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Factors Influencing the Occurrence of Cyberbullying on Facebook among Undergraduate Students in Kenyan Universities

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Abstract: This study investigated on factors influencing the occurrence of cyberbullying on Facebook among undergraduate students in Kenyan Universities. The study employed the mixed methods. Data was collected from 3,020 undergraduate students and 24 deans of students from 16 public and 8 private chartered universities in Kenya. A questionnaire was used to collect quantitative data from students while qualitative data was collected through focus group discussions with the students and key informant interviews with the deans of students. Qualitative data was analysed thematically using ATLAS.ti while quantitative data was analysed statistically using STATA. The findings revealed that most undergraduate students in Kenyan universities experienced cyberbullying on Facebook. Factors which influenced the prevalence include number of friends and interactions on Facebook as well as selected demographic attributes. The study recommends that students should be made aware of the prevalence of cyberbullying through a comprehensive sensitisation programme in universities. Users of Facebook should be cautious about their interactions online by limiting friendships with strangers. Finally, students should use security settings to block or report bullying offences.

Keywords: Cyberbullying; prevalence; undergraduate students; universities; Kenya; social media.

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Introduction

Cyberbullying is an aggression that is carried out online using electronic gadgets or media by individuals, or groups to molest and harass their victims (Kibe et al., 2022). It is exacerbated by anonymity, ease of access to the internet and related communication devices and lack of physical contact when executing it (Parsitau, 2020). Kwanya et al. (2021) argued that the aim of cyberbullying is to harass, intimidate or hurt the victims. Cyberbullying is experienced by people of varied social statuses ranging from children to powerful members of society such as celebrities and media personalities. Makori and Agufuna (2020) assert that the prevalence of cyberbullying is growing fast in tandem with the explosion and rapid growth of the internet, associated connection devices like mobile phones and is accelerated by the exponential uptake of social media. Carter (2013) avers that social networking sites have recently become prominent platforms for people, particularly the young, to communicate and interact with one another. This has increased the occurrence of cyberbullying.

Ndiege et al. (2020) observed that cyberbullying is real in institutions of higher learning in Kenya. They also argued that the vice is becoming a serious concern among the youthful students who are active on social media platforms like Facebook. Indeed, Facebook is the most popular social media network used by the youth in Kenyan universities (Kwanya et al., 2021). Parsitau (2020) observed that the ease and convenience of using technology coupled with the rise of online human interactions have led to the increase in cases of cyberbullying, particularly, in Africa and more so, in Kenya. The author further reported that in 2020, a survey by the United Nations Office for Drugs and Crime (UNODC) ranked Kenyans as the worst bullies on Twitter. The author added that "Like all other forms of violence that are prevalent in Kenya, including gender-based, sexual and political violence, cyberbullying is not only rife, but continues to thrive in Kenya's ungovernable online space, even as it keeps evolving" (p. 4). Giordano et al. (2021) agreed that the more interactions and relationships develop on social media platforms, the higher the chances of experiencing cyberbullying. Additionally, the more time spent on social media platforms, the higher the risk of being cyberbullied (Shultz et al., 2014). Kao (2021) asserts that the increased use and uptake of social media and advancement of technology are the driving forces behind the increase of cyberbullying cases in recent times.

There is no doubt that cyberbullying is a serious global concern affecting the most promising population segment of the society (Kwanya et al., 2021). It is causing both social and academic harm to undergraduate students in Kenyan universities. Therefore, there is a need to address it comprehensively to reduce its prevalence and effects on the youth and young adults. Makori and Agufuna (2020) argued that addressing cyberbullying requires an understanding of the factors that contribute to its occurrence. Ndiege, et al. (2020) concur that understanding factors contributing to the occurrence of cyberbullying will assist institutions of higher learning to put in place mechanisms that can help to mitigate it. These mechanisms may result in the implementation of key strategies that can be used to deter perpetrators of the vice while assisting the victims. Considering that there is very little scientific research that has been done on the prevalence of cyberbullying in Kenya (Kwanya et. al, 2021; Ndiege, et al., 2020), this study, therefore, sought to address this gap by investigating factors that influence the occurrence of cyberbullying on Facebook among undergraduate students in Kenyan universities.

Methodology

This section explains and justifies the methodology used to conduct the study which informed this paper. It specifically explains the research approach, design, population and sampling, data collection techniques and instruments, validity and reliability, data analysis and ethical considerations.

Research Design

The study adopted a mixed method which involved collecting, analysing and interpreting both qualitative and quantitative data (Creswell et al., 2011; Kwanya, 2022). Specifically, convergent parallel mixed approach was used to collect both qualitative and quantitative data autonomously yet simultaneously. This approach was suitable for the study because it enriched the diversity and completeness of the data collected. This ensured a comprehensive exploration of important factors influencing the occurrence of cyberbullying in Kenyan universities. The study adopted a cross-sectional survey research design which enabled the collection of data from a huge cluster of respondents at a given point in time. It also enabled the researchers to identify attitudes, comparisons and assessment of variables under study.

Population and Sampling

The population of the study comprised of undergraduate students and deans of students from 49 chartered universities in Kenya. The researchers used stratified and information-oriented purposive sampling techniques to select the actual participants in the study. The universities were first stratified as private and public. From the strata, the researchers purposively selected sixteen (16) public and eight (8) private universities. The selection yielded a diverse ethnic, gender, international, racial and religious population of the undergraduate students. From the selected universities, the researchers used the information-oriented purposive sampling to select class representatives of all academic programs offered in the selected universities to serve as actual respondents in the study. A census was used for the deans of students from the selected 24 universities. Therefore, the actual sample size was 4,494 which consisted of 4470 class representatives and 24 deans of students.

Data Collection Techniques and Instruments

Quantitative data was collected through a semi-structured questionnaire administered to students while qualitative data was collected from the students through focus group discussions and the deans of students using key informant interviews.

Validity and Reliability

This study used test-retest piloting as a way of measuring reliability. Data collection tools were administered to respondents having similar characteristics as those of the sample population to test their usability. The pilot test generated data which was used to refine the data collection tools. Reliability was further enhanced through the use of multiple instruments. Validity was achieved through construct, face and criterion validity.

Statistical Treatment of Data

Quantitative data was analysed using STATA software, version 17 while qualitative data was analysed thematically using ATLAS.ti version 9. Data was presented through tables and word clouds.

Ethical Considerations

The authors sought permission to collect data. They obtained a research permit from the National Commission for Science Technology and Innovation in Kenya. They also sought and obtained the ethical clearance from a registered Institutional Review Board. They assured the participants of the confidentiality and protection of data collected from them. Only the basic demographic information, such as age and gender was captured but with the assurance of ultimate anonymity of the respondents. Furthermore, participation in the study was voluntary as all the participants signed informed consent forms.

Findings and Discussion

From the 4,770 questionnaires that were sent out to students, 3,020 were received back giving a response rate of 63.3%. The response rates for the interviews and focus group discussions were 100%. For the FGDs, one session consisting of 50 students was conducted in each of the targeted 24 universities. All the 24 deans of students from the selected universities were interviewed.

Research Question 1: How prevalent are cyberbullying incidents on Facebook?

Table 1 indicates a total of 2,877 students in the selected universities responded to this question through the questionnaire.

Table 1: 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%)
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 same were asked to indicate whether they had experienced cyberbullying or not. It emerged that a total of 1,551 (53.8%) of the students had not experienced cyberbullying while 1,334 (46.2%)

confirmed that they had experienced cyberbullying. The majority 926 (74.3%) of the students who had experienced cyberbullying confirmed that they were bullied on Facebook while 320 (25.7%) indicated that they were bullied elsewhere.

It also emerged that the majority (1,241) of respondents (51.9%) knew someone who had experienced cyberbullying. A majority (979) of the respondents knew at least five friends who had been bullied on Facebook while 293 knew between 6 and 10 friends who had been bullied on Facebook. Furthermore, 19 knew between 11 and 15, 20 knew between 16 and 20 and 25 knew above 20 persons who had been bullied on Facebook. This indicates a high prevalence of cyberbullying on Facebook.

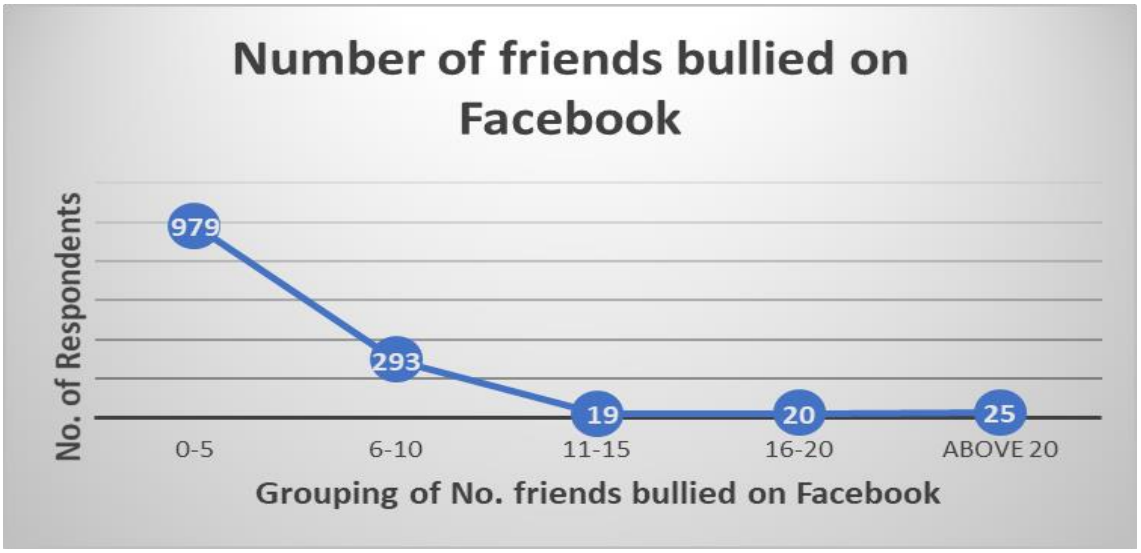

Figure 1: Number of friends bullied on Facebook

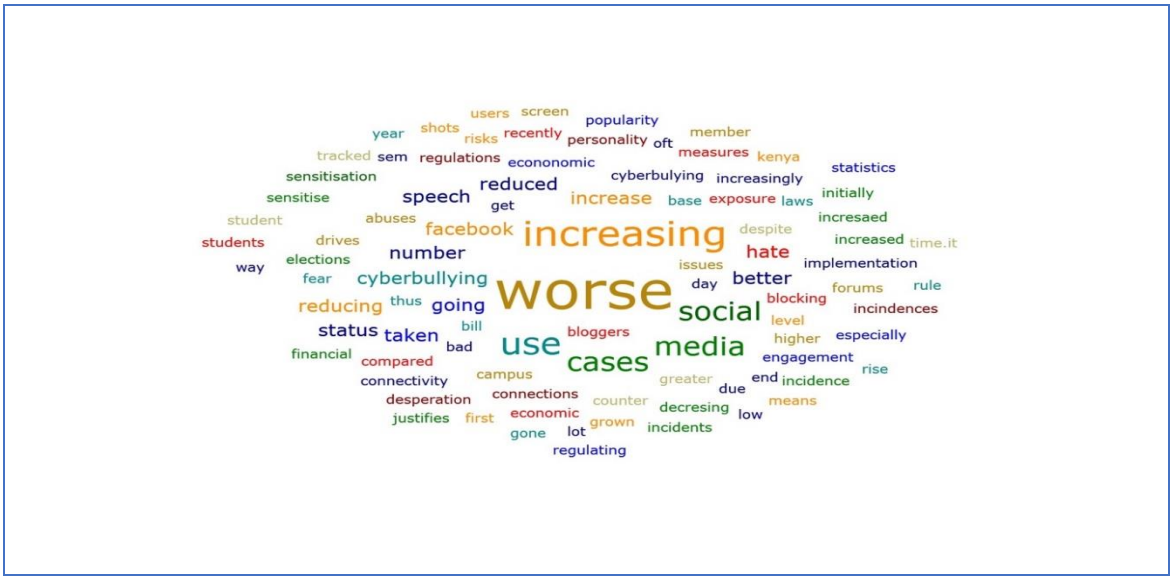

Figure 2: Views on cyberbullying by Deans of Students

All the students who participated in the FGDs confirmed that they had experienced cyberbullying on Facebook. When asked about how widespread they believed cyberbullying on Facebook was, the majority felt that the probability of experiencing cyberbullying on Facebook was about 80%. The deans of students were asked to express their opinion on cyberbullying situation in their universities. The majority reported that cyberbullying was not only prevalent but was actually getting worse in their universities. Figure 1 shows the opinions of the deans in terms of the cyberbullying trends. The more prominent, in terms of size, the word is in the word cloud, the higher the frequency of its occurrence. Thus, most of the deans stated that cyberbullying was getting worse or

increasing as they were resolving more cases related to the vice.

Although only 46.2% of respondents to the questionnaire confirmed that they had been cyberbullied, the FGD participants were of the view that the frequency of cyberbullying was at 80%. Furthermore, the majority (51.9%) of students knew someone who had been cyberbullied. In fact, 79% of these knew at least five persons who had been bullied online. Therefore, this study established that cyberbullying is rampant in Kenyan universities. This concurs with Qudah et al. (2019) who asserted that cyberbullying is prevalent in universities worldwide. Similarly, Shaikh et al. (2020) pointed out that the growing prevalence of the vice has attracted the attention of many scholars. Nwosu et al. (2018) investigated incidences of cyberbullying among undergraduate students in Nigeria and found out that between 48% and 57% of the students had been bullied outside or within the college environment. Other scholars who conducted studies which found that cyberbullying is rampant in universities include Akbulut and Eristi (2011) and Turan et al. (2011) in Turkey, Saleem et al. (2021) in Pakistan, Faucher et al. (2014) in Canada and Finn (2004) in the United States of America. Other countries where cyberbullying in universities has been observed as being prevalent include Egypt (Desouky & Ibrahem, 2015), Saudi Arabia (Khalil etal., 2016), Spain (Lopez-Fernandez, 2017) and India (Soni et al., 2017). Hodgins and McNamara (2019) further argued that prevalence of cyberbullying is typically higher in educational institutions than in other spaces. This echoed Olweus (2012) who termed cyberbullying as a "global pandemic."

Whereas there are many scholars who agree with the findings of this study on the high prevalence of cyberbullying in universities, Molluzzo and Lawler (2014) concluded that cyberbullying was not a very serious issue. Donegan (2012) also pointed out the fact that cyberbullying among the youth varied from country to country. As such, it is not possible to generalise findings and make an objective conclusion on the prevalence of the vice. Nonetheless, this study reveals that Kenya is one of countries in whose universities cyberbullying is prevalent.

Research Question 2: What is the influence of the frequency of Facebook use on cyberbullying incidents on Facebook?

In response to the second research question, table 2 reveals that most of students used Facebook "daily" 1402(48.7%), followed by "sometimes" 611(21.2%), "weekly" 473(16.4%), "hourly" 223(7.7%), and "monthly" 72(2.5%). Some students 98(3.4%) mentioned that they have never used Facebook.

Table 2: 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%)

Table 3: Frequency of Cyberbullying incidents on Facebook among undergraduate students in Kenya

	Male n=1907	**Female n=970**	**Overall n=2877**
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%)

As students were also asked to indicate the frequency of cyberbullying incidents they experienced on Facebook as seen in table 3, the majority reported experiencing cyberbullying "sometimes" 1124 (87.3%). This was followed by

"monthly" 54(4.2%), "weekly" 53(4.1%), "daily" 43(3.3%) and "hourly" 13(1.0%) in that order.

This study found that frequent access to and usage of Facebook increases the likelihood of cyberbullying. Apart from increasing exposure in cyberspace, frequent use of social media platforms leads to the formation of many relationships through friends and more interactions, thus increasing incidents of cyberbullying. The findings are in agreement with the opinions of Brody and Vangelisti (2016) that the more the youth are involved in online communication, the higher the chances of being bullied. The other scholars whose studies have yielded similar results include Dredge et al. (2014), Balakrishnan (2015), Giumetti and Kowalski (2022) and Peluchette et al. (2015). These scholars concur that frequency of Facebook use is closely linked to the prevalence of cyberbullying on the platform. Therefore, the higher the frequency of use, the higher the likelihood of experiencing cyberbullying on Facebook (Cao et al., 2020; Lee, 2017; Sentürk & Bayat, 2016; Uludasdemir & Kucuk, 2019).

There are scholars, however, who posit that level of use of Facebook does not affect the likelihood of experiencing cyberbullying on it. For instance, Zalaquett and Chatters (2014) conducted a study which concluded that no significant relationship exists between frequency of Facebook use and cyberbullying. The other scholars who support this opinion include Sticca et al. (2013) as well as Wiederhold and Riva (2012). Other scholars such as Müller et al. (2018) argued that it is not possible to know whether the frequency of use of social media platforms correlate with the frequency of cyberbullying on them. In spite of the divided opinion on the relationship between frequency of Facebook use and the risk of cyberbullying on the platform, more scholars have confirmed a positive relationship. We, therefore, argue that the risk of experiencing cyberbullying on Facebook is dependent on the frequency of the use of the platform.

Research Question 3: What is the influence of the number of Facebook friends on the occurrence of cyberbullying incidents?

In table 4, most of the questionnaire respondents (2877, 96.1%) reported that they were on Facebook with only 116(3.9%) indicating that they were not on Facebook. Many (885, 31.3%) students who were on Facebook had between 0 and 1,000 friends while 190 (6.7%) had more than 5,000 friends. Overall, about 51.8% of the participants had more than 2000 friends on Facebook.

Table 4: 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%)

Findings revealed that the more friends the students had on Facebook, the higher the likelihood of them being bullied. The emergence of social media sites has enabled university students to form friendships and interact online with many faceless people whom they befriended through such social media platforms like Facebook. However, such interactions have allowed many wrongdoings such as cyberbullying to be more rampant and widespread compared to the traditional bullying (Donegan, 2012). Unlike traditional bullying, perpetrators of cyberbullying can mask their identity making it anonymous and easy to commit their crimes un-identified.

Students in universities in Kenya are most likely making friends on Facebook with strangers. Because the so-called friends are people the students have not met face to face or whose real identity, or faces, they do not know, the students would not be able to know their real intentions or identities. The level of anonymity enabled on social media implies that

unsuspecting students may innocently request or accept friendship from these strangers who may have ill intentions to perpetrate cyberbullying. Some of the reasons for befriending these strangers is social media fame, especially in the era where the more social friends and following one has, the more famous one becomes. A large number of scholars (Cao et al., 2020; Dredge et al., 2014; Marcum et al., 2014; Peluchette et al., 2015) assert that the number of friends one has on Facebook is a strong predictor of cyberbullying. Thus, the more friends one has on Facebook, the higher the risk of being bullied on the platform. However, there are also scholars who opined that the number of Facebook friends only may not influence the risk of being bullied. The likelihood of being bullied may be influenced more by how the students interact with their community of friends than just the mere number of friends (Cho & Yoo, 2017).

Research Question 4: What is the association of number of friends, age and degree course with frequency of cyberbullying on Facebook?

The researchers investigated the number of friends the students had on Facebook with the intention of determining whether the number of friends correlate with the incidences of cyberbullying. The data used the Odd Ratio (OR), Confidence intervals (CI) and P-value. If an OR is greater than 1, the control is usually better than the intervention while if the OR is less than 1, the intervention is better than the control. The CI is used to show the level of uncertainty in the data analysed. This is because data is mostly collected from a sample that represents a population. The p-value is used to indicate if the groups are statistically significant. From the findings, the odd ration based on age indicated that with the respondents aged less or equal to 22 as control, the OR was 1.09 with the P-value of 0.350 and CI of 0.91 to 1.29. Therefore, comparing the respondents aged less than or equal to 22 with those above 22 gives an OR 1.09 95% CI 0.91-1.29. This indicates that the odds of having many friends in Facebook at age of 22 and below are 109% more than when aged above 22 with the true population effect between 129% and 91%. The p-value, however, shows that the results are not statistically significant. In terms of degree courses respondents undertook, the control was social sciences. Comparing social sciences and education gives an OR 1.27 95% CI 1.05-1.52 and p-value of 0.012. This indicates that the odds of having many friends in Facebook by social sciences students are 127% more than those of education with a true population effect of between 152% and 105%. These results are statistically significant (0.012 p-value). This implies that students pursuing social sciences are more likely to have more Facebook friends than those taking education as reflected in Table 5.

Table 5: Association of the number of Facebook friends by age and degree course

	Odd Ratio	p-value	95%	CI
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

This study establishes that the number of friends in Facebook is different based on age groups. The students aged 22 and below are more likely to have more friends compared to those above 22 years old. Worldwide, by April 2022 Facebook was able to reach more users aged 25 to 34 (30%) followed by those aged 18 to 24 years (22%) (Dixon, 2022). This means that there are more users aged 25 years and above hence may tend to be the ones with a high number of friends. In Kenya, according to Dixon (2022), there were 12 million Facebook users by April 2022. Most of these users were aged between 18 and 24 years (35%), followed by 25 to 34 years (34%). Those aged between 13 and 17 years used the platform least. These findings echoed Sopu et al. (2016) who argued that most students in Facebook

who have many numbers of friends are 22 years and below. It is important to note, however, that their research was based on secondary school students, hence not completely in line with the current study. There is no research that has been conducted to substantially differ or concur with the current study results, hence its uniqueness.

Further, the research found out that students aged 22 and below generally experienced cyberbullying in social media. These results echo those of Zalaquett and Chatters (2014) who claimed that youth in the ages of 20 and 25 were 10 times more likely to be affected by cyberbullying than those above 30. Lobe et al. (2021) in another study on cyberbullying in Europe found that children aged 10 to 18 years have already encountered cyberbullying. If the findings of the study are to go by in the Kenyan situation, then cyberbullying may originate before the students join campus. By the time they are in universities, they may just be extending the vice or may continue to suffer from it. Another reason could be that students acquire freedom from their parent's supervision as they transit to college. Armed with mobile devices which they use to access the internet, they may practice the vice the more.

In terms of experiencing cyberbullying on Facebook, those aged 22 and above years were more vulnerable. This is probably due to students having diverse engagements in both social and academic work. However, this study contradicts Demir and Seferoglu (2016) who argued that cyberbullying is influenced by the age of the students and the higher the age, the lesser the tendency of encountering cyberbullying on Facebook. Similarly, Abaido (2020) found that university students in United Arab Emirates aged between 14 and 18 experienced cyberbullying with 54% being on Facebook. There are no significant studies to quantify the differences in terms of age and cyberbullying by undergraduate students in Kenya.

Research Question 5: What is the association of experiencing Facebook cyberbullying with age and degree course?

The researchers probed the association between demographic characteristics of undergraduate students and cyberbullying experience. In terms of age, the age below or equal to 22 was the control. The results for general experience of cyberbullying gave an OR 1.15 95% CI 0.96-1.36 and p-value of 0.124. This indicates that the odd of generally experiencing cyberbullying by students aged below or equal to 22 is 115% more than those aged above 22 with a true population effect of between 96% and 136%. The results are statistically insignificant (0.124 p-value). For those who have experienced cyberbullying on Facebook, the OR 0.94 95% CI 0.72-1.23 and p-value of 0.659 means that the odds of experiencing cyberbullying in Facebook by students aged above 22 is 94% more than those aged below or equal to 22. The data is statistically insignificant because of the p-value of 0.659.

Table 6: Association of experiencing Facebook cyberbullying by age and degree course

	Ever Experienced Cyberbullying				Experienced FB cyberbullying			
	Odd Ratio	**p-value**	**95% CI**		**Odd Ratio**	**p-value**	**95% CI**	
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								
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

In terms of degree course, as seen in table 6, the respondents undertook, the control was social sciences. For ever experiencing cyberbullying, social sciences and education give an OR 1.09 95% CI 0.91-1.31 and p-value of 0.345. This indicates that the odds of ever experiencing cyberbullying by social science students is 109% more than those in education though the results are insignificant as p-value is 0.345. This data is similar in comparison with students undertaking applied sciences and natural sciences. Compared to social sciences, students taking engineering and physical sciences were more likely to experience cyberbullying. Results for experiencing cyberbullying on Facebook,

social science and education give an OR 1.73 95% CI 1.28-2.35 and p-value of 0.000. This indicate that the odd of experiencing cyberbullying on Facebook by social science students is 173% more than those of education and the results are statistically significant with a 0.000 p-value. This is similar to physical science with an OR 2.59 95% CI 0.97-6.91 and p-value of 0.056. therefore, applied sciences students are more likely to experience cyberbullying on Facebook compared to those in social science and the results are statistically significant (OR 0.75 95% CI 0.54-1.04 and p-value of 0.088). The results for those undertaking engineering and natural sciences are statistically insignificant.

The results indicate that students undertaking courses in social sciences tend to have many friends than those taking education, applied sciences and physical sciences. However, they have lesser number of friends than those taking engineering and natural sciences. This can be attributed to the fact that social science students tend to be more interactive compared to physical science students. Therefore, students undertaking social sciences were generally more likely to experience cyberbullying on social media compared to those pursuing education, applied sciences and natural sciences. This can be attributed to the fact that the students from social sciences had more friends on social media, hence more chances of being bullied.

Compared to social sciences, students pursuing engineering and physical sciences experienced more cyberbullying on social media platforms. According to Demir and Seferoglu (2016), the technical prowess exhibited by students taking technical courses contributes to their interactions, hence higher cyberbullying incidents. Junco (2012) argued that parameters such as the student's level of study and the technicality of courses taken are significantly tied. Thus, they have a significant relationship with cyberbullying incidents. Zalaquett and Chatters (2014) differed by stating that having computer proficiency did not influence the occurrence of cyberbullying among college students.

Students undertaking social sciences have a high rate of experiencing cyberbullying on Facebook compared to those taking education and physical sciences. Comparing social science and applied sciences, the applied science students experienced cyberbullying on Facebook more than those in social sciences while engineering students were less likely to face cyberbullying on Facebook. The proficiency of using technological devices by the engineering students could be giving them an upper hand to safely navigate the internet compared to students in other disciplines (Junco, 2012; Demir and Seferoglu (2016). However, there are scholars who argue that how students use social media networks is purely psychological and is strongly related to the desire to communicate, socialise, actively take part in group postings or form social relationships online (Altaany & Jassim, 2013). As such, there can be no prediction of how a particular group of students may experience cyberbullying on Facebook (Bălтereţu & Balaban, 2010).

Conclusions and Recommendations

Conclusions

This study makes the following conclusions based on its findings:

First, most undergraduate students in Kenya's universities had experienced or witnessed cyberbullying. Those who had not had a personal brush with cyberbullying knew a classmate or friend who had experienced cyberbullying which predominantly occurred on Facebook. Therefore, the prevalence of cyberbullying among university students is higher than reported in the studies carried elsewhere. As such, this study found Kenya to be one of countries with the highest prevalence of cyberbullying.

Secondly, undergraduate students in Kenyan universities had a high presence on Facebook and they frequently used it to socialise with many friends. This, among other factors, ultimately led to a high prevalence of cyberbullying they experienced.

Thirdly, the more friends the students had on Facebook, the more interactions they had and the higher the risk of them being cyberbullied.

Fourthly, students aged 22 years and below knew more people who had experienced cyberbullying than those above 22 years. However, students aged 22 years and above had personally experienced cyberbullying more than those aged 22 years and below. The study concludes that age is another factor which determined the prevalence of cyberbullying.

Fifthly, students pursuing education, applied sciences, natural sciences, physical sciences and engineering courses were less likely to experience cyberbullying than their counterparts pursuing social sciences. Thus, the course pursued is a

significant determinant of the prevalence of cyberbullying experienced by university students in Kenya.

Recommendations

From the findings, the study offers the following recommendations:

First, students should be made aware of the prevalence of cyberbullying through a comprehensive sensitisation programme in universities. The sensitisation may be carried out at societal level via socialisation agents in religious institutions and through social media platforms like Facebook.

Secondly, users of Facebook should be cautious about their interactions online by limiting friendships with strangers. The users should also be mindful of their social comments on other people's posts that may constitute or ignite cyberbullying.

Finally, students should be made aware of or reminded to take advantage of technological interventions currently available on social media platforms like Facebook. They can use the security settings to block or report bullying offences.

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