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Kodjo Atiso University of Missouri, eltiso@yahoo.com

Jenna Kammer jkammer@ucmo.edu

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User Beware: Determining Vulnerability in Social Media Platforms for Users in Ghana By Kodjo Atiso and Jenna Kammer

Introduction

In the last few years, use of social media in Ghana has increased 40% as more connectivity becomes available throughout the country (Internet World Statistics, 2017). Ghana was one of the first African countries to invest in Internet access and they have experienced significant growth in Internet usage. After major improvements were made to the Information and Communications Technology (ICT) infrastructure, the Ghanaian government began promoting social media as a tool capable of improving the quality of life. As part of developing the economy, the Ghanaian government recommended using mobile phones that connect to the ICT network to improve access to communications for small businesses, improving education, and technological literacy (Oxford Business Group, 2013). Burrell (2012) describes how technology development has long been part of a developing countries effort to reduce poverty.

Along with the rise of internet usage, scams, fraud and hacking have also been on the rise in Ghana (Warner, 2011; Danquah & Longe, 2011). Some say that the ICT network was developed faster than policies or laws that can protect or ensure the online safety of citizens in Ghana (Baylon & Antwi-Boasiako, 2016). This study is motivated by the concern that cybercrime is prevalent in Ghana and that social media users may be vulnerable to attacks. It approaches the vulnerability of Ghana's social media users from an *ex-post* perspective: that the growth in Internet usage and adoption of social media was faster than the development of other security measures such as training, cybersecurity or policy to protect online users.

The impact of social media use in Ghana and other African countries is a growing area of study. There have been many white papers that examine social media and mobile phone

coverage in Ghana for the business sector (for example, see Jumia, Serianu Limited, and Lancaster, 2015; Sey, 2011 etc). These papers indicate that social media use in Ghana is being quickly adopted, though less so than in first world countries. Academic research indicates that social media in Ghana is a platform that can be used in different sectors of the Ghanaian economy, for instance healthcare (Moorhead et al., 2013; Chou et al., 2009; Johnston, 2015; Loeb et al, 2014), politics (Van Gyampo, 2017), education (Gikas & Grant, 2013; Rubin & Babbie, 2016; Mingle & Adams, 2015; Out, 2015; Tuursong & Faisal, 2014; Apeanti & Danso, 2013), and business (Kaplan & Haenlein, 2010) to reach people that were otherwise cut off from telecommunications.

The literature on social media use in Ghana clearly indicates that social media has had a positive effect on improving the quality of life in Ghana's urban and rural areas. For instance Sam (2013) confirmed the potential of ICT to increase social capital and generally improve livelihood nationwide even rural communities in Ghana. However, research from Madden et al (2013) and Madden (2012) indicate that there may be another side to social media use that has not been examined in the literature: vulnerability. While social media has increased access to communications, research and business, it has also increased opportunities for cybercriminals to reach people in attempts to scam, fraud or hack others. In Ghana, no academic research has focused on user vulnerability when using social media. This study uses ethnographic methods to examine the negative side of social media that Ghanaians experiences and fears that users encounter.

Literature review

In this paper, social media is defined as an internet-based service, that can be accessed on either a computer or mobile phone, that allows users to create a public or private profile, and develops a series of connections with others users of that same service (Mbinjama, 2013). Social media can include services like Facebook, WhatsApp, Twitter, Instagram, or Skype. However, social media is also evolving and users are quick to develop new networks on different services depending on their needs. The following literature review explores what is known about what motivates people to use social media, the dangers that people face when using it (referred to as vulnerability in this study), and how aware people are of these dangers. Also, social media use in Africa, and Ghana in particular, is examined.

Reasons for Using Social Media

Many people understand social media to be a way of connecting with others through online platforms. In addition to staying in contact with family and friends, social media provides an option to connect with groups of people who share similar interests. Theoretical attempts have been made at explaining why people use social media. Hallikainen (2015) did not think there was enough understanding as to why people use social media platforms and applied a value-based theory to social media use. The findings indicate that social capital and social rewards (all stemming from interactions with others) are major forces for people who use social media. Hallikainen (2015) notes that factors such as social, emotional and epistemic values lead to interacting online (p. 9).

Matikainen (2015) also examined the motivations that drive people to contribute their own content on social media platforms. This study identified three reason that propel social media use: (1) a desire to be part of the Internet and to develop oneself accordingly; (2) self-

expression – people, especially the young, want to act independently and freely on the Web and to share information about their lives; and (3) community – people want to belong to online communities and to interact with one another (p. 41). However, Matikainen also concludes that motivation for use may change depending on the platform used (i.e. one may be motivated to use Facebook to the latest news with family and friends, while Twitter may be used more to participate in conversations) and may change as the platform evolves.

Other research into the motivation of social media indicates that people receive personal gratification from using it. Through qualitative research, Whiting & Williams (2013) found that there are a number of reasons that people use social media. The most common use for social media is social interaction, but people are also motivated to use social media for information seeking, entertainment, relaxation and expressing opinions. In addition, they found that social media users may enjoy social media as a way to find out more information about other people (surveillance/knowledge).

Vulnerability

In developing countries, vulnerability is associated with the possibility that a future event will have negative consequences for the people living there (McGillvray, et al., 2009). Those who live in developing countries may be more vulnerable to disease, natural disasters and access to resources. In addition, governments of developing countries may not be able to provide protections that exist in developed countries, like security and safeguards.

Online vulnerability is a concept that is not necessarily only associated with those in developing countries. Betts & Spencer (2015) describe online vulnerability as a problem associated with users who are lacking education and training (basically, nativete) for how to use and handle online social interactions (particularly young adults). Social media allows people to

share what they are doing and read about what others are doing, but it also makes this information available to anyone who is able to access it. While there are many personal motivations for using social media, it can also lead to user regrets when one posts something that is shared without permission. In this study, "vulnerability" is used to refer to the various scams that users might be exposed to (e.g. business, romance and related scams) that have caused increasing concern to the user in Ghana recently.

The literature notes that steps or missteps in the online environment have users increasing concerned about their online behavior especially their posts. Neil (2015) records that Americans admit making mistakes on social media. As a whole, 57 percent of Americans have posted something about which they have regrets later on. The survey is corroborated by earlier work from Wang et al (2011) which attempted to explain why people regretted making posts to Facebook. Their study surveyed 569 Facebook users and found that users recounted regrets based on sensitive topics including lies and secrets (p. 1). The study also revealed an important feature with users: many users did not foresee how their posts could be perceived by people within their intended audience. They conclude that when users misunderstand, or misuse, the Facebook platform, users may experience unwanted consequences.

Gundecha & Barbier (2011) also mention exploiting user vulnerability as a common feature in online environments. While technology allows a user some level of control, the study cited that as one's social network expands, his/her privacy protection goes beyond the privacy settings and becomes a social networking problem (p. 1). This makes a user more vulnerable to online attacks. The paper also revealed that a single, vulnerable friend can put all friends at risk to some kind of scam. This risk is even higher when a user has a relatively low level of

education. While this study did not take education into account, it was clear some participants did not have high school education and therefore assumes a higher risk.

In social media, users often have the option to handle their own problems with people on their friends list. For example, in Facebook, a user can file a complaint about a post or a person through the technology by filing a report. Users can also hide, block, or unfriend someone for disrespectful behavior. Facebook may respond by blocking a user or closing their account. However, many people are not aware of this service. Many people often handle their own Facebook lists by friending or unfriending as is needed. Some people may even receive Facebook requests from people they don't know. Pena & Brody (2014) said that users will often prefer to hide a friend's post for being disrespectful, rather than unfriending them believing that is a nicer response.

Privacy management on social media sites is a concern for users (Grizzlies et al 2014; Madden 2012). These authors recount the never-ending debate about privacy as a relic in the information age suggesting the end of privacy in and online environment. No section of the public is spared, includes children who may start posting online at an early age and through the teenage years (Madden et al 2013). Technology itself offers some reprieve to assure some level of privacy (i.e. settings that allow user profiles to be private).

Hasinoff (2013) wrote about social media and pornography and blames laws governing pornography to some extent. In Ghana, outmoded laws may indeed be a contributing factor to an increase in online adult content. Thousands of nude files that defy privacy and thousands of other inappropriate materials have been deposited online, sometimes illegally from scammers. Nude videos, or "sexting' trending the media in Ghana are an hourly occurrence. While this started with celebrities, it caught up with the general population. While some are from scammers, others

are used to embarrass. First activities of scammers, who propose to partners (mostly women) online was noticed. The perpetrators (some of whom are local) would ask people to go nude and send them their nude videos, unsuspecting victim would comply. Victims are asked to pay a ransom or their videos would go online, most of them do because ransom is normally a big sum. Secondly these videos are used to trick other men, pretending propose love to them. At the end, most of these nude videos go online. Finally, distant relations add to scam. With the use of tools such as Bluetooth, videos are stolen and shared among friend.

Wyche et al. 2013 argues that users who are less experienced in the online environment are more likely to be hustled on line, as a result of lack of knowledge of the online environment. This can be a concern for new social media users who may not realize what situations they are getting into. Sibona & Walczak (2011) also studied online behaviors of users on Facebook. They concluded that user behavior is not backed by any formula, or prior training. His study confirms that education is a major factor in vulnerability online. It appears users would just start off an online activity and only stop once they faced a challenge. Respondents noted that training related to inappropriate activity could have a positive impact of their presence online. Though the need for training was forecasted a decade ago (Agichtein et al., 2009), not much research has gone into it. The perceived potentials of the medium seem to have overshadowed the need to works towards finding high quality content, the need for this becomes a priority. A digital file finding its way online might be difficult or not possible to delete. This is because there are always ways to retrieve content online, (Ariffin et al., 2013). Whether is possible to delete media files or not is no longer in contention (Marshall et al., 2006; Mercer, 2004). Scammed individuals with inappropriate files online rely under the solace that their videos could be deleted at some point. One time World Wrestling Federation (WWF) great Hogan once found his nude videos online and stated: "I will be naked forever for my great grandchildren to see me."

Social Media use in Ghana

The cost of telecommunications in Ghana is relatively high and it ranks among the most expensive in the West African countries (Atiso, 2017; Burrell, 2012). Reasons for this high cost are related to using obsolete technology and simply poor management of telecommunications systems. The internet and its social media tools provide an option for users to communicate without the burden of high cost. Platforms such as Facebook, Youtube, WhatsApp, and Viber are paving the way for a new era of communication. Although the cost of internet in Ghana might be high, users find it relatively less expensive to communicate, compared with traditional calls made directly from cellular phones. Burrell (2012) describes how it was the educated and elite who were the first to start using technology in Ghana, and that use of technology showed positive changes in the lives of those using it.

Social media in developing countries has greater significance than it might in a first world country where electricity, bandwidth and access to computers is easy. In developing countries like Ghana, reliable Internet access is sometimes a challenge, even in urban or professional areas, like research centers (Tagoe, 2012). For rural areas, reliable Internet is especially a challenge. Social media can be accessed on mobile phones using cell service instead of unreliable ICT systems, making it a very attractive method of connecting to the Internet. Wyche, Forte & Schoenebeck (2013) found that even though there are still many barriers to using social media (limited access to phones and computers), social media use has increased significantly in rural communities in Africa.

Politicians in Ghana have started using social media as a tool but found that it may not work as well as they hoped. Van Gyampo (2017) examined social media use and found that use has increased by politicians as a way to reach younger voters and build support for political parties. However, despite social media serving as a tool to reach constituents, findings indicate that it is still very new for many Ghanaians and did not actually increase support. He projects that poverty and illiteracy are still a problem in Ghana that even social media cannot solve. In addition, many of the recipients felt that these communications were an invasion of privacy and responded negatively to political solicitation.

Otu (2015) studied social media addiction amongst college students at the University of Ghana. He used an Internet Addiction Test to examine how addicted students were to social media and found that most were heavy users of social media (particularly WhatsApp) without being severely addicted. Mingle and Adams (2015) examined social media use in a high school and Ghana and found that most students were addicted to social media (particularly Facebook and WhatsApp) and that social media use affected their grades and performance in school.

Social media use in Ghana is an important part of communicating for personal use and for business and industry. Literature indicates that social media is now a critical part of life in Ghana. However, abuse of social media has made users wary. Users experience phishing and sometimes too much contact from business and companies. Van Gyampo (2015) found that young social media users in Ghana are skeptical when they receive social media requests after having many bad experiences. More research is needed to learn about what these bad experiences are.

Methods

The purpose of the study was to collect baseline data to identify user vulnerability of social media use in Ghana. To empirically investigate the danger involved in social media use in Ghana, the study uses data from interviews with Ghana citizens, within their own communities. Interviews took place in the native language by the first author on this paper. Participants were located in Accra, capital of Ghana, except for two residing in the United States and were selected using a cluster sampling method. The interview protocol was designed by the researchers to focus on the following areas: (1) motivation for social media use, (2) knowledge about dangers in social media use (3) prior training in online platforms.

This study uses ethnographic methods to understand more about the users of social media in Ghana. The ethnographic approach is a qualitative method that is used to explore a specific culture and seek explanations for social interactions (Wolcott, 1999) by participating within that community. Walcott claims causes and behaviors when examined from within, has the capacity to unravel details what would otherwise be missed. As part of the Ghanaian community, the first author (Atiso) interviewed a total of thirty (n=30) Ghanaians from within the selected social media platforms (What Sapp, Viber, Facebook, Imo etc) to understand user behavior on social media use. Participant selection was limited to the cluster of Ghanaians who formed groups and participated within a Ghana-specific group in the WhatsApp social media site. In June 2017, the first author (Atiso) who is part of the groups, sent a request letter and invited users to sign up to be interviewed on this topic. Within the cluster, random sampling was used. Random sampling in qualitative studies is becoming increasing beneficial (Marshall, 1996) since sample size tends to be small because of the concept of saturation (Malterud et al., 2016). Though a small sample size may be considered too small for other research approaches, is sufficient for a qualitative study.

The interviews took place within the WhatsApp, Viber and Imo platforms. These apps are messaging apps that includes features like messaging, group chat, voice calls and video. The WhatsApp platform is the most common among users in Ghana (Mingle & Adams, 2015; Otu, 2015). Requests for participation in the study were sent to social media users in WhatsApp, Viber and Imo, who were all part of groups of Ghanaians. Once consent had been attained, communication in the participant's native language began between the first author and the participants within the app itself. Languages used include two of Ghana's most popular languages, Twi and Ewe. English served as the third language. Altogether, conversations took two weeks. Participants were aged between 25-52, and included 20 women and 10 men. Fifty (50%) of the participants were college students, 30 percent from the "after college" or the working group, while 20% came from high school students. Interviews were transcribed and coded for themes. Using Creswell & Marietta's (2002) approach for finding meaning, data was analyzed by first coding, then generating themes from the codes. The themes were then explored for their descriptive meaning and interpretation. These themes were juxtaposed against the objectives of the study to make a meaning out of the text.

Findings and Discussions

The main goal of this study is to examine user vulnerability in social media use in Ghana. Thorough the selected platforms participants shared various ways they interacted online and the different dangers that they experienced. Most participants had experienced online dangers, and found that though some perpetrators came from outside, a significant number were home-bred (i.e. from Ghana). Participants in this study described how they were manipulated by perpetrators

who would start with confidence building initially and end with their demands. Other important emerging themes are listed below.

Motivation

Connections. Participants stated that social interaction was a major motivator to confirm finding from previous literature (Matikainen, 2015; Whiting & Williams, 2013 etc). The interpersonal relationship offered by social media platform makes communicating this way different than simply talking by phone. Others mentioned that interpersonal interaction, which is offered by platforms like WhatsApp, which mainstream calling platforms (landline, cell phone lines) did not. For the Ghanaian, this brings them closer to their family members even when far away. Some user even said the video interaction with friends and family is the single greatest motivator to using social media platforms.

Affordability. The findings show that cost concerns are a major motivator for using social media. Almost all participants stated that they were motivated to use social media to communicate with peers, do business and to entertain because it offers relatively low prices. They claim the cost involved in mainstream communication is high, they there find "solace" these platforms. In effect, cost is a major reason one would use social media platforms. Another addition in social media use is its ability to offer convenience in relation to buying airtime on cell phones landline phones which can only be used at certain locations. One participant said:

Credit (airtime) is too expensive in Ghana but if you have data, you can make a lot of calls for free. Also, some of them (networks) offer free platforms like WhatsApp and Facebook. I use them a lot.

Opportunities. Social media may have challenges but also offers business opportunities. To the young person in Ghana with business initiatives, social media offers an unfettered

opportunity to advertise at a cheaper cost. This was confirmed in the interview by participants.

One of them stated:

You can't imagine how much social media has helped advertise my saloon (hair salon) business. All I need is to buy some credit (data to go online) than that's it. WhatsApp and Facebook have been helpful to me.

In addition, many of the participants indicated that they were "hooked" on the platform. Two of the platforms, WhatsApp and Facebook are leading the business "crusade" in Ghana by using WhatsApp for advertising and marketing. The popularity of the platform has also attracted religious organizations to hold online services for their congregations. Participants also narrated its role in various area as education, health and related ones. Student participants recounted how much they have used WhatsApp to download academic materials besides other things. It is also common for medical centers to advertise their services through the selected platforms.

Vulnerabilities

The findings confirmed that while social media might be a savior in many respects, it also comes with some kind of dangers to users. Participants indicated they did not foresee dangers in social media activities until they started using it. Participants who have had adverse experiences said a little education into online environment activities would have made a difference to them.

Insider Threats. Participants describe the personal problems that they have faced with friends or family that they had originally trusted online, particularly related to adult content. They may have shared a personal video with a romantic partner, only to have that video shared when the relationship ends, or found by a relative who shared it on social media. While this had happened to some participants, other participants just worried about it happening. A participant who had a personal video shared reads into the future of this trend.

One day this video will be played to my children, is this not what you want your (my) kids to see.

Another danger that participants experienced was related to the romantic scam. A participant whose interaction with a Facebook friend started as a romance, ended up finding out they were one of millions of Ghanaians scammed:

I met this man on Facebook who proposed (romance) to me. We chatted and exchanged pictures including my (expletive) pictures). He later brought up a business plan which I accepted. He asked me to take a loan (bank loan) which I sent to him. He came for a second one. The third time I said I could not raise the amount. After this moment he blocked me on all platforms. I later found out he is a scammer.

Sometimes romance scammers will develop relationships with the victims, then ask their victims for nude photos. They later ask them to pay a ransom or else these pictures would be posted online. Inability to pay required some lead to these pictures being posted online. Numerous of these files are found online today. A female victim recounts.

After we met and chatted for some time, he demanded a video of me including private ones. I did several of them for him. At some point he demanded money which I didn't have. He ended up posting my private videos online. The embarrassment he has caused me and my family cannot be quantified......"

Privacy and Trust. The findings indicate that participants who had experienced a negative event online, or knew of someone who had experienced one, were less likely to trust people who contacted them on social media. Despite this, there is an increasing concern that this is not enough, because of activities not only hackers but political authorities as well. There are many situations where individual have been tracked by political operatives, irrespective of the

settings on their devices. Participant indicated the "system" cannot be trusted any longer and their privacy was gone. A frustrated participant states:

There is no privacy anymore and I know I could be tracked anytime. It's scary.

Embarrassment and stigma. One after effect of online activity is embarrassment and stigma. User private data trending online has caused embarrassment to households in the wake of events. The stigma created might be difficult to delete, the effect on family and friends cannot be underestimated. Generally, the fall out in the online environment have had severe consequences on some users. Resources, mainly money spent from being scammed amount to several millions of dollars. These resources are unrecoverable, victims had no choice than to live with them. Even more damning, these victims would find it very difficult, in regaining their more past glories in life, which could mean loss of jobs.

Government Surveillance. Besides usual scams and dangers associated with social media use, there seems to be another twist to engaging in online media recently. Tracking individuals suspected of some kind of dealings has a main mode of operation for security agencies across the globe. For the Ghanaian, their concern lies in the possibility of being tracked in view of their massive use of social media. The US Department of Homeland Security (DHS) has just announced it would collect and store social media information on all immigrants including permanent residents and naturalized citizens (Nixon, 2017). This information will be used in deciding who gets to enter or leave the country. Again, Russia has been accused the US of meddling in its electoral process, and activity the US claim Russia did via the use of social platforms. As a result, the digital platforms such as Google, Facebook, or Twitter testified about Russia linked activity on 2017 elections (Howitz et al., 2016). These two scenarios show online

activities go beyond just social networking. Participants indicated current political events like these means that their search history could be used against them, and that makes them uncomfortable, at least for now. Knowing that their social media activity created a space where they could be tracked affected how much they used social media. Most participant were unaware of tracking or web search history. Those who did know this said they would be more cautious about what they look out for. A student participant said he was not sure of his future in the United States and thinks privacy and security is therefore compromised. He states:

I just want to finish (college) and go back home (Ghana) anything could happen anytime.

Education and Training

One question on the interview protocol asked participants whether they had taught or taken any training of some kind before entering the online environment. Most participants had not had any training and some participants even questioned the need for such education. Most also indicated that they do not seek training for how to use social media.

Many participants indicated that they believed that digital files can be deleted and were not worried about the permanency of online photos. Participants were not aware of the fact that digital files may be permanently stored within the digital platform, or could have already been shared without their knowledge.

Discussion

This study examined the reasons that people in Ghana use WhatsApp, Viber and Imo, as well as investigated the vulnerabilities that they feel when using them. The findings indicate that these social media platforms are considered cost-effective way to stay in touch with friends and family in ways that the phone does not allow. Ghanaians experience expensive costs for phone

communication and are able to circumvent that by using free social media platforms. In addition, many Ghanaians must travel or leave home for work or educational opportunities. Video is a major benefit of WhatsApp and helps to bridge gaps between people who live at a distance. This assertion confirmed earlier studies that (Atiso, 2017; 2015, Boateng et al., 2011) that communication is a major reason why users use this platform. In addition, social media is a boon for business, helping to make connections in the business world as well.

Increasing use of social media has also made some users more vulnerable and they have experienced scams and behavior that makes them fearful and distrustful online. (Kaplan & Haenlein, 2010). Findings indicate that many participants in this study had experienced a negative online interaction with people on their friends list: relatives or romantic partners who had exploited them by sharing personal videos or files. This left them feeling embarrassed and concerned about how the interactions could come back to hurt them later. In addition, participants felt vulnerable to the digital footprint left online: not only could government track them down and know more about them, but businesses could as well. In addition, participants felt vulnerable to having their account hacked and spamming all of their friends.

The findings indicate that social media users in Ghana lack experience in social media and are likely to fall victim to spam or other online frauds. One recommendation might be for users of social media to learn more about how to safely use the platform. The challenge here lies in the *how* to undertake this kind of education. The study noted that this kind of sensitization will be difficult because users come from diverse background. Ideally, the consortium of technology companies, i.e. cell phone companies, internet service providers could come together to prepare training for users. The findings in this study suggests that while users value social media, not many of them are aware of the dangers that come with it. In a country with little

knowledge on technology, how much to users know and trust the environment becomes an important question.

This study also examined the knowledge that social media users had about the online environment. The findings show that knowledge varies: while some participants claim they foresaw the dangers, most were not even concerned about it. Besides the perceived dangers, participants spent many hours online and could often not even quantify the number. Participants recounted the addiction towards the online platform and which is difficult to do away with. This confirms an earlier study on student's use of social media about students in tertiary schools in Ghana. In spite of the merits of the platform some studies (Tess, 2013; Malita, 2012) revealed the enormous amount of time spent online, suggesting the need for time management.

Another problem in Ghana is that there are few regulations related to protecting users from online scams. Absence of current laws on emerging issues contributes to social vices as online scams. In Ghana particularly, current laws (Atiso, 2017) do not tackle cybercrime at all, except for the general criminal code that makes it unlawful to humiliate or embarrass another. This gives perpetrators a leeway to do their activities.

This study attempted to use qualitative research to understand more about what users know about social media. It will not be out of place if tech companies provided a continuous online education for users, detailing possible dangers that arise. Self-paced learning (Dabbagh & Kitsantas, 2012) via social media has proved to be successful in other because they are done at a user's own pace. The same thing could be extended to trainings dealing with ethical issues in online environment. Some of them could be made a requirement force users to learn.

Conclusion

Social media provides a platform to communicate information. In developing countries like Ghana, social media provides a platform for communicating with friends and family who are not nearby. It can also help them to develop business or create opportunities for networking. However, social media has also added some risk to communication that does not exist when using a cell phone to make a call. For one, privacy and trust is at risk as users create a digital trail. If users are not careful and prepared, they may be more vulnerable to scams and phishing attempts. Social media uses are also concerned about their personal videos being shared without their permission and being able to settle disputes online. Users also worry about government tracking their online history and using it against them for immigration or travel status.

In this study, social media users also indicated that they experienced embarrassment, lack of security and settling scores in an online environment which almost invariably ends badly. A majority of users stated they use social platforms for communication, however, they were unaware of the risks and dangers unless they had personally experienced a scam. For those who had experienced a scam, they expressed deep regret and were concerned for their future.

Findings in this study indicate that a greater need for education and awareness of the dangers of social media should be considered in Ghana. Another question what actions participants take when in danger? It did appear through the data they are left on their own, except to try to delete those files, a feat that will be difficult to achieve. This feeds into the narrative of urgent need for some kind of education as recommended in this study.

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