

# Cyber-bullying research in Kenya: a meta-analysis

Cyber-bullying research

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## Abstract

**Purpose** – Cyber-bullying is a form of harassment that is perpetrated using electronic media. The practice has become increasingly common especially with the growing ubiquity of social media platforms. Most cyber-bullying cases inevitably occur on Facebook because it is the most preferred social media platform. However, little is known about cyber-bullying research in Kenya. This paper aims to analyse the quantity, quality, visibility and authorship trends of scholarly publications on cyber-bullying from and/or about Kenya.

**Design/methodology/approach** – This study was conducted as a systematic literature review. A meta-analysis approach was used. Bibliometrics approaches were used to conduct the analysis. Data on the publications was collected from Google Scholar using Harzing’s “Publish or Perish” software and then analysed and presented using Microsoft Excel, Notepad and VOSviewer.

**Findings** – The study yielded 359 research publications on cyber-bullying in Kenya. There was a gradual increment in the number of publications, peaking in 2018. Nearly half of the publications have not been cited indicating low uptake of research on cyber-bullying in Kenya. It also emerged that most of the research has been published on subscription channels thereby restricting their visibility, access and use. Minimal collaboration in research on cyber-bullying in Kenya was also observed since 67.4% of the publications were written by a single (one) author. The authors conclude that the quantity, quality and visibility of research on cyber-bullying in Kenya is low.

**Originality/value** – This is an empirical study. The findings can be used to promote and mainstream research on cyber-bullying in Kenya.

**Keywords** Facebook, Kenya, Social media, Bibliometrics, Informetrics, Cyber-bullying, Research

**Paper type** Research paper

## 1. Introduction

Cyber-bullying is a form of bullying that occurs in cyberspace. It is an emerging aggressive behaviour currently being experienced all over the world (Aricak *et al.*, 2008). Research on cyber-bullying is relatively new and, therefore, there is no unified definition of the phenomenon. Nonetheless, several definitions exist in literature. Laibuta (2019) describes cyber-bullying as the sending, posting or sharing of negative, harmful, false or mean content online about someone to embarrass or humiliate the person. According to Olweus (2012), cyber-bullying is deemed to have occurred when a person makes derogatory comments about other people, pokes fun at them or calls them mean and hurtful names. Also, cyber-bullies may completely ignore or exclude a person from a group of friends on purpose, tell

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lies, spread false rumours or send mean notes about them and try to make other people dislike their victims. Olweus further explains that these actions are construed as bullying when they occur repeatedly. Davidshofer and Murphy (2005) emphasise that in addition to being aggressive, intentional and repeated, cyber-bullying occurs between people with unequal power in cyberspace.

Kowalski *et al.* (2012) view cyber-bullying as a form of social cruelty expressed through online communication using networking or gaming platforms. It is a form of psychological violence intended to cause mental torture to the victims. It inflicts fear and distress through hurtful and derogatory communication (Aricak *et al.*, 2008). In some instances, cyber-bullying activities can cross the social line into unlawful or criminal behaviour such as stalking, threats, harassment, impersonation, humiliation, trickery or exclusion executed using digital communication channels (Feinberg and Robey, 2009). Piotrowski (2012) explains that cyber-bullying is cyber-abuse behaviour intended to harass, embarrass, threaten or socially ostracise victims. He further explains that cyber-bullying triggers negative emotional responses such as sadness, fear, anxiety and humiliation in its victims.

Some researchers have focused on differentiating cyber-bullying from traditional bullying. Domínguez-Hernández *et al.* (2018) argue that cyber-bullying is an incipient phenomenon, which overlaps with traditional bullying. According to Dehue *et al.* (2008), the main difference between traditional bullying and cyber-bullying is anonymity. The internet provides an opportunity for bullies to hide their identity and target individuals without the fear of repercussions. Additionally, online anonymity means that cyber-bullies do not have to rely on physical intimidation to scare their victims. Moreover, they do not need to be stronger or swifter than their victims. Cyber-bullying also differs from traditional bullying in that the evidence of the derogatory attacks is permanent and can be viewed online over and over again. Similarly, cyber-bullying can be remote, widespread and sustained. The victims can be bullied regardless of the place or time because of the ubiquity of the internet and social media. Unlike offline bullying, there is no “safe” place for the victims to retreat to as the bullies can reach them even in the privacy of their own homes (Kowalski *et al.*, 2012).

Kowalski *et al.* (2012) note that there has been an increased prevalence of cyber-bullying, especially among young adults. In his research on the prevalence of cyber-bullying in varied social media platforms, Petrov (2019) found that Instagram had the highest prevalence of bullying at 42%. It was followed by Facebook at 37% and Snapchat at 32%. Dehue *et al.* (2008) report that more girls are bullied than boys. Similarly, they report that boys are more likely to become bullies than girls. Some scholars (Kowalski *et al.*, 2012; Aricak *et al.*, 2008) also concur with this view. However, other scholars (Kowalski *et al.*, 2014; Hinduja and Patchin, 2008; Slonje and Smith, 2008; Beckman, Hellström and von Kobyletzki, 2020) hold the view that there are no statistically significant gender differences in cyber-bullying.

To better understand cyber-bullying, researchers have identified and classified types of cyber-bullying and the specific actions that constitute it. These include:

- *Exposure* – This occurs when a bully exposes private information of the victims, such as mobile phone numbers or home address, leading to them being attacked, scammed or harassed online by other unscrupulous individuals (Ondieki, 2017).
- *Outing* – This involves bullies exposing information about the sexual orientation of Lesbian, Gay, Bisexual, Transgender (LGBT) persons without their consent (Kraus, 2014; Broman, 2018; Berthélémy, 2019).
- *Exclusion or isolation* – This occurs when individuals are excluded from participating in online groups or conversations by their peers (Tryon and Logan, 2015; Ouma, 2020).

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- Impersonation – This happens when a bully creates a pseudo account and uses it to bully a victim without revealing their true identity (Cheruiyot, 2019).
  - Cat-fishing – This occurs when a bully creates fake accounts and uses them to bully or extort money from individuals or have romantic or erotic relationships with victims without revealing their true-selves (D’Costa, 2014; Waring, 2019).
  - Cyber-stalking – This is where the perpetrator persistently contacts and attempts to communicate with the victim despite repeated demands to stop (Gitonga, 2014).
  - Trolling – This happens when the bully starts arguments or upsets victims by starting controversial topics or making aggressive or insulting statements about an individual or topic (Bourque, 2017; Moreau, 2020).
  - Flaming – This occurs when one responds to comments or joins discussions with disparaging, harsh or insulting remarks (Gil, 2020).
  - Vigilantism – This is a form of cyber-bullying in which victims are bullied by a group of individuals because of actions they have undertaken (Laidlaw, 2017; Molloy, 2018; Mohamed, 2018).
  - Shaming – This involves bullies derogating victims over their physical appearance or behaviour (Wambui, 2017).
  - Blackmail – This occurs when bullies threaten to expose nude photos or other embarrassing information unless the victim agrees to pay them or perform certain tasks in their favour (Wolak *et al.*, 2018; Stokel-Walker, 2019).
  - Revenge porn – This is a form of cyber-bullying where a jilted lover or partner threatens to reveal intimate information of the former partner(s) out of malice to cause them embarrassment (Oduor, 2019; Hatimy, 2019; Mugambi, 2019; Wekesa, 2019).
  - Warning wars – These involve bullies wrongly and repeatedly flagging a victim’s account as offensive, explicit, containing nudity or sexual materials thereby causing the accounts to be suspended, blocked or permanently disabled (Meyer, 2014; Ghero, 2019).

Cyber-bullying has detrimental effects on the physical and emotional well-being of the victims. Dehue *et al.* (2008) found that cyber-bullying can lead to physical, social and psychological problems including depression and stress. Kowalski *et al.* (2012) argue that cyber-bullying creates ugly memories that are permanently etched in the victims’ minds and can last a lifetime. These experiences create anxiety, low self-esteem and psychological maladjustment in the victims. Kowalski *et al.* (2014) argue that other effects of cyber-bullying include substance abuse; insomnia; poor performance in school, truancy or dropping out of school; and murder or suicide. Other researchers have identified various negative effects of cyber-bullying on victims which include suicide or suicide ideation (Chang *et al.*, 2019; Hinduja and Patchin, 2019); poor work or academic performance (Yousef *et al.*, 2015); poor mental and/or physical health (Kowalski *et al.*, 2016; Gordon, 2019); substance abuse or alcoholism (Peleg-Oren *et al.*, 2012; Gámez-Guadix *et al.*, 2013); social alienation (Saylor, 2012; Tobin *et al.*, 2015); economic losses (Kim, 2019; Yates, 2017); and aggressive, violent or hostile behaviour (Kejitan, 2019; Wako, 2019).

Strategies that victims use to cope with cyber-bullying vary from one person to another. Most victims adopt passive resistance by ignoring the bullying actions (Dehue *et al.*, 2008; Feinberg and Robey, 2009). However, some victims may take more active approaches including blocking the harasser; reporting the bully to parents or peers; seeking legal

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redress; seeking counselling and therapy services; or disengaging from social network platforms (Arıcak *et al.*, 2008; Kowalski, 2010; Hershenson, 2018; Hinduja and Patchin, 2018; Sasaka, 2018). Domínguez-Hernández *et al.* (2018) argue that cyber-bullying continues to be a problem in society because of the bystander behaviour of people who can help stop it but fail to stand up for the victims. They explain that many would-be “upstanders” become bystanders because of fear of retaliation. Some also become passive unless the victims explicitly seek help from them. They also argue that personal factors such as empathy, moral disengagement and self-efficacy are particularly important in determining the extent to which people who witness cyber-bullying are likely to stand up against the vice and the perpetrators.

The specific objectives of this study were to analyse the quantity, quality, visibility and authorship trends of scholarly publications on cyber-bullying from and/or about Kenya as a means of drawing attention to the vice. Many lives will continue to be affected adversely or lost if appropriate strategies are not developed and deployed to stem the vice. This research, therefore, provides the data needed to anchor these interventions.

## 2. Literature review

The nature, substance and scope of research on cyber-bullying is unclear. Although Piotrowski (2012) reported that research on cyber-bullying, especially among children and adolescents, has proliferated in the recent past, researchers such as Dehue *et al.* (2008) have asserted that scientific research on cyber-bullying is limited. Indeed, Arıcak *et al.* (2008) acknowledged that there is a dearth of research on cyber-bullying and that there is a need for more studies to fill the gaps in the literature on this form of bullying. Olweus (2012) argues that cyber-bullying has not attracted serious scientific research. The main factor that may have contributed to the low levels of research on cyber-bullying is the fact that, as an emerging phenomenon, initial research into it lacked theoretical focus and was fragmented (Kowalski *et al.*, 2014). Additionally, a poor understanding of cyber-bullying has led to the use of inadequate instruments to measure its occurrence or effects. Vivolo-Kantor *et al.* (2014) conducted a systematic literature review on cyber-bullying and concluded that there is inconsistency in the understanding and measurement of cyber-bullying.

Among the themes covered by research on cyber-bullying are its definition (Davidshofer and Murphy, 2005; Kowalski *et al.*, 2014); comparison and contrasts between cyber-bullying and traditional bullying (Sourander *et al.*, 2010; Kowalski *et al.*, 2012); nature or forms of cyber-bullying (Olweus, 2013; Pyzalski, 2011); power games and balances in cyber-bullying (Dooley *et al.*, 2009; Sourander *et al.*, 2010; Kowalski *et al.*, 2014); gratifications, motivations or rewards for cyber-bullying (Vannucci *et al.*, 2012); and demographic aspects of cyber-bullying (Ang and Goh, 2010; Olweus and Limber, 2010; Hinduja and Patchin, 2008; Kowalski *et al.*, 2012), among others. It is evident, however, that majority of these studies have focused on school-going children rather than adults since cyber-bullying was generally portrayed as an extension of school-yard bullying. There is, therefore, a gap in research on cyber-bullying among adults.

The prevalence of cyber-bullying is an aspect of constant debate. There is no consensus on whether cases of cyber-bullying have increased, reduced or levelled out in the recent past. Some researchers, such as Slonje and Smith (2008), hold the view that cases of cyber-bullying have increased with the growing application of information and communication technologies as well as the higher presence of people in cyberspace. Kowalski *et al.* (2012) note that there has been an increased prevalence of cyber-bullying, especially among young adults. On the contrary, Olweus (2012) argues that the prevalence of cyber-bullying has neither increased nor reduced. Despite this difference of perceptions on the prevalence of

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cyber-bullying, [Kowalski et al. \(2014\)](#) assert that it remains serious malpractice affecting society in the digital age.

The demographic aspect of cyber-bullying is not well defined either. This is because existing studies differ on whether demographic characteristics such as gender affect how cyber-bullying is experienced or perpetuated. Nonetheless, [Dehue et al. \(2008\)](#) report that girls are bullied more than boys and that boys are likely to become bullies compared to girls. Some scholars ([Kowalski et al., 2012](#); [Aricak et al., 2008](#); [Sorrentino et al., 2019](#)) also concur with this view. [Abreu and Kenny \(2018\)](#) conducted a systematic literature review on cyber-bullying of LGBT youth. They concluded that sexual minority and gender expansive adolescents are disproportionately more often victims of cyber-bullying than their heterosexual and cisgender counterparts. However, other scholars ([Kowalski et al., 2014](#); [Hinduja and Patchin, 2008](#); [Slonje and Smith, 2008](#)) hold the view that there are no statistically significant gender differences in cyber-bullying.

Many issues are identified as the motivations for engaging in cyber-bullying. These include the urge to retaliate by victims of cyber-bullying ([Hemphill et al., 2012](#)); previous exposure to bullying as either a victim or perpetrator ([Dilmac, 2009](#)); and drive to demonstrate superior technological prowess ([Dooley et al., 2009](#)). Other bullies just do it for the fun of it because of their personality traits. Therefore, people who are narcissistic, exploitative and less empathetic are likely to engage in cyber-bullying for fun ([Steffgen et al., 2011](#); [Fanti et al., 2012](#)). [Kowalski et al. \(2014\)](#) also explain that persons with other maladaptive behaviour are likely to perpetrate cyber-bullying. A closer analysis of the literature has revealed that most of the existing studies have focused more on the victims of cyber-bullying. Consequently, little research has been conducted on cyber-bullies themselves. This can be attributed to the anonymous nature of cyber-bullying. As such, it is difficult to identify online bullies and be able to conduct research on them or understand their motivation for bullying others.

Other factors that affect cyber-bullying include the level of digital technology penetration in a country as well as the existence of mitigating programmes. A study by [Sorrentino et al. \(2019\)](#) in eight European countries (Bulgaria, Cyprus, France, Greece, Hungary, Italy, Poland and Spain) found that cyber-bullying was more prevalent in Bulgaria and Hungary than in Spain. One of the factors the researchers attributed this difference in the prevalence of cyber-bullying in specific territories to is the level of digital technology penetration. Thus, countries with a high population presence in cyberspace inevitably experience a relatively high prevalence of cyber-bullying. The researchers also opined that countries, which have programmes to prevent, detect or mitigate cyber-bullying, such as Spain, experienced relatively lower incidents despite high levels of digital penetration. Another study by [Tsitsika et al. \(2015\)](#) in Spain, Poland, The Netherlands, Romania, Iceland and Greece had yielded similar results. Despite these similarities, [Brochado et al. \(2017\)](#) cautioned that researchers should not rush to generalise findings on cyber-bullying in different countries across the globe. They explain that this is because there is significant variability in the prevalence, nature and consequences of cyber-bullying across geo-cultural territories. Nonetheless, they argue that new research may clarify the inconsistencies in cyber-bullying research findings and, thereby, enhance their likely application in stemming the wave of the vice.

From the foregoing, the authors conclude that research productivity on cyber-bullying is low partly because it is an incipient phenomenon. So far most of the studies have been conducted on children and school-going youth. This is because cyber-bullying is largely considered as an extension of physical bullying in schoolyards. It has also emerged from the literature that most of the studies have focused on victims and less on perpetrators.

Significantly, few studies have analysed the visibility and uptake of research on the subject. Similarly, the literature on the authorship of research on cyber-bullying is limited. Furthermore, perhaps because of the digital divide, research on cyber-bullying from developing countries, especially in sub-Saharan Africa, is minimal. This study seeks to address these gaps in the literature by contributing to the body of knowledge on the productivity, impact and authorship of research on cyber-bullying in developing countries.

### 3. Context, rationale and justification of the study

Kenya is one of the Sub-Saharan countries with a high penetration of information and communication technologies. Referred to as the “Silicon Savannah”, the country exhibits a relatively significant population in cyberspace (Poggiali, 2016). Bramann (2017) explains that Kenya’s information and communication ecosystem is superior, despite it being a relatively poor country. According to the Communications Authority of Kenya (CAK), about 89.7% of Kenyans had access to the internet by September 2019 (CAK, 2019). Further, CAK reports that 90% of Internet usage in Kenya is via mobile phone. In this scenario, inexpensive android phones and widespread access to fibre-optic networks are driving the trend. Furthermore, 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 that users spend on social media standing at 10h per week. Owino *et al.* further explain that Facebook is the most preferred social media platform in Kenya followed by Twitter. Other authors such as Ndavula and Mberia (2012), Owiny *et al.* (2014), Kimemia and Mugambi (2016) and Kamau (2017) concur that Facebook is the most popular social media platform in Kenya.

Although Kenya is one of the countries in Africa with the highest number of social media users, statistics on the nature, prevalence or consequences of cyber-bullying in the country are unknown. Nonetheless, anecdotal evidence suggests that cyber-bullying is increasingly becoming rampant. It is a serious concern affecting the world’s most promising population segment. Recently, many suicide cases in Kenya have been linked to diverse forms of cyber-bullying. In the past year, the COVID-19 pandemic has disrupted people’s ways of life. Because of health concerns and the need to reduce the spread of the coronavirus, most businesses have moved their functions online and encouraged their employees to work remotely. Other sectors of society, such as education, have been greatly affected. Schools worldwide shut down completely or have adopted e-learning. Social and leisure activities, such as sports, religious meetings and travel, have also been restricted. Consequently, there has been an increase in the use of the internet leading to increased vulnerability to cyber-bullying (Karmakar and Das, 2020). The increased dependency on online communication for work, school and leisure means that for a majority of people, being online is now mandatory; hence, they no longer have the option to disengage when facing hostility in cyberspace.

Cyber-bullying is no longer a fringe issue but has become the main concern affecting a majority of internet users. Knowing that most cyber-bullying cases go unreported, this is just the tip of the iceberg. There is a need to address it comprehensively to reduce its prevalence and consequences on the youth and young adults. Addressing the vice requires a clear understanding of its dynamics in specific contexts. This knowledge can be contributed through scientific research yet the body of scientific knowledge about cyber-bullying in Kenya is unknown. Consequently, it is not easy to make any informed recommendations on how to deal with the vice without research data. It is in light of this new reality that this study was conducted. This study, therefore, seeks to address this gap by investigating and

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analysing the quantity, quality, visibility and authorship trends of scientific research on cyber-bullying in Kenya. Cyber-bullying  
research

#### 4. Methodology

This study was conducted using a systematic literature review. This is a purposeful, structured and clearly defined approach to identifying, collecting and reviewing the literature. [Boell and Cecez-Kecmanovic \(2014\)](#) explain that the systematic literature review emerged from and is applied widely in medical research. They add that systematic literature reviews are unbiased and replicable. [Fink \(2005\)](#) perceives a systematic literature review as the explicit and reproducible approach to identifying, evaluating and synthesising the written work of researchers, scholars and practitioners. Despite the use of standardised protocol and criteria, [Okoli and Schabram \(2010\)](#) opine that systematic literature reviews are normally conducted with an open mind. In this study, a meta-analysis type of systematic literature review was applied. [Cronin et al. \(2008\)](#) explain that meta-analysis uses quantitative methods to analyse literature and draw conclusions. [Polit and Beck \(2006\)](#) explain that meta-analysis helps researchers to draw conclusions and detect patterns and relationships from and between literature.

The literature was identified and analysed using bibliometrics approaches. According to [Norton \(2001\)](#), bibliometrics is a method used to measure text and information. The approach uses metadata such as author, date of publication, the channel of publication, citation analysis, as well as keywords. Traditionally, bibliometrics is associated with quantitatively measuring documentary materials. It encompasses all studies seeking to quantify written communication. According to [Wormell \(2001\)](#), bibliometrics is used to evaluate research production. The merits of bibliometrics as a research approach include the fact that it is quantitative and objective; unveils research issues undetected by the other methods; and examines the exchange of knowledge and scientific communication ([Dayu, 2012](#)). However, bibliometrics is not without its demerits. According to [Neuhaus and Daniel \(2008\)](#), one of the demerits emanates from its quantitative nature, which may result in some important perspectives being left out. Bibliometrics may also be manipulated, as there is a view that it is biased towards the big players in scientific publishing. Despite its shortcomings, bibliometrics was considered suitable for this analysis because of its quantitative and objective attributes. It can expose research issues undetected by other methods. Furthermore, it is also able to examine the exchange of knowledge and scientific communication.

Data on scholarly publications on cyber-bullying on and/or from Kenya were analysed. The types of documents analysed were books, journal articles, theses and conference papers. The documents were identified from Google Scholar using Harzing's "Publish or Perish" software. Google Scholar was selected for this analysis because of its liberal inclusion framework and wide accessibility in developing countries. It was useful for literature review because of its ability to obtain data from and across multiple disciplines such as published articles, conference proceedings, grey literature and books. Google Scholar provides a quick way of identifying those who are publishing in a specified field of research. It also provides the options of rating publications in terms of citations. This gives relative weighting of the papers compared to other publications in other fields. Furthermore, Google Scholar, unlike other ordinary databases that have access restrictions, also provides free access to publications. Therefore, the researchers opted for Google Scholar as a suitable tool for literature search. [Piotrowski \(2007\)](#) argues that using Google Scholar as a source of research data may come with some disadvantages including lack of full-text materials, use of non-controlled vocabulary and overbearing search output. Nonetheless, Google Scholar was suitable for this study because it focused only on metadata of the publications and not their full-text content.

A keyword search using “cyber-bullying”, “cyber bullying” and “Kenya” was conducted in “Harzing’s Publish or Perish” software on 1st August 2020. The results were analysed and presented using Microsoft Excel, Notepad and VOSviewer.

**5. Findings of the study**

A total of 984 publications were initially retrieved. This number was reduced to 359 usable publications after data cleaning based on the relevance of the publications to the topic of study. To be included in the analysis, the publication had to be empirical and report the findings of original research. Therefore, citations and media reports were excluded. Similarly, publications on cyber-bullying which were neither about nor published in Kenya were excluded. There were no restrictions on the year of publication. The selected publications had to bear all the keywords in either their titles or content. A total of 359 publications met the criteria for inclusion and were analysed.

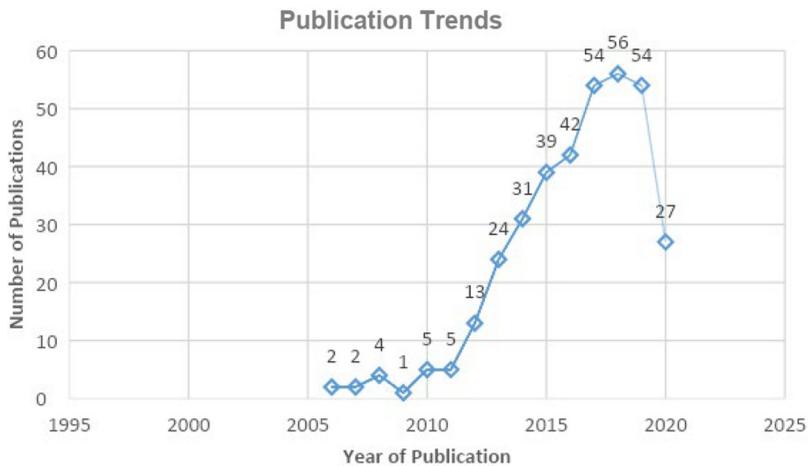
*5.1 Quantity of research on cyber-bullying in Kenya*

From the cleansed data, a total of 359 research works on cyber-bullying in Kenya have been published. The oldest two articles were published in 2006 while the latest (27) were published in 2020. [Figure 1](#) summarises the publication trends of research works on cyber-bullying in Kenya.

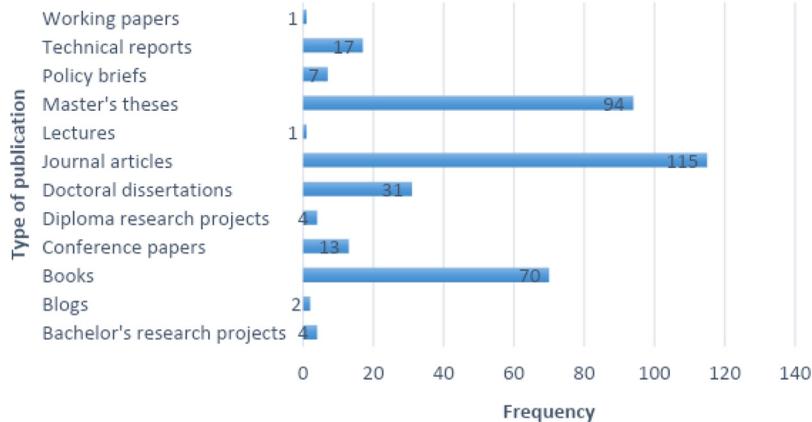
As shown in [Figure 1](#), the number of publications on cyber-bullying in Kenya was on a steady, but gradual increase between 2012 and 2017. The rise peaked in 2018 and then reduced marginally in 2019. Given the current count of 27, it is unlikely that the number of publications in 2020 will surpass the peak of 56 publications witnessed in 2018.

The steady increase in the number of publications on cyber-bullying in Kenya coincides with the growth of Internet penetration in the country. The higher the number of people on the internet, the higher the likelihood of cybercrimes, including cyber-bullying. The steady rise also coincides with the period of an exponential increase in the ubiquity of social media platforms as well as the population of Kenyans found on them.

The majority (115) of the publications were journal articles. The other major publication types were Master’s theses (94), books (70), doctoral dissertations (31), technical reports (17) and conference papers (13) ([Figure 2](#)). The high representation of journal articles in the collection of



**Figure 1.** Trends of publications on cyber-bullying in Kenya between 2006 and 2020



Cyber-bullying  
research

**Figure 2.**  
Types of publications

research outputs can be attributed to the premium value laid on them by the [Commission for University Education \(2014\)](#) appointment and promotion standards in which each journal article is assigned higher points than other publication types. Therefore, scholars, especially those in educational institutions, prioritise this type of publication to earn maximum points necessary for promotion or tenure. A surprising dominant type of scholarly publication is Master's theses (94). Most of these theses have been written in local universities on diverse subject areas including counselling psychology, education, information technology, criminology and sociology, among others. This demonstrates the fact that cyber-bullying is a multidisciplinary phenomenon. There is also a sizeable number of doctoral dissertations. However, as opposed to the Master's theses, the dissertations have been written by candidates from all over the world on a wide variety of subjects. The large number of postgraduate theses and dissertations (125) implies a rising interest in cyber-bullying as a researchable topic. The fact that candidates can identify gaps in the existing body of knowledge on the subject demonstrates the need for further research on cyber-bullying in Kenya. It was discernible, however, that the large number of theses and dissertations has not resulted in a correspondingly high number of journal articles or conference papers. There is a need, therefore, for strategies to turn theses and dissertations into journal articles or conference papers to increase the visibility and uptake of the issues studied by the students.

### 5.2 Themes in cyber-bullying research in Kenya

The themes covered in the publications are varied. An analysis of the keywords in the titles of the publications indicates that "Kenya" is the most common keyword appearing in 72 research works. This is followed by case studies (21), social medium (19), impact (18), violence (18), child (16), school (15) and social media (12). Other prominent themes include; gender (9), girl (9), bullying (8), education (8), secondary school (8), youth (7), hate speech (5), cybercrime (4), adolescence (3), cybersecurity (3) and sexual violence (3), among others ([Figure 3](#) depicts the results).

These themes underlie the issues of cyber-bullying in Kenya which scholars have investigated through scientific research since 2006. It is discernible from the list that most of the studies have revolved around the safety concerns of children, adolescents and youth. There is also a gender perspective to the concerns where girls have also featured prominently.



Citations	Authors	Title	Year	Publisher
420	S Lewandowsky, UKH Ecker, J Cook	Beyond misinformation: Understanding and coping with the “post-truth” era	2017	Elsevier
264	P Olson	We are anonymous	2013	Random House
171	G Walsham	ICT4D research: Reflections on history and future agenda	2017	Taylor and Francis
136	AH Foxman, C Wolf	Viral hate: Containing its spread on the internet	2013	Macmillan
129	F Leach, S Humphreys	Gender violence in schools: Taking the ‘girls-as-victims’ discourse forward	2007	Taylor and Francis
98	H Saini, YS Rao, TC Panda	Cyber-crimes and their impacts: A review	2012	academia.edu
96	M Pinquart, R Kauser	Do the associations of parenting styles with behaviour problems and academic achievement vary by culture? Results from a meta-analysis.	2018	psycnet.apa.org
77	N Riestenberg	Circle in the square: Building community and repairing harm in school	2013	Elsevier
69	N Jones, K Moore, E Villar-Marquez, E Broadbent	Painful lessons: The politics of preventing sexual violence and bullying at school	2008	eccnetwork.net
64	S Walklate, G Mythen	Contradictions of terrorism: Security, risk and resilience	2014	Routledge

**Table 1.**  
Top-ten most cited publications on cyber-bullying in Kenya

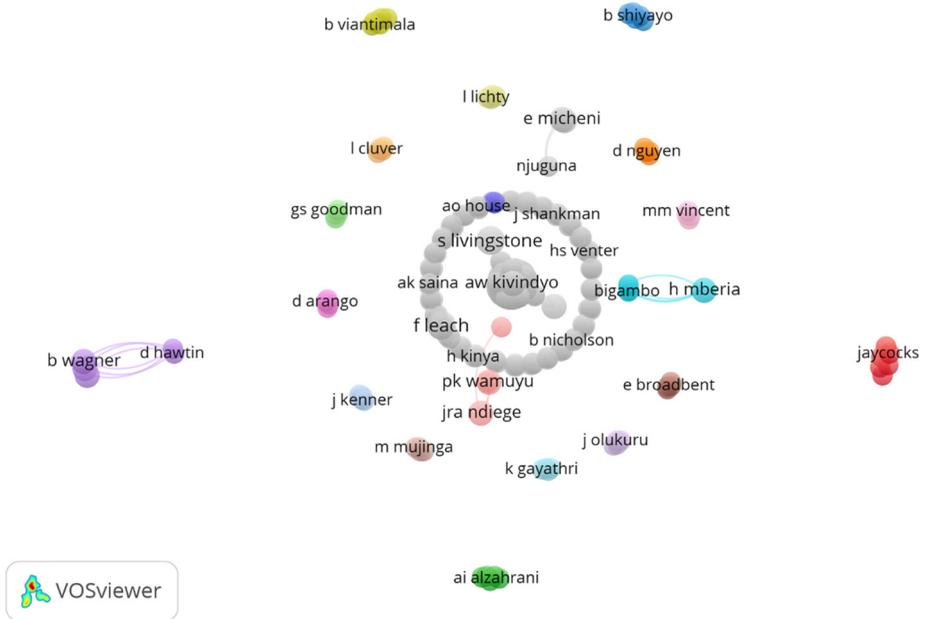
Looking at the findings, the majority of the works have been published in subscription channels. This, in terms of visibility, is both an advantage and a disadvantage. It is an advantage because most subscription channels are high impact platforms which guarantee better scholarly visibility. However, the downside is that they limit access to the publications thereby restricting visibility. Therefore, the visibility of the publications on cyber-bullying in Kenya can be said to be low. This partly explains the low uptake and citation of the research products.

A wide use of digital institutional repositories to “publish” theses and dissertations was observed. Local universities have made a good effort to promote the use of open access institutional repositories. Nonetheless, conspicuous use of repositories was observed more among the leading universities such as the University of Nairobi and Kenyatta University. The other universities were, however, relatively invisible.

### 5.5 Authorship of research on cyber-bullying in Kenya

Most 242 (67.4%) of the publications have been written by a single (one) author. This is followed by those written by two authors (61), three authors (37), four authors (9), five authors (9) and six authors (1). This indicates minimal collaboration amongst the authors. It also implies less convergence of views on the issues related to cyber-bullying in Kenya.

As can be seen from [Figure 4](#), authors of research outputs on cyber-bullying in Kenya have not collaborated much with each other. Consequently, no tangible social networks among them are discernible. There are only four small networks. On the bottom left of the



**Figure 4.**  
Co-authorship on  
cyber-bullying in  
Kenya

sociogram (Figure 4) is a network between B Wagner, T Mendel, A Puddephatt and D Hawtin. Nearly in the same position to the right is another network coalescing around H Mberia and consists of O Bigambo, AW Munuku, J Ndavula and GS Sikolia. Another network can be seen at the bottom of the centre coalescing around JRA Ndiege and consisting of PK Wamuyu, G Okello, and PW Kanyi. A fourth network coalesces around E Micheni and consists of J Murumba and A Njuguna.

There is evidence from empirical research that co-authorship results in higher quality research products (Hilmer and Hilmer, 2005; Hart, 2007; Andrade *et al.*, 2009; Franceschet and Costantini, 2010; Bidault and Hildebrand, 2014). Franceschet and Costantini (2010) argue that research collaboration and co-authorship is inevitable. Bidault and Hildebrand (2014) explain that co-authorship provides a mechanism for junior academics and researchers to be mentored by their senior colleagues. This ultimately increases the quality of research and its products. Given the low degree of collaboration as demonstrated by less co-authorship of publications, research products on cyber-bullying in Kenya are less likely to be of the best quality possible. The low collaboration may have also contributed to low visibility, hence low citations.

## 6. Discussion of the findings

The findings showed that the quantity of publications on cyber-bullying in Kenya has increased over the years. This implies increasing research interest on the subject. According to Donegan (2012), the emergence of bullying in society is immemorial and is founded on social structures and competition in communities. Interest in cyber-bullying has increased because emerging technologies have provided a platform for traditional bullying to expand, mutate and become more elusive. Therefore, more research on the subject is emerging in an attempt to understand the vice and, hopefully, mitigate it. These findings also lend credence

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to the argument put forth by authors such as [Slonje and Smith \(2008\)](#) as well as [Kowalski et al. \(2014\)](#) that cyber-bullying has increased in tandem with the increasing use of information and communication technologies in society. [Kowalski et al. \(2014\)](#) further asserted that cyber-bullying is a serious malpractice affecting society in the digital age and, thus, has attracted the attention of scholars in recent years. Despite the growing research interest on the subject, [Olweus and Limber \(2018\)](#) argue that research on cyber-bullying has resulted in inconsistent results and exaggerated claims. Therefore, they recommend more research to build coherent body of knowledge on the subject. Consequently, it is the thesis of this paper that research on various aspects of cyber-bullying is inconclusive. There is, therefore, need for more research on the subject, in Kenya and beyond.

From these findings, the authors also conclude that interest in cyber-bullying in Kenya has increased since the new Millennium. A saturation point was seemingly reached around 2018 when the production of scholarly literature on the subject levelled out. Kenya promulgated a new constitution in 2010. The constitution has a bill of rights which kicked off debate on personal liberties, which resulted in the enactment of the Computer Misuse and Cybercrimes Act (2018). Although the law does not comprehensively address cyber-bullying, it is one of the legal frameworks executed to address the vice, among other cybercrimes in Kenya ([Kakah, 2018](#)). Therefore, it is possible that the discussions on cyber-bullying stimulated research prior to 2018 but the interest subsided with the enactment of the cybercrimes law. Some sections of the law have been challenged in court as limiting freedom of speech but a determination is yet to be made ([Laibuta, 2019](#)). The rise in the number of publications on cyber-bullying in Kenya in 2017 and 2018 may also have been caused by fiery campaign rhetoric before, during and after the 2017 general elections in the country. In fact, the enactment of the law on cyber-crimes was also influenced by the rise of online hate speech and fake news witnessed in the country during the electioneering period. Given the growing number of Kenyans in cyberspace due to reduced Internet connection costs and the commonness of smartphones, it is expected that new concerns and perspectives regarding cyber-bullying will emerge. This will inevitably lead to the need for more research publications and result in growth in their quantity.

The findings of the study reveal research themes which are similar to those conducted elsewhere. These include describing the concept of cyber-bullying ([Davidshofer and Murphy, 2005](#); [Kowalski et al., 2014](#)); cyber-bullying versus traditional bullying ([Sourander et al., 2010](#); [Kowalski et al., 2012](#)); forms of cyber-bullying ([Olweus, 2013](#); [Pyzalski, 2011](#)); and motivations for cyber-bullying ([Vannucci et al., 2012](#)). Nonetheless, it was also evident from the findings that some perspectives on cyber-bullying are inadequately covered by current research in Kenya. They include theories on cyber-bullying; elements of cyber-bullying; legal and legislative frameworks; measurement of occurrences and effects of cyber-bullying; demographic perspectives of cyber-bullying; and strategies for coping with cyber-bullying. It was also evident that the majority of the current studies have focused on school-going children rather than adults, as cyber-bullying was generally portrayed as an extension of school-yard bullying. Therefore, there is a gap in research on cyber-bullying among adults.

The findings revealed low citation of research on cyber-bullying from Kenya. Many factors explain citation of research. One of the factors is co-authorship of research. Indeed, from [Table 1](#), it is evident that seven out of the top ten most-cited publications were written by multiple authors. This confirms the view that co-authorship, whether local or international, results in higher citations due to perceived better quality of publications and visibility ([Schmoch and Schubert, 2008](#); [Bosquet and Combes, 2013](#); [Card and DellaVigna, 2020](#)). [Ding \(2011\)](#), however, argued that most of the highly cited authors do not necessarily

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collaborate but closely cite each other. Glänzel and Thijs (2004) explain that co-authorship inflates the number of citations through self-citations. Another issue, which influences citations is geo-cultural biases (Bormann, 2017; Struck *et al.*, 2018; Thelwall and Mafahi, 2020). It is evident from Table 1 that none of the top-ten most cited publications has been authored by indigenous Kenyans. Additionally, the studies are not entirely focused on Kenya. In fact, Kenya is just one of the countries covered by the publications either in a global or Sub-Saharan context. Thus, local studies are eclipsed by the buzz about cyber-bullying in the country. Therefore, the local voices on the issues of cyber-bullying are hardly heard.

The findings revealed a low use of open access channels of publishing, such as institutional repositories. Several factors can be blamed for the low use of institutional repositories by researchers in Kenya. These include lack of awareness about the value of repositories in opening access to scholarly works (Moseti, 2016; Ratanya, 2017); ineffective recruitment of content (Chilimo, 2016); inadequate institutional policies (Chilimo, 2015); and lack of technical skills to self-archive research work on institutional repositories (Ratanya and Muthee, 2018). Knowing that research on cyber-bullying could be going on in the less visible universities, the products of such research are unlikely to be seen or applied due to their low visibility.

## 7. Implications of the study

Given the low number (7 out of 359 publications) of policy briefs retrieved, this study can catalyse national policy and legislative developments that can go a long way to preventing or reducing cyber-bullying. Currently, there is a law on cyber-crimes in Kenya, but it is vague and has elicited controversies in interpretation and application. By highlighting the areas of discussions and interest on cyber-bullying by other researchers, this study provides a clear perspective on cyber-bullying that can be used by legislators in Kenya to draft a cyber-bullying bill. The study also identifies knowledge gaps in cyber-bullying. Thus, it informs scholars of potential areas of research on the subject. Similarly, the study takes cognisance of the fact that there is less collaboration in publishing on cyber-bullying. This study identifies that gap that informs potential scholars on the need to collaborate to enhance the visibility and quality of their research.

The study identified 359 research publications on cyber-bullying in Kenya. As much as it shows a gradual increase in the number of publications over the years, especially in 2018, nearly half of the publications have not been cited indicating low uptake of research on cyber-bullying in Kenya. It also emerged that most of the research done on cyber-bullying was published on subscription channels, thereby restricting their visibility and access and hence, low quantity and quality of research on cyber-bullying in Kenya. The findings of the study can be used to create awareness of literature on cyber-bullying research by proposing that dissemination of findings should be done through other channels such as conferences, open access publishing and social media platforms, among others, to increase awareness of cyber-bullying research.

This study revealed limited research on theoretical frameworks of cyber-bullying research. Knowing the significance of theory to research, the findings of this study can be used to encourage researchers to develop theories, models and conceptual frameworks to anchor research on cyber-bullying. Given that cyber-bullying is multidisciplinary in nature, projects on research theories on the subject may spur collaboration among researchers from different fields. The theories may emerge from psychology, journalism and media, computer science, information technology, health sciences and sociology, among others. Considering

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the research themes covered, this paper proposes the use of critical philosophical worldview to underpin theories in this research topic.

## 8. Recommendations

Based on the findings of the study, the authors propose as follows:

- Kenya should mainstream cyber-bullying in the research agenda in universities to increase interest and output on the subject. The National Research Fund is encouraged to prioritise research on cyber-bullying as a means of cushioning young people from negative social and academic effects of the vice.
- Universities, research institutions, as well as research funders should promote and encourage open access publishing as a means of increasing visibility of research products on cyber-bullying in Kenya.
- Local institutions, especially universities, should establish academic journals in which local researchers can publish their work. Local journals will encourage indigenous Kenyans to publish their research findings on cyber-bullying, as they (journals) will have terms and conditions which are contextually primed for local researchers.
- Universities and other research agencies or regulators such as the National Commission on Science, Technology and Innovation (NACOSTI); Commission for University Education (CUE); and National Research Fund (NRF) should encourage co-authorship and social networking among academics and other researchers in Kenya. Increased collaboration will enhance the quality, quantity and visibility of research products through peer learning and benchmarking. Research collaboration will also attract greater attention to cyber-bullying as a societal concern of modern times. This attention is likely to improve efforts to mitigate the vice thereby reducing the prevalence and consequences of the crime on the population, especially the youth and young adults.
- Besides the efforts to increase citations and other scholarly impacts of research on cyber-bullying, there is a need for increased conversations between researchers and policymakers. From the data, only seven policy briefs were retrieved out of the 359 publications. Greater involvement of policymakers and implementers in the conduct and uptake of research is likely to increase the application of the knowledge generated to address cyber-bullying. Researchers are encouraged to comprehensively repackage and disseminate their findings to policymakers to favourably influence policy formulation and execution as a means of mitigating cyber-bullying.

## 9. Conclusion

Cyber-bullying is an emerging concern that should be, among other strategies, addressed through scientific research. Unfortunately, research production on the subject is relatively low globally. Kenya exhibits similar trends in the number of research outputs on the subject. Furthermore, more than half of the available publications on the subject in Kenya have not been cited at all. This can be attributed to many factors. However, the usability of the papers is largely driven by their quality. Therefore, it can be concluded that the quality of scientific publications on cyber-bullying in Kenya is relatively low. Similarly, the uptake and citation of the publications is further compromised by low visibility given that most of the works are published by subscription publishers. It also emerged from the data that most of the authors

of the scientific publications on cyber-bullying in Kenya do not collaborate adequately with each other. The authors, therefore, conclude that the quantity, quality, visibility and authorial collaboration of research publications on cyber-bullying in Kenya is low.

### 10. Suggestions for future research

One of the factors that have contributed to low levels of research on cyber-bullying is the fact that it is an emerging phenomenon. As reported by Kowalski *et al.* (2014), research on cyber-bullying is fragmented and lacks theoretical focus. The authors identify the need for studies that can contribute to the development of a unified theoretical approach and key concepts on cyber-bullying. Such studies can also help in developing a consensus on the definition and nature of cyber-bullying, among other issues.

This study was conducted using a bibliometrics approach wrapped around a systematic literature review of publications indexed in Google Scholar. Recognising the limitations of Google Scholar, there is a need for studies using other databases such as Web of Science and Scopus, among others. Studies using other research designs, methods and tools are also recommended to identify perspectives not fully covered in this study.

Further research is also recommended on the under-studied issues identified earlier. These include theories on cyber-bullying; elements of cyber-bullying; forms of cyber-bullying; legal and legislative frameworks; measurement of occurrences and effects of cyber-bullying; demographic perspectives of cyber-bullying; and strategies for coping with cyber-bullying.

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