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Sylvia Tuikong

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Résumé de l'article

The internet has become an essential resource for social interaction among children, but it brings with it both advantages and disadvantages that depend in part on how it is used. This study, which is anchored in social learning theory, employed a desktop review of existing literature that focused on Kenya but covered global and other regional levels as well. The study found a number of benefits of the internet for children: updating family and friends on new developments in the children's lives, reviewing photos and other records of past events, engaging in online interactions, and increasing their capacity for learning. Nonetheless, there are also internet-specific risks, such as access to inappropriate content and unsafe interactions with other children or adults. Other risks include "digital kidnapping" and contact with perpetrators who encourage children to engage in sexual activity. Although some countries have policies on internet usage, few have specific policies or guidelines addressing children's vulnerability when sharing their pictures online. Moreover, most such policies are not applied in practice, especially in African countries. The study recommends developing and implementing policy frameworks to protect children online and using privacy settings to protect their information.

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Abstract: The internet has become an essential resource for social interaction among children, but it brings with it both advantages and disadvantages that depend in part on how it is used. This study, which is anchored in social learning theory, employed a desktop review of existing literature that focused on Kenya but covered global and other regional levels as well. The study found a number of benefits of the internet for children: updating family and friends on new developments in the children's lives, reviewing photos and other records of past events, engaging in online interactions, and increasing their capacity for learning. Nonetheless, there are also internet-specific risks, such as access to inappropriate content and unsafe interactions with other children or adults. Other risks include "digital kidnapping" and contact with perpetrators who encourage children to engage in sexual activity. Although some countries have policies on internet usage, few have specific policies or guidelines addressing children's vulnerability when sharing their pictures online. Moreover, most such policies are not applied in practice, especially in African countries. The study recommends developing and implementing policy frameworks to protect children online and using privacy settings to protect their information.

Keywords: technopanic, real risk, children's pictures

Sylvia Tuikong PhD is a senior lecturer in Peace, Conflict Studies, and Psychology as well as the Director, Quality Assurance and Accreditation at Daystar University, P.O. Box 44400-00100, Nairobi, Kenya. Email: stuikong@daystar.ac.ke

The pervasive global digital environment that today's children must learn to navigate presents new parenting challenges (Brosch, 2016). Parents are increasingly using social media networks such as Facebook to "share the joys and challenges of parenthood and document children's lives publicly.… Many children have a plethora of pictures, posts and updates about their lives on social media before they can even walk" (Brosch, 2016, pp. 225–226). This practice is called "sharenting", a term coined by Leckart (2012) in a headline in the Wall Street Journal that asked, "Are you a mom or dad who's guilty of 'oversharenting'?". In spite of such concerns, the sharing and public display of personal information about children by caregivers through social network sites is growing daily, as indicated in numerous studies.

A survey done in Michigan, United States (C. S. Mott Children's Hospital National Poll on Children's Health, 2015) indicated that 56% of mothers and 34% of fathers shared information related to childcare on social networks (para. 3). The survey also found that:

> The majority of parents who use social media (74%) know of another parent who has shared too much information about a child on social media, including parents who gave embarrassing information about a child (56%), offered personal information that could identify a child's location (51%), or shared inappropriate photos of a child (27%). (para. 6)

As they grow older, the child may come to find the shared information humiliating. For example, the Family Online Safety Institute (2015) surveyed 589 U.S. parents of 6- to 17-year-olds and found that 1 in 10 parents said that "their child asked them to take down something they posted about the child" (p. 22).

Technological advancement has put camera phones in the hands of many caregivers: sharing photos now ranks at the top among practices prevalent on social media (Brosch, 2016). A survey of 404 Polish parents revealed that 21% uploaded a photograph or video of their child to the internet once a week or more (Sas, 2020). In an article for *Good Housekeeping* magazine, Lombardi (2022) also advanced this point of view, indicating that the average parent shares almost 1500 images of their child before the child's 5th birthday.

Globally, internet use among children has become widespread; it may be expected to have benefits and risks for them, depending on which online activities they pursue (Bulger et al., 2017). In Europe, "The internet is somehow inscribed in the everyday lives of young people, since 60% of 9- to 16-year-olds use the web every day or almost every day" (Wojniak & Majorek, 2016, p. 132). As far back as 2009, a survey comparing the activities of Japanese and American children on the internet determined that, "About 80% of American children use the Instant Messenger (IM) and 70% use the social networking services (SNS), but for Japanese children, only 20% use IM and 10% use SNS" (Kanoh, 2009, p. 912).

In Nigeria, Nkordeh et al. (2017) noted that while university students did use social media for online learning, communicating with friends was the dominant use, as well as posting and viewing photos, joining groups, and watching movies, and that this mix of activities had had "a negative impact on the reading culture of Nigerian youths" (p. 225). Ravalli and Paoloni (2016) noted that, "In Argentina, 45% of adolescents [had] used the internet for the first time before the age of 10" (p. 16), and that nearly all adolescents used social media, especially Facebook. The same study found that both adults and adolescents regarded "loss of privacy, given the excess of personal and family information posted on the web" (p. 30) as one negative consequence of heavy internet use.

Phyfer et al. (2016) showed that the widespread use of the internet was changing how children live and interact with their friends in South Africa, where most children have access to the internet in schools and homes. Children who used the internet highlighted "the importance of the internet to school work and broadening their knowledge on various subjects, accessing entertainment, socialising and access to educational opportunites" (p. 23). Phyfer et al. (2016) also reported that some children as young as 6 were using the internet, although "the average age at which participants started using the internet was 11.7 years" (p. 16).

According to Pavlick (2017), Kenya leads internet usage in Africa: the Communications Authority of Kenya is cited as reporting that "mobile penetration now stands at 88%, while internet penetration is at 74% — 9 out of 10 Kenyans have a mobile device and 7 out of 10 can access the internet" (para. 2). The current study has a focus on Kenya because, in spite of this extensive use of mobile devices and the internet in the country, there is a scarcity of studies on the risks and benefits of internet usage for children in the Kenyan context.

This study was guided by social learning theory, originated by Albert Bandura in 1969 (Bandura, 1969). Social learning theory holds that knowledge is a cognitive process in a social context and that learning can occur either through observation or instruction (Akers, 2011). According to Ahn et al. (2019), social learning entails people learning by observing other people, considering noticeable effects experienced by those people, and rehearsing (first mentally) what could occur in their own lives if they adhered to other individuals' actions; in doing so, people can compare their own experiences with those of others. Oyero and Oyesomi (2014) supported these views, noting that "whatever children learn while watching cartoons, they tend to act out, thereby influencing their mode of socializing with other children and with the world in general" (p. 97).

Social learning theory can frequently aid in identifying and treating the sources of specific actions. The theory describes human behaviour in terms of a continuous mutual interface "between cognitive, behavioral, and environmental determinants" (Bandura, 1977). The theory has been used extensively to understand aggression and psychological disorders, especially with regard to behaviour modification. It is also the theoretical foundation for behaviour modelling, which is widely used in training programs. For these reasons, social learning theory provided a crucial basis for the research described in this study.

Today we live in a digital age in which access to the internet, new technologies, and new services is rapidly growing. As young people become ever more active in the online environment, they are increasingly exposed to external influences, creating a "need for the state, stakeholders and other key persons in a child's life to ensure that the child is protected against possible harm" (National Council for Children's Services, 2010, p. 14). As a result, some countries have developed strategies and policies to protect children online by limiting the collection and use of personal information about children by the operators of internet services and websites. One important law designed to protect children is the Children's Online Privacy Protection Act (COPPA) in the United States (Federal Trade Commission, 1998). Widespread internet usage makes such policy frameworks essential for protecting the vulnerable, especially children. However, Hannah (2022) and Andrews et al. (2020) stated that, even though COPPA has been around for 20 years, protecting children's privacy online faces "challenges with ensuring verifiable parental consent and keeping up with emerging technology" (p. 11). In Europe, the European Union established the Safer Internet Plus Programme to promote safe use of the internet, mostly by monitoring and filtering undesirable content that might negatively influence children's psychological or moral development (Hasebrink et al., 2009).

The United Nations Convention on the Rights of the Child (CRC; 1989) established that children have the right "to be protected from abuse or exploitation [and] to have their privacy protected" (Santos Pais & Bissell, 2006). In discussing the aging of the CRC, Veerman (2010) pointed out that the rights of children need to be recognized, that children can participate in their own protection, and that there is a need to focus on prevention of, and response to, child abuse, neglect, violence, and exploitation.

Data Protection in Africa

As users and companies increasingly rely on the internet to transmit and store private information, governments and other stakeholders all over the world are expected to have put in place policies and mechanisms that protect children. Deloitte (2020) reported that well over half of African countries have some form of legislation, either in place or in development, governing the privacy and security of personal digital data (p. 5).

In Kenya, the Data Protection Act was passed in 2019 to protect against the misuse of online data (Deloitte, 2021). The Act maintains that "every data controller or data processor shall ensure that all personal data is processed lawfully, fairly, and in a transparent manner in relation to any data subject" (Republic of Kenya, 2019, Part IV, 25b). As well, the government has in place the Kenya Computer Incident Response Team Coordination Centre[1] (KE-CIRT/CC) whose goal is to report cybercrime criminal incidences experienced online. This is a collaboration between government agencies and international organizations, and has a designated section within the KE-CIRT to handle children's complaints relating to cybercrime (Okuku et al., 2015).

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[1] https://ke-cirt.go.ke/

Additionally, some countries in Africa have put in place data protection authorities (DPAs; Deloitte, 2020), a type of agency that oversees the application of a country's data protection laws. Deloitte (2020) characterized the use of DPAs "in countries such as Ghana and Mauritius as being more robust due to recent action taken or fines issued for non-compliance with relevant personal data protection legislation" (p. 8). In Senegal and Tunisia, meanwhile, "there have not been any reports of particularly robust DPA activity" (Deloitte, 2020, p. 8). The creation and application of DPAs throughout Africa generally has been similarly inconsistent (Deloitte, 2020).

The legislative environment is also varied. In the Nigerian constitution, Section 8 of the Child Rights Act provides for children's right to privacy, and Section 23 of the Cybercrimes Act 2015 punishes child pornography; it also criminalizes cyberbullying. In Rwanda, the Rwanda Child Online Protection Policy is designed to mitigate against those risks and harms and deliver a framework that meets children's needs and fulfils their rights while enabling them to navigate the digital environment safely and confidently. However, in many African countries where such policies exist, including Kenya, they have not been implemented effectively or efficiently (Deloitte, 2020; Greenleaf & Cottier, 2018; Okuku et al., 2015) and do little to strengthen children's safety online.

Technopanic?

Steinberg (2017) indicated that as parents share information online about parenting, they "shape their their children's digital identity long before these young people open their first e-mail" (p. 839). Such exposure without the children's consent ignores their right to privacy and continues to affect them as they grow up. Steinberg further observed that:

> Parents act as both gatekeepers of their children's personal information and as narrators of their children's personal stories. This dual role of parents in their children's online identity gives children little protection as their online identity evolves. A conflict of interests exists as children might one day resent the disclosures made years earlier by their parents. (p. 839)

Are such worries about the practice of sharing children's pictures online just "technopanic"? Wheeler (2015) explained technopanic as an unreasonable fear of what technology might bring to society, including such common problems of internet use as exposure to pornography and other undesirable content, the danger of contact with pedophiles, cyberbullying, and sexting (sending sexually explict photos and texts). Wheeler pointed out that these are all issues of concern to those responsible for protecting children. In the current study, "technopanic" means a moral panic that occurs due to the rapid emergence of internet usage globally, especially among children. This study therefore aims to assess the benefits and risks of sharing children's pictures and information online — whether by parents or other caregivers, or the children themselves — to examine whether concerns raised about the practice reflect a real risk or are mere technopanic.

Methodology

This article began as a paper presented at the 4th Regional Parenting Conference: Embracing Technology for Safety of Children in Care Settings, which took place in Malawi in October, 2017 (Tuikong, 2017). I employed a desktop review of the published literature in the subject area at the global and regional levels, and also with specific regard to Kenya. This was significant for making comparisons and developing a broad understanding of the views of other scholars. The study designs that had been used in the reviewed literature included quantitative, qualitative, and mixed methods. Published studies were preferred under the assumption that they are likely to be of a higher quality than those in the grey literature. Available and accessible literature was reviewed until the saturation point was reached — when no new information or themes were observed (Randolph, 2009). Google and Scopus were used to search for studies with the terms and phrases "publishing children's pictures online" and "children and online risks". Google Scholar returned 837,000 hits on articles related to the phrase "children and online risk", and the phrase "publishing children's pictures online" returned 693,000 hits. Scopus search on "publishing children's pictures online" returned 2,640,000 hits. The first few pages of the Google search, Google Scholar, and Scopus results contained the most relevant articles. Of these, I selected and read 79 peer-reviewed articles, and identified 52 that addressed the research question. Thus, 52 published full articles were accessed, downloaded, and reviewed for the study. During data analysis, the collected literature was analyzed based on themes emerging from reviewed literature that were similar to the themes earlier identified for the study. Some of the themes used included the benefits and risks of sharing children's photos and information online, and policies in place to protect children online, and the existing gaps.

Findings

This section describes the numerous benefits and risks that arise from sharing children's pictures online that emerged from the reviewed literature and from policy frameworks for sharing children's pictures online.

Risks of Sharing Children's Pictures and Information Online

A study was conducted by Tejedor-Calvo and Pulido-Rodríguez (2012) to examine the challenges and risks of internet use by children in Spain and the United States. The study found that 44% of children in Spain had at least one experience of feeling sexually harassed on the internet in 2002. In the United States, a 2010 survey of 4,400 students found that 20% suffered from cyberbullying. The high frequency of these behaviours shows the need to take measures to protect the children.

A study conducted in Nigeria by Nkordeh et al. (2017) to examine the impact of social media platforms focused on children in primary schools. The research showed that children spent much of their time chatting, sharing photos, and searching for current movies and pictures. One of these,

sharing photos, entails the risk that unauthorized people may access the images. This increases the danger of children being exposed to sexting and other unwelcome contacts.

Kamaku and Mberia (2014) sought to examine social media's effect on the incidence of sexual activity among secondary students in Kenya. A descriptive case study design was used. The study found that most secondary school students have access to mobile phones and the internet, and that heavy usage of social media can lead students to engage in sexual activity. They may share pictures with their colleagues, and hence risk exposure to sites and people who take advantage of their innocence. Similarly, Kimemia and Mugambi (2016), in a study of public secondary students in Meru County, Kenya, examined whether social media exposure influenced the teenage pregnancy rate, and established that pupils' access to social networking sites was high, and was focused on sexually explicit music, images, and videos, and on sexting. Of 283 participants, 31.8% felt that sexting on mobile phones was the social media usage that most influenced the rate of teenage sex, followed by social networking sites (26.1%), and the internet in general (18.2%; p. 4596).

Using a correlational research design, Wangamati et al. (2018) conducted a study to examine communities' perceptions of factors contributing to child sexual abuse vulnerability in Kenya. Participants included school-enrolled (ages 12–16) and unenrolled (ages 14–18) minors, as well as adults. The study revealed a general tendency among children as well as adults to use their smart phones to access erotic material. In 10 of the 12 adult FGDs conducted by Wangamati et al., participants were of the opinion that these sexually explicit materials could encourage children to engage in sexual activity at an early age.

O'Neill (2015) used the term "digital kidnapping" to designate a serious concern linked to posting children's pictures and information online. Brosch (2016) described this as "a phenomenon where strangers steal baby photos and repost them across the Internet as if the child was their own" (p. 227). This can lead to a new online identity based on the child's picture, with a new name and a new life story (Brosch, 2016).

Sharenting may also expose children to the risk of being mocked online. Parker (2013) reported on a secret "mean girls" Facebook group of mothers who were posting derogatory comments on photos of children from other Facebook accounts, making fun of the children they deemed "ugly", including physically challenged children.

Posting children's photos and information starting in infancy may mean that a significant digital footprint has been created by the time adolescence is reached. A child's digital footprint is a permanent part of their online reputation: what is posted online about the child can never be entirely erased (Holloway & Green, 2017, p. 15). Parents rarely post their children's pictures or videos online with malicious intent. However, they may not always have contemplated how the information they share could be understood or reframed by others, particularly when the stories or photos are in some way embarrassing or inappropriate (Brosch, 2016). They may also not understand that they cannot know or control where the information they post will end up (Brosch,

2016): someone could easily copy the photo, tag it, save it, or otherwise use it without the original poster's knowledge. It is technically easy to copy photos online, edit or alter them as desired, and then distribute them to other sites or publications. Finally, content that parents post online now may not be seen as appropriate in the future (Brosch, 2016).

Benefits of Sharing Children's Pictures and Information Online

Many parents find benefit in the practice of sharing photos of and information about children online: Kumar and Schoenebeck (2015) described Facebook as a "modern day baby book" that helps "new mothers enact and receive validation of 'good mothering'" (p. 1302). Indeed, Brosch (2016) stated that "parents post online an enormous number of pictures to chronicle almost every moment of their children's lives", and gave results from a study by AVG Technologies in 2010: "On average, children acquire a digital identity by the age of six. But in many cases, these online practices start even before the birth of a child, when expectant mothers share sonogram images of their unborn children" (p. 226).

Wamuyu (2021) affirmed the idea that online pictures can provide a memorial record as the ease of posting photos of children during sports events and celebrations such as birthday parties enables these occasions to be recorded and shared with loved ones. As Brosch (2016) and Steinberg (2017) pointed out, children's photos shared online help them review past events.

Additionally, when work situations, marriage away from one's ancestral family, or immigration keep family members apart, sharing photos and information on digital platforms can provide a means of keeping family and friends updated. Thus, pictures and information on social media sites can help unite family members who live far away from each other (Kumar & Schoenebeck, 2015), easing the burden of separation.

Sharing children's photos and information online invites interactions, "likes", and comments from other parents and friends online. For modern parents, social media sites can offer "a unique opportunity to exchange experiences and happiness about their parenthood or search for help with parenting issues" (Brosch, 2016, p. 227). Children, too, want interaction and feedback with their peers and friends. Dyer (2018) maintained that, among children in Canada, internet use promotes communication and enables positive interactions and stronger friendships with others from diverse backgrounds.

Akram and Kumar (2017) found that internet use was beneficial for children in Pakistan, promoting interaction between children and, in turn, increasing the sharing of educational materials and enhancing group projects. When children share information with their peers for clarification and discussion, the comments they receive can boost their confidence and help them improve their social skills.

Discussion

The reviewed literature confirms that internet exposure can make children vulnerable to sexual harassment, and that some have experienced cyberbullying, as Tejedor-Calvo and Pulido-Rodríguez reported in 2012. Their findings agree with those of Wangamati et al. (2018), who stated that one significant risk of posting photos of children on social media is the attention they may get from sexual predators.

Kamaku and Mberia (2014), in a study that sought "to establish how the respondents' engagement in sexual immorality had been modeled by social media" (p. 420), were concerned that internet use, and sexting in particular, encouraged students to engage in sexual activities while young. A later study by Kimemia and Mugambi (2016) found that nearly a third of the public secondary students who participated in their survey felt that sexting on mobile phones was the social media usage that had the most influence on the rate of teenage sex.

Nkordeh et al.'s (2017) study found that, although the internet can be a place of education, few of their participants used it that way, instead spending much of their time chatting, taking photos, and searching for current movies and pictures. The authors felt that, overall, the internet had a negative impact on the reading habits of the students they surveyed. Akram and Kumar (2017) took the opposite position in maintaining that internet use enables children to conduct research and facilitates the sharing of educational materials for learning.

The literature review found that parents may create the digital identities of their children long before the children have had a chance to establish their own presence on digital platforms. Often they begin posting pictures of their children at birth, or even before, on multiple social media platforms (Brosch, 2016). Steinberg (2017) confirmed that parents form their children's digital identities by sharing their pictures and information online from an early age.

Children's pictures and details posted to the internet remain online permanently and can be misused. Holloway and Green (2017) noted that a child's digital footprint remains part of their online reputation and can never be entirely erased. Wangari (2016) agreed that content posted online can easily be stolen and re-used for unintended purposes; moreover, one can lose control over the posted content, which can remain online in different forms.

The study results indicate that content posted online may be interpreted differently than intended, leading to children being ridiculed (Brosch, 2016; Parker, 2013). For example, online commentators may demean a child as "ugly" (Parker, 2013). The Family Online Safety Institute (2015) took a different perspective, focusing instead on children's embarrassment about photos that they themselves regarded as inappropriate.

Content posted on social media sites can become a "modern day baby book," providing a record of the child's life history (Kumar & Schoenebeck, 2015). Steinberg (2017) and Brosch (2016) agreed that children's photos shared online help them later to have a view of past events.

It is evident that social media connect families and friends, enabling them to follow each other's progress, share their experiences, and even resolve outstanding challenges (Kumar & Schoenebeck, 2015). These findings agree with Brosch's (2016) view that social media offer opportunities to share parenting challenges.

Children's confidence and self-esteem improve as a result of interaction and feedback from online peers (Akram & Kumar, 2017). Similarly, Phyfer et al. (2016) indicated that increased communication with online friends leads to increased knowledge, creativity, and confidence.

As the National Council for Children's Services affirmed in 2010, it is vital for the Kenyan state, stakeholders, and other key actors in a child's life to ensure that the child is protected against possible harm. In constructing the Framework for the National Child Protection System for Kenya, the Council (2011) reiterated that the existence and application of appropriate laws and policies can help protect children from violence and exploitation and ensure the delivery of "prompt and co-ordinated action … to prevent further occurrence" (p. iii).

On balance, this study's findings agree with Marcovitz (2012) that technopanic over sharing children's pictures is unwarranted, since measures can be put in place to reduce the risks. Wheeler (2015) took the general view that concerns over safety on the web and around mobile phone use, especially for children, tend to be exaggerated.

Summary of Knowledge Gaps

The literature reviewed exhibited dissimilar results. The reviewed studies take a variety of perspectives — global, regional, and Kenyan. Examining studies from different contexts was essential for making comparisons and comprehensively understanding other scholars' perspectives. It becomes apparent that children from the global North behave differently from their peers in the global South in regard to online activities due to their different levels of technological exposure. While some studies have indicated that sharing images of children online can have a positive impact, and others have claimed a negative effect, few have compared the benefits and risks of using the internet, especially for children. Moreover, scant information is available in the particular context of Kenya. It is hoped that the current study goes some way towards addressing that gap.

Conclusion

The literature makes clear that the online presence of children and the posting of their personal content exposes them to a variety of risks, such as sexual harassment and cyberbullying. It is necessary that parents and teachers develop mechanisms and strategies to address these. Available techniques include: (a) the use of privacy settings to protect children's information, (b) alternative ways of sharing pictures, (c) protocols on the use and sharing of children's photos in schools, (d) avoiding the use children's names along with images, and (e) turning off location settings on

devices used to share pictures online. The application of such methods seems preferable to giving in to technopanic and making the decision to not publish children's photos online at all.

Although policies for the protection of children online have been widely implemented in some regions, such as the United States and Europe, some African countries have yet to develop them at all. In other African countries, including Kenya, the implementation and enforcement of such policies is not yet fully realized. These policy gaps must be corrected and frameworks put in place to ensure that children are protected on all fronts.

Perhaps the main finding of this literature review is that there remain large gaps in available scholarship concerning the benefits and risks of sharing children's pictures online. Many of the studies reviewed were limited in geographical scope, and need to be undertaken on a wider scale. With regard to online culture, similarities and contrasts between regions with different cultures need to be investigated. The impacts on risk of the age and gender of children whose pictures are shared online, whether by themselves or by others, also warrants further study. Finally, literature reviews like the present study need to be complemented by a range of empirical investigations.

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