Effectiveness of Cyberbullying Prevention Strategies in the UAE

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Abstract The ever rising Internet of Things, rapid globalization and technology advancement have created a valuable seamless platform for folks to interact, publish and share contents online over high-speed connections regardless of location and distance. Nonetheless, several benefits, proliferation of vigor and anonymity of the Internet create a permanent breeding ground for all forms of cyber threats globally and the UAE in particular including all sorts of online crime like sexual harassment, deception, cyborgs, compromised safety and fraudulent engagements among others leading to manipulation of user credentials, perceptions, exposure to offensive content, financial losses, psychological and physical harm. In this paper, we examine a variety of Cyberbullying offensive and preventive strategies available globally giving particular attention to the UAE, examine the phenomena of risky Internet use of ICT tools and its relationship to Cyberbullying and assess the effectiveness of existing anti-Cyberbullying strategies used in the UAE. The findings and recommendations of the paper can be useful to government policy-maker and online crime regulators who intend to effectively curb Cyberbullying in the region.

Keywords Cyberbullying · Bullying · Cyber security · Online harassment · United Arab Emirates (UAE) · Internet of Things (IoT)

1 Introduction

In technology advancement, the rise of IoT and pivotal innovation on the World Wide Web has altered the way societies behave and interact globally on online creating a competitive atmosphere in educational, social and economic realms [3]. Meanwhile, the UAE has upgraded its cybercrime legislation to take account of technological and social change (from Federal Law No. 2/2006, to Federal Law No. 5/2012) by imposing new fences and strict penalties on information technology crimes. Bullying is normally intended to gain power over a victim especially in the case of students in...
primary, secondary and higher institutions of learning. Cyberbullying, on the other hand, is more severe compared to traditional bullying due to the fact that it attracts a wider scope and the bullies are anonymous. Moreover, with cyberbullying, detection may require organizations and government to recruit experts with the necessary experience to manually classify online content, whether it is harmful to the online users or not and applying unsupervised tools and learning algorithms to automatically perform the classification. Meanwhile, most Cyberbullying incidents occur away from school campuses driven by technology which allows information to spread in a short spell triggered by conflicts within schools and may lead to violence which disrupts learning and concentration of the students. Research shows that females are more emotionally offended by the inappropriate online content than males.

Additionally, the widespread use of media sites, chatrooms, temporary email accounts, Facebook, Twitter, YouTube, WhatsApp, face messenger, imo and pay as you go cell phones among others provides an avenue for bullies to remain anonymous creating the need for continuous monitoring and supervision of online activities with modern technology, strong acceptable use policies and legislation and anti-bullying programmes in addition to training and awareness. Further, efforts may be required toward detection and identification of predators and online victims if we are to curb the Cyberbullying problem globally, the UAE in particular.

The rest of the paper is organized as follows: Sect. 2 provides a comprehensive review of related work and efforts from different countries regarding the effectiveness of the Cyberbullying prevention strategies applied in their countries. Section 3 reviews the Cyberbullying efforts in the perspective of the UAE as compared to other countries, especially revealing the challenges impending successful implementation of such efforts and possible solution to the challenges taking a leaf from other countries. Section 4, on the other hand, presents the paper recommendations, conclusions and future research avenues.

2 Related Work

Empirical studies and some high profile circumstantial cases globally have explained several Cyberbullying cases, challenges and prevention strategies especially in children between 5 and 10 years and the youth between 13 and 22 years due to their extensive use of the Internet and social media [2]. For instance, Abaido [1] conducted a quantitative study on the extent of Cyberbullying by collecting and analyzing data from over 200 university students in the UAE especially considering the prevalence rates of Cyberbullying, the different forms of podiums predatory to Cyberbullying, the views of the youth and whether they preferred to remain silent after different forms of Cyberbullying incidents among others. Moreover, Abaido’s research revealed that social and cultural restraints among most societies in the region create the biggest impasse toward reporting and declaration of Cyberbullying incidents in university students. Further, Abaido [1] analysis revealed 91% of the students confirmed the
Table 1  Social media platforms where Cyberbullying occurs

| Which of the following social media platforms have more Cyberbullying? | N   | % age |
|---------------------------------------------------------------|-----|-------|
| 1 Facebook                                                    | 76  | 38.0  |
| 2 Twitter                                                     | 71  | 35.5  |
| 3 Snapchat                                                    | 31  | 15.5  |
| 4 YouTube                                                     | 50  | 25.0  |
| 5 Instagram                                                   | 111 | 55.5  |
| 6 Blogs                                                       | 4   | 2.0   |

Source Abaido [1], pg. 8

existence of Cyberbullying on social media platforms with Instagram and Facebook taking the lead as shown in Table 1.

The findings from Abaido’s research revealed that 72% of the respondents agreed that the Cyberbullying issue was very common among the youth between 14 and 18 years with several negative outcomes like depression, school dropouts, substance abuse and sleeping disorders among others, and the same was in turn reported by Diener West and Leaf and Privitera and Campbell [14]. Despite the previous findings deliberations and efforts narrowing down the Cyberbullying problem to the youth, the researcher envisages a deeper penetration of this problem in all age groups from 8 to over 60 years fueled by the high penetration of the Internet in the UAE to the tune of 90% by 2020, the widespread use of smart devices, the explosion of online gaming and betting, the intensification of IoT technologies and the recent outbreak of the COVID-19 global pandemic in the first quarter of 2020 that limited the public and the entire global population to working from home with the jobless limited only to social media platforms for chatting and bullying others as the only way to kill boredom, hence escalating the Cyberbullying problem globally, the UAE in particular.

Meanwhile, most of the anti-bullying approaches in schools were conducted through proactive measures like policies and supervision, reactive measures like sanctions in addition to peer support activities like school conferences, parents training, classroom ground rules, anti-bullying videos among others [11] and the reduction of known risks by protecting children online [10]. Additionally, Robertson and Amna [15] emphasized that Cyberbullying can no longer be ignored by any school management in the UAE by urging management in all schools to enforce and communicate appropriate use of Internet policies to all teachers, students and parents from time to time. Moreover, any school that fails to observe such policies shall be punished under the new Dubai schools law (Executive Council Resolution No. 2 of 2017) which requires all schools to have an obligation toward “student’s safety and protection online” through due care and protection of student’s rights intensified by existing telecommunication regulatory authority’s Internet access management policy that sets appropriate measures, restrictions and approach through which Internet content containing pornography, nudity, gambling and any other unacceptable content to be blocked sets clear ramifications for perpetrators.
Meanwhile, Madden et al. conducted research looking into the impact of technology explosion on the lives of teenagers by examining a population of 802 teenagers aged between 12 and 17 years. Their findings revealed that 95% of the respondents had access to Internet while 78% owned a mobile phone, 47% owned a smartphone and 23% held a tablet computer implying a deep penetration into the digital world, interacting and posting all forms of personally identifiable information online leading to exposure to online crime and Cyberbullying. Moreover, the prevalent form of such incidents includes (i) harassment by sending offensive messages; (ii) sexting especially by sharing nude pictures of someone online illegally; (iii) flaming or sending vulgar messages online; (iv) cyberstalking or online threatening messages; (v) impersonation by illegally breaking into someone’s account and (vi) trickery or forcing someone to reveal sensitive information online among others [9]. Figure 1 shows the most prevalent locations for Cyberbullying in children less than 10 years globally.

From Fig. 1, most of the Cyberbullying for children occurs at school and during transit in buses with a sizable figure on social media platforms which creates a major call for parents and guardians to focus on the safety of their children from anywhere any time to avoid victimization. Further, Table 2 presents the global Cyberbullying
Table 2  Cyberbullying statistics for the period 2011–2018

| Country       | 2018 | 2016 | 2011 |
|---------------|------|------|------|
| India         | 37   | 32   | 32   |
| Brazil        | 29   | 19   | 20   |
| USA           | 26   | 34   | 15   |
| Belgium       | 25   | 13   | 12   |
| South Africa  | 26   | 25   | 10   |
| Malaysia      | 23   | 0    | 0    |
| Sweden        | 23   | 20   | 14   |
| Canada        | 20   | 17   | 18   |
| Turkey        | 20   | 14   | 5    |
| Saudi Arabia  | 19   | 17   | 18   |
| Australia     | 19   | 20   | 13   |
| Mexico        | 18   | 20   | 8    |
| Great Britain | 18   | 15   | 11   |
| China         | 17   | 20   | 11   |
| Serbia        | 16   | 0    | 0    |
| Germany       | 14   | 9    | 7    |
| Argentina     | 14   | 10   | 9    |
| Peru          | 14   | 13   | 0    |
| South Korea   | 13   | 9    | 8    |
| Italy         | 12   | 11   | 3    |
| Poland        | 12   | 18   | 12   |
| Romania       | 11   | 0    | 0    |
| Hungary       | 10   | 11   | 7    |
| Spain         | 9    | 10   | 5    |
| France        | 9    | 7    | 5    |
| Chile         | 8    | 0    | 0    |
| Japan         | 5    | 7    | 7    |
| Russia        | 1    | 9    | 5    |

Source  Comparitech: https://www.comparitech.com/internet-providers/Cyberbullying-statistics/, visited on May 30, 2020

statistics collected over three selected years (2011, 2016 and 2018) from different countries;

Results in Table 2 show that the Cyberbullying problem has been growing over a decade across global boundaries except in Russia and Japan where very strict legislation has harnessed the impact and rise of Cyberbullying and indicated by the lowering figures from say from 9 in 2016 to 1 in 2018. Additionally, findings from the Cyberbullying research center in the USA after conducting 11 different
studies from 13 different projects from over 25,000 middle and high school students between 2007 and 2019 further accentuate the fact that rates of online Cyberbullying victimization have increased rapidly over the recent years. It is indicated that an average of about 27.8% students agreed to the fact that they had been victims of Cyberbullying averaged over a decade as indicated in Fig. 2.

Meanwhile, findings from Grierson indicate that every two in five children had been victims of Cyberbullying in New Zealand while three in five teenagers and women aged between 18 and 19 were victimized through online platforms. The major cause of such high statistics was attributed to the rapid increase in broadband Internet penetration and connectivity to the tune of 89.4% New Zealand and 85% Australia. Broadband Internet penetration figures are even higher in the GCC, for instance Bahrain, Qatar and the UAE are ranked among the world top ten with Internet penetration at 98.7%, 95% and 95.7%, respectively [7]. Meanwhile, most victims report poor interpersonal relations, low self-esteem and depression among others [5, 6, 12]. Moreover, bullies always take advantage of the victim’s weak points like appearance, family problems and social class. Further, the need for constructs and Cyberbullying measurement tools has been called upon by several authors [4]. Batoul and others looked at the possibility of designing a multilingual system for Cyberbullying detection and assessment in Arabic language with the help of machine learning and natural language processing to support the existing English versions especially in the Arab region was profane jargons maybe stated in Arabic creating the need for filtration and classification of contents online.
3 Cyberbullying Efforts and Challenges in the UAE Perspective

The concerns of bullying and Cyberbullying have not been recently emphasized in the UAE and the entire Arabian Peninsula. This is evidenced by the few published findings accessible despite empirical evidences observed from Europe and the USA. Meanwhile, some few scholars have attempted the phenomena over the previous decade. For instance, Kazarian and Ammar [8] studied school bullying in the Arab region through multiple literature review. Their findings show that 20.9% of middle east school juveniles report bullying victimization in UAE, 31.9% in Morocco, 33.6% Lebanon while 39.1% in Oman and 44.2% reported Cyberbullying victimization from Jordan. The authors point out the urgent need for interventions into the subject to explore signs, locations and consequences to school bullying in the region. Besides, the Dubai government established a new schools law on Cyberbullying which requires all schools to establish and implement student’s online safety and protection policy as part of their cybersecurity programme (Executive Council Resolution No. 2, 2017) in addition to efforts from the UAE Telecommunications Regulatory Authority to block unauthorized sites and those with profane content in the region.

Additionally, in a survey conducted by ICDL Arabia, 60% of the youth in the GCC admitted to the presence of Cyberbullying among peers while 54% of the UAE adolescents were not aware that Cyberbullying is punishable by the existing legislation and 48% self-confessed to the use of Internet social media platforms like Instagram and Facebook without any parental supervision [7]. This claim implies cyber addiction for children which increases exposure to profane content, nudity and joining wrong groups that may persuade them into committing online crime and in turn lead to an overall change in lifestyle, poor performance in school or dropping out completely. Addiction is also fueled by the fast paced growth of cyber technology, ambient home environments with 24/7 high-speed Internet connectivity which facilitates engagement of students into off campus Cyberbullying activities and the lack of proper legislative guidance among others.

Further, Cyberbullying may lead to loss of lives if not quickly handled by specialized experts or counselors. An example is the case of Tyler Clementi of September 22, 2010, in the USA where an 18-year-old student at Rutgers University jumped off the George Washington Bridge and died after being bullied for having sexual harassment with a fellow male partner in same institution.

Therefore, in an attempt to reduce Cyberbullying in the UAE, defamation was considered a criminal offense according to (Federal Law No. 3 of 1987; Federal Decree No. 5 of 2012) in which cyber criminals and bullies are punishable by imprisonment in addition to payment of a fine at the discretion of a judge. Additionally, it is worth noting that everything done online leaves a digital footprint upon which investigation and prosecution can start or be evidenced, therefore, parents need to be vigilant to report any form of bullying incidents in the community to the nearest police station for further investigation and traceability despite the fact that victims
are always surrounded by a deep sense of fear, loneliness and helplessness with psychological and emotional scars that need the attention of experts.

4 Recommendations, Conclusions and Future Interventions

4.1 Recommendations

Based on the critical literature review and the researcher’s experience in the subject matter, it is recommended that

- All schools and universities in the UAE educate their students on the dangers and legal implications of Cyberbullying, inappropriate use of the Internet and social media platforms through online safety and protection policies in addition to continuous training, awareness and social orientation programmes especially on cyber safety and risks associated with the Internet for both parents and children.
- Minimum age upon which children in the UAE are granted access to online platforms and social media be enacted by the UAE government authorities.
- Schools and universities need to conduct more investigations into the relationship between Cyberbullying and academic performance of students in addition to revealing its impact based on cross-age and cross-sex demographics.

4.2 Conclusions and Future Interventions

Much as the Cyberbullying challenge is still on the rise in many countries globally, the UAE in particular, some significant efforts have been done across the globe. Moreover, significant gaps still exist in the body of literature especially in terms of detection and identification of the victims and bullies with little efforts invested into technologies and mechanisms for uncovering accurate and reliable information on the trends and impact of Cyberbullying, limited forensic investigations and efforts into protecting the chain of custody log to ensure admissibility in courts of law. Moreover, if the integrity of evidence collected after Cyberbullying incidents is not handled by following the right forensic evidence collection and integrity protection guidelines, then most of the perpetrators will go unpunished leading to further escalation of the Cyberbullying problems globally, the UAE in particular.

Therefore, efforts are needed in designing strategies to improve digital forensic investigation, efforts to properly handle the Cyberbullying chain of custody log and tools for accurate prosecution of perpetrators by the UAE government in addition to enhancing partnerships between federal entities, private and public sector organizations, parents, schools and universities to develop consolidated efforts for identification of the bullies and victims. This will in turn address the anonymity problem, harness the jurisdictional boundary challenges through international cooperation and
collaborations, hence reducing the Cyberbullying problems in all Emirates of the UAE. In the future, the researcher intends to explore the extent of the Cyberbullying problem in the UAE public and private sector organizations.

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