ 1001-2000

☐ 2001-3000

☐ 3001-4000

☐ 4001-5000

☐ Above 5000

7 How frequently do you use Facebook?

☐ Hourly

☐ Daily

☐ Weekly

☐ Monthly

☐ Sometimes

☐ Never

8 What do you do on Facebook? (Kindly indicate with (P) as appropriate)

Uses of Facebook			
Social Networking		Dating	
Business		News	
Entertainment		Politics	
Academic			

9 Which Facebook groups do you belong?

.....

.....

.....

SECTION B: PREVALENCE OF CYBER-BULLYING

10 Have you ever experienced cyber-bullying?

☐ Yes ☐ No (if no go to 10c)

10a If YES, did it happen on Facebook?

☐ Yes ☐ No

10b How frequently have you been cyber-bullied?

☐ Hourly

☐ Daily

☐ Weekly

☐ Monthly

☐ Sometimes

10c If no, do you know of classmates/friends who have experienced cyberbullying

☐ Yes ☐ No

10d If yes, how many of these have been through Facebook?

.....

.....

SECTION C: TYPES OF CYBER-BULLYING

11 Kindly indicate the type of cyber-bullying you have experienced or aware of on Facebook

Types of cyber-bullying	**(P)**	**Types of cyber-bullying**	**(P)**
Outing		Flaming	
Exposure		Vigilantism	
Exclusion		Shaming	
Impersonation		Black mail	
Cat fishing		Revenge porn	
Cyber-stalking		Warning Wars	
Trolling		Others(Specify)	

SECTION D: EFFECTS OF CYBER-BULLYING

12 Kindly select the effects of cyber-bullying on academic and social life and Indicate the level of seriousness to which they affect your academic and social life on a scale of 1 to 4 where 1: Not serious; 2: Less serious; 3: Serious; and 4: Very serious.

Effects of cyber-bullying	(P)	Level of seriousness (P)			
		1	2	3	4
Suicide ideation					
Poor mental health					
Poor physical health					
Substance abuse					
Poor academic performance					
Social alienation					
Economic loss					
Victim bullying					

SECTION E: STRATEGIES OF COPING WITH CYBER-BULLYING

13 Kindly select the strategies used to cope with cyber-bullying.

Indicate the extent to which the strategy assists to cope on a scale of 1 to 4. Where 1: No extent; 2: Less extent; 3: Moderate extent; 4: Great extent.

Strategy to cope with cyber-bullying	(P)	Scale			
		1	2	3	4
Passive resistance					
Enhancing online privacy					
Flagging abusive content					
Seeking legal redress					
Anti-bullying campaigns					
Counselling therapy					
Social support					
Disengagement					
Victim-bullying					
Others					

14 Suggest any other ways that can be used to make Facebook safe from cyber-bullying

.....

.....

.....

.....

.....

.....

.....

.....

Thank you

END

Appendix 7: Student Focus Group Discussion Guide

We, Prof. Tom Kwanya, Angella Kogos, Lucy Kibe, Erick Ogolla and Claudior Onsare, are from the School of Information and Social Studies at The Technical university of Kenya. We are conduction a study to investigate the nature, prevalence and consequences of cyber-bullying on Facebook among undergraduate students in Kenyan Universities. As representatives of other students we, invite you to participate in this study by being part of the focus group discussions we wish to reiterate that your participation in this study is voluntary. Therefore, you can withdraw your participation at any point of the study without any consequences to you whatsoever. We also assure you that all the discussions will be confidential and will be used solely for the purpose of this study. Similarly, the discussions will be reported anonymously without identifying you individually

What is cyber-bullying?

Cyber-bullying is a form of harassment using electronic media. It has become increasingly common, especially with the growing ubiquity of social media. Most cyber bullying cases inevitably occur on Facebook because it is the most preferred social media platform hence our focus on Facebook.

Focus Group questions

1. How widespread do you think cyber-bullying is?
2. Of the social media you are on, which one has the highest prevalence of cyber-bullying?
3. Can you narrate an experience with cyber-bullying? Personal experience or someone you know?
4. How has cyber-bullying affected your social life?
5. How has cyber-bullying affected your academic life?
6. How did you respond to the cyber-bullying incident?
7. How effective were the measures you took against cyber-bullying?
8. What has Facebook done to make the platform safe?
9. Is Facebook doing enough to curb cyber-bullying on its platform?

10. What technological interventions can Facebook make to keep the platform safe?
11. What non-technological interventions can Facebook use to make face book safe?
12. How can we as Facebook users make Facebook safe from cyber-bullying?

Appendix 8: Interview schedule for cyber-bullying victims

We, Prof. Tom Kwanya, Angella Kogos, Lucy Kibe, Erick Ogolla and Claudior Onsare, are from the School of Information and Social Studies at The Technical university of Kenya. We are conducting a study to investigate the nature, prevalence and consequences of cyber-bullying on Facebook among undergraduate students in Kenyan Universities. As a victim of cyber-bullying, we invite you to participate in this study as a key informant. We wish to reiterate that your participation in this study is voluntary. Therefore, you can withdraw your participation at any point of the study without any consequences to you whatsoever. We also assure you that all the discussions will be confidential and will be used solely for the purpose of this study. Similarly, the discussions will be reported anonymously without identifying you individually

What is cyber-bullying?

Cyber-bullying is a form of harassment using electronic media. It has become increasingly common, especially with the growing ubiquity of social media. Most cyber bullying cases inevitably occur on Facebook because it is the most preferred social media platform hence our focus on Facebook

Interview questions

1. Kindly narrate the cyber-bullying incident? How did it happen?
2. When and where did the cyber-bullying occur?
3. How frequently did the cyber-bullying take place?
4. Did you get to know the people/persons bullying you?
5. How did the cyber-bullying affect you, socially and academically?
6. How did you respond to the cyber-bullying?
7. Were the measures you took effective?
8. What would you suggest persons who are being cyber-bullied to do?
9. What do you think can/could be done to prevent cyber-bullying on Facebook?
10. Do wish to add any more information on the issue of cyber-bullying and Facebook?

Appendix 9: Interview Schedule for Deans of Students

We, Prof. Tom Kwanya, Angella Kogos, Lucy Kibe, Erick Ogolla and Claudior Onsare, are from the School of Information and Social Studies at The Technical University of Kenya. We are conducting a study to investigate the nature, prevalence and consequences of cyber-bullying on Facebook among undergraduate students in Kenyan universities. As the officer offering social support to students, we are happy to invite you to participate in this study by responding to specific questions on this subject. We wish to reiterate that your participation in this study is voluntary. Therefore, you can withdraw your participation at any point in the study without any consequences to you whatsoever. We also assure you that all the discussions will be confidential and will be used solely for the purpose of this study. Similarly, the discussions will be reported anonymously without identifying you individually.

What is cyber-bullying?

Cyber-bullying is a form of harassment using electronic media. It has become increasingly common, especially with the growing ubiquity of social media. Most cyber-bullying cases inevitably occur on Facebook because it is the most preferred social media platform hence our focus on Facebook.

Use of Facebook

1. Do you use Facebook?
2. On average, how many hours do you spend on Facebook?
3. Which other social networking sites do you use? How long do you spend on these sites?
4. What do you use Facebook for? What do you use other social media sites for?
5. How much do you spend (in terms of bundles) on Facebook? How much do you spend on other social media platforms?
6. Which is your favourite social media site? Why?

Prevalence of cyber-bullying

1) Are there cases of cyber-bullying which have been reported to you? How many of these have been on Facebook?

2) In your assessment, what is the trend in the prevalence of cyber-bullying? Is the situation getting worse or better?

Types of cyber-bullying

1. Which types of cyber-bullying have been reported to you?
2. Which ones have been on Facebook?

Effects of cyber-bullying

1. What are the consequences of cyber-bullying on the academic lives of your students? How serious are these consequences?
2. What are the consequences of cyber-bullying on the social lives of your students? How serious are these consequences?

Strategies of curbing cyber-bullying

1. What strategies exist to curb cyber-bullying generally?
2. What strategies exist to curb cyber-bullying on Facebook?
3. As a university, what strategies have you put in place to deal with cyber-bullying among undergraduate students?

Effectiveness of the strategies

1. In your opinion, how effective are the strategies Facebook has put in place to make its platform safe from cyber-bullying?
2. How effective are your own strategies of dealing with cyber-bullying?

Making Facebook safer from cyber-bullying

1. In your opinion, is Facebook "doing enough" to make it safe for its users?
2. What technological interventions can Facebook make to keep the platform safe?
3. What non-technological interventions can Facebook take to keep the platform safe for its users?

Others

1. How can users help to make Facebook safe?
2. How can deans of students in all universities in Kenya work with each other and students to make Facebook safer?

Appendix 10: NACOSTI Permit (2021-2022)

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **530031**

Date of Issue: **04/August/2021**

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Appendix 11: NACOSTI Permit (2020-2021)

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Appendix 12: Ethical Clearance Letter

United States International University-Africa

USIU-A/IRB/151-2020 **USIU-A Institutional Review Board (IRB)**

8th April 2020

Tom Kwanya
The Technical University of Kenya
tom.kwanya@gmail.com

Dear Tom,

IRB-RESEARCH APPROVAL.

The USIU-A IRB has reviewed and granted an ethical approval for the research proposal titled **"Pixels hurt more than sticks and stones: confronting cyber-bullying on Facebook".**

The approval is for **twelve months** from the date of IRB. A continuing review application must be approved within this interval to avoid expiration of IRB approval and cessation of all research activities. A mid-term report and a final report must be provided to the IRB within the twelve months approval period. All records relating to the research (including signed consent forms) must be retained and available for audit for at least 3 years after the research has ended.

You are advised to follow the approved methodology and report to the IRB any serious, unexpected and related adverse events and potential unanticipated problems involving risks to subjects or others.

Should you or study participants have any queries regarding IRB's consideration of this project, please contact irb@usiu.ac.ke.

Sincerely,

RESEARCH OFFICE

Dr. Juliana Namada,
IRB chair
Tel: +254 730 116 628
Email: jnamada@usiu.ac.ke

Cyberbullying is a form of harassment using electronic media. It has become increasingly common especially with the growing ubiquity of social media. Most cyberbullying cases inevitably occur on Facebook because it is the preferred social media platform. Although statistics on cyberbullying in Kenya were unavailable, anecdotal evidence suggested that the vice was increasingly becoming a major concern in the country. This report is an output of an empirical study which investigated the nature, prevalence, and consequences of cyberbullying on Facebook among undergraduate students in Kenyan universities.

The report comprises six chapters which are as follows:

- **Chapter 1:** Elucidates the context of the study, research problem, significance and justification of the study, scope and delimitations of the study, limitations of the study, as well as the dissemination strategy of the research findings.
- **Chapter 2:** Presents a review of literature on the subject, analyses research gaps, and explains the conceptual and theoretical underpinnings of the study.
- **Chapter 3:** Explains the research approach, design, population, sampling approaches, data collection techniques and tools, data collection procedure, data analysis as well as research reliability and validity.
- **Chapter 4:** Presents the analysed research data in a structure that reflects the key themes of the study.
- **Chapter 5:** Discusses the findings and positions them in the existing body of knowledge on cyberbullying in universities.
- **Chapter 6:** Summarises the findings and presents the recommendations of the study.

The findings of this study will be instrumental in developing a framework for mitigating cyberbullying by providing both technological and non-technological solutions to making Facebook safer. The findings may also influence policy formulation and implementation on university students' support systems by the university management and also other agents of socialisation such as government, family, and religious leaders, among others.

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