Towards an Interdisciplinary Cyberbullying Campaign

J. Van Niekerk and K. Thomson.

Centre for Research in Information and Cyber Security, NMMU, South Africa e-mail : {Johan.vanNiekerk, Kerry-Lynn.Thomson}@nmmu.ac.za

Abstract

The use of social networks have become an extremely important part of the lives of most teenagers in the developed world. Teens are constantly connected to their peers to share various aspects of their lives via cyberspace. Being bullied in cyberspace thus have an extremely negative impact on the lives of the victims of such bullying. Most anti-cyberbully campaigns are not very effective. However, the KiVa program from Finland has been shown to be especially effective. This research reviews the literature to determine why the KiVa program is so effective and then critically reviews a current campaign from South Africa in order to identify areas where this campaign can be improved.

Keywords

Cyberbullying, awareness, anti-bullying, SACSAA, KiVa

1. Introduction

The use of cyberspace and social networking has become ubiquitous amongst teens in many parts of the world. In the UK 87% of children aged 5 to 15 go online and half of them use social networking every day (UK Council for Child Internet Safety Evidence Group 2015), whilst 76% of teens in Europe (EU Online 2014) and more than 70% of teens in the US (PewResearchCentre 2015) are reported to be active on social networking sites.

For today's youth cyberspace has become such an important aspect of life that many of them feel they would 'die' without their phones (Ringrose et al. 2012). Phones and social networks play a 'massive part' in the lives of youths and are shaping most aspects of their everyday lives (Ringrose et al. 2012). Through cyberspace, most teens are constantly connected to their peer group, sharing various aspects of their lives with each other.

It is therefore not surprising that problems such as schoolyard bullying have spilled over into cyberspace (Smith et al. 2008). The effects of being ostracised or bullied in cyberspace can be devastating for a teenager with victimization in cyberspace being associated with "serious psychosocial, affective, and academic problems" (Tokunaga 2010) and the impact of some forms, i.e. picture or video clip bullying, listed as "especially negative" (Slonje & Smith 2008). Consequently, there have been many cases of cyber bullying that lead to highly publicised teen suicides.

Media focus on such cyberbullying related teen suicide cases has sparked many calls for legislation to help combat this problem. Many researchers also present strong cases for the need for such legislation (Ong 2015). However, others argue that such legislation is not the answer as it might be very difficult to enforce (Lievens 2014). Recently in Canada the *Cyber-Safety Act*, which was passed into law aimed at protecting victims of online harassment, was eliminated because the court found it infringes on rights under the Charter of Rights and Freedoms (CBC News 2015).

In part due to the lack of adequate legislation, many social network service providers subscribe to a self-regulatory charter titled 'Safer Social Networking Principles for the EU'. Under this charter they adhere to several principles, including to ensure the availability of reporting mechanisms, and responding to reports of harmful incidents, inappropriate photos, or harassing behaviour (Lievens 2014). These features are of obvious importance to anti cyber bullying efforts, however, reports assessing the effectiveness of these features have shown a lot of room for improvement (Lievens 2014).

Partly due to the lack, and ineffectiveness, of legislature in curbing cyberbullying, most approaches to combatting this problem still rely on education in the form of anti-bullying campaigns. However, these campaigns often lack a theoretical grounding and are also not necessarily very effective. One such campaign has been running for several years under the auspices of the South African Cyber Security Academic Alliance (SACSAA). The aim of this campaign is to raise school children's awareness about vital cyber security and safety behaviours, which includes raising awareness about cyberbullying (Reid & Van Niekerk 2015; Van Niekerk et al. 2013).

The SACSAA campaign consists of both an education campaign and a related poster contest. The poster contest entries have in the past been used to gauge the effect of the education campaign (Reid & Van Niekerk 2015). This paper reviews current literature to identify criteria that could lead to more effective anti-cyberbullying efforts. These criteria are then used to perform a qualitative content analysis on both the educational material and the poster contest of the SACSAA campaign with the aim of identifying areas for improvement of the current campaign.

2. Methodology

This research performs a critical analysis of the content of the current SACSAA cyber safety campaign through a combination of literature reviews and qualitative content analysis. The analysis was conducted according to guidelines provided by (Krippendorff 2004). Firstly, a review was conducted focusing on cyberbullying literature. Based on this review criteria for successful; anti-bullying campaigns were identified. Next a qualitative content analysis was carried out on the current curriculum of the SACSAA cyber safety campaign to answer the broad thematic questions:

• Who is the target audience of the current lessons about cyberbullying?

- What does the current curriculum's material recommend?
- What does the lectures/talks recommend?

The results of the literature review and content analysis was then used in the critical analysis of the current SACSAA campaign.

3. Literature Review

A large portion of cyber bullying literature focuses on describing the problem and not necessarily on ways in which to address it. (Vivolo-Kantor et al. 2014) examines ways in which the prevalence of either traditional bullying or cyber bullying can be measured. Just like in offline bullying, aggression, is found to be a good predictor of cyber bullying behaviour (Sari & Camadan 2016; Modecki et al. 2014).

(Mishna et al. 2014) suggest that students might not be willing to discuss being bullied with adults because they want to protect themselves, or others, or simply do not believe that adults would be able to help. "Concern about what other would think of them" is also identified as a significant barrier to seeking help (Mishna et al. 2014).

Being cyberbullied leads to high levels of social anxiety (Tomşa et al. 2013). Responses to being bullied varies substantially. Some children were found to be able to cope with being bullied, while others are less resilient and in need of more emotional support. Children who participated in social activities, such as sports, were significantly better able to cope with being bullied (Yüksel-Şahin 2015).

Much research exists regarding "traditional or "school yard" bullying, and many researchers view cyberbullying as simply another form of such bullying. (Antoniadou et al. 2016; Antoniadou & Kokkinos 2014) examines whether or not these forms of bullying are in fact the same and concludes that there are indeed many similarities but also important differences. The most important differences found are 1) there is a small group of cyber bullying participants that have no previous school bullying involvement, 2) students do not always have the same role between the forms of bullying (children who are bullied at school might in fact be perpetrators of cyber bullying happens with greater ease, lower cost and high profit for the bully and psychological pain for the victim, often resulting in additional students joining in and mutual attacks between students (Antoniadou & Kokkinos 2014).

(Wahab et al. 2015) discuss a multimedia based campaign that teaches learners about cyberbullying and provides them with some guidelines regarding how they should handle incidents and how to communicate in cyberspace. The program was shown to be effective in raising awareness about cyberbullying (Wahab et al. 2015). However, no data could be found regarding its effect on reducing bullying, or influencing children's behaviour.

Despite the prevalence of anti-bullying campaigns worldwide, the rate of bullying in both schools and cyberspace has been fairly constant for many years (Luxenberg et al. 2014). Systematic reviews of research related to whole school anti-bullying programs have shown that the majority of such programs had nonsignificant outcomes (Smith et al. 2004). However, one anti-bullying program has been shown to be especially effective, namely the KiVa program from Finland (Kärnä et al. 2011).

The KiVa program was developed for all forms of bullying and its effectiveness specific to addressing cyberbullying has also been proven (Salmivalli et al. 2011). This program was specifically designed to "improve the school ecology by changing bystander (peer as well as teacher) responses to bullying" (Juvonen et al. 2016). The KiVa program's focus on increasing teacher and peer support (compassion) for the victims led to the victims feeling less distressed. The "perception of a caring school" had a large impact on the ability of victims to cope. The research also found that both victims of bullying and their peers who were not being bullied benefitted from the intervention. Overall this program has been shown to be 1.5-1.8 times more effective than traditional approaches towards reducing bullying (Juvonen et al. 2016). However, the effectiveness of the KiVa program is still subject to other influences, for example, very popular bullies have been shown to be more resistant to the positive effects of this campaign than their less popular classmates (Garandeau et al. 2014). This makes it even more important to focus educational efforts on the entire peer group so that the peer's perception of bullies is changed, since social status and popularity is ultimately determined by the peer group (Garandeau et al. 2014).

While there are many other cyber safety and cyberbullying related campaigns the KiVa campaign's proven success makes it an ideal 'role model' for other campaigns. The remainder of this paper will focus on an analysis of the South African Cyber Security Academic Alliance (SACSAA) and the extent to which the campaign addresses bystanders.

4. Analysis of SACSAA campaign

The South African Cyber Security Academic Alliance (SACSAA) campaign was run from 2011 to 2015 to raise awareness amongst South African youth, teachers and parents regarding cyber safety. The target audience for the campaign was school children, teachers, and parents in the Nelson Mandela Bay Metropolis area. The campaign consisted of two parts: an education campaign and a poster contest, both of which will be discussed in the following subsections.

4.1. The Education Campaign

The education campaign aimed to raise the awareness of cyber safety issues, including, but not limited to, 'stranger danger', browsing, cyber citizenship, social networking, cyberbullying, password and hardware security, viruses and malware, sexting and cyber identity management. Content in the campaign has been continuously updated and improved since the inception of the campaign in 2011. In

2014 the campaign adopted the use of the cyber safety curriculum developed for teachers by (Von Solms & Von Solms 2014). The current education campaign thus consists of a 24 Lesson curriculum that could be used by teachers to discuss cyber safety topics with students.

Five of the 24 lessons (Lesson 4, Lesson 10, Lesson 14, Lesson 16 and Lesson 21) addressed the topic of cyberbullying. Each lesson had a link to a video on cyberbullying, followed by a list of questions for the teachers to discuss with the students, as well as a worksheet for the students to complete. Table 1 indicates the focus of each of these cyberbullying related lessons, as well as the recommendations given in the curriculum regarding action to be taken.

	Cyberbullies	Cyberbully Victims	Bystanders
Who does the campaign/material focus on?	Mention (Lesson 4, 14, 16)	Focus (Lesson 4, 10, 14, 16, 21)	Mention (Lesson 4, 16)
What does the campaign/material recommend?	Treat people the way you would like to be treated. Could get into trouble at school or with authorities	Do not reply and do not be rude back. Save evidence and tell a responsible adult.	Report if someone else is being cyberbullied. Stand up for someone who is being cyberbullied.

Table 1: Focus and recommendations of cyberbullying relevant lessons

As can be seen from Table 1, the predominant focus of the curriculum in terms of cyberbullying was on the *victims* of cyberbullying and what they should do when confronted by a cyberbully. All of the videos and most of the discussion questions focused on the victims of cyberbullying. In Lessons 4, 14 and 16, the videos *mentioned* that the viewers should treat people the way they would want to be treated and that they could get into trouble at school or with authorities if they were cyberbullies. Further, in Lessons 4 and 16 a single *mention* was made that viewers should report if someone they knew was being cyberbullied and they should stand up for someone who is being cyberbullied. In addition to the curriculum being issued to teachers, several cyber safety talks were given at schools by the researchers.

These talks were based on a shared slide deck, and the content of the talks were thus also included in the analysis of the current campaign material. As can be seen in Table 2, the talks covered the role that schools should play in curbing cyberbullying, including policy creation, the role that parents should play if they suspect their child is being cyberbullied and what teachers should do to inhibit cyberbullying if it is reported to them. The talks to students focused on reporting if they were victims of cyberbullying and why cyberbullying is wrong - 'Do not be mean behind the screen'. The role of the bystanders was not formally, or routinely, addressed in any of the talks given to students, teachers, principals or parents.

	Environment (Policies)	Authority Figures (Parents, Teachers)	Cyberbullies	Cyberbully Victims
What do the talks focus on?	Anti- Cyberbullying Policy creation	How to recognise Cyberbullying. What to do if Cyberbullying is identified	'Do not be mean behind the screen'. Do not Cyberbully others	Report if you are being Cyberbullied to parent or authority figure

Table 2:	Content	of lectures	and talks	at schools
----------	---------	-------------	-----------	------------

4.2. The Poster Contest

Each year, following the education campaign, a poster contest was held with entrants from various schools in the Nelson Mandela Bay Metropolis. By analysing the messages and scenarios depicted in these posters, the perception of the education campaign, consisting of the curriculum and talks, could be determined. As mentioned, multiple cyber safety related topics were covered by the education campaign. For the purposes of this paper, the focus of the poster analysis was cyberbullying.

From 2011 to 2015, 726 posters, from primary school and secondary school students, were entered into the contest. Of the 726 posters, 347 included messages and/or scenarios that related to cyberbullying. The majority of the posters simply stated 'Stop Cyberbullying' or similar and did not provide any recommendations on how this could be achieved or what students could do to help. Another message that emerged from these posters was 'Don't be mean behind the screen', highlighting that the students understood that cyberbullying is wrong.

5. Discussion

The KiVa program's success is ascribed to its focus on the entire ecology within which the bullying takes place and specifically on the role(s) of bystanders in the bullying process. As mentioned earlier, bullies are more resistant to changing their behaviour if they are more popular. Popularity and social status, however, are not an inherent characteristic, but rather something given by one's peers.

In the social architecture of bullying, it is estimated that 20% of bystanders act as reinforcers for the bully and a further 7% assist the bully, whilst up to 24% simply act as outsiders (Herkama 2012). This dynamic is quite paradoxical, because research has shown that most children's attitudes are against bullying. However, in a bullying situation, they do not act against bullying for fear of losing their own social status and due to concern for their own safety (Herkama 2012). The KiVa program attempts to change this distribution through ensuring that bystanders understand the role they are playing in the bullying process through enhancing the bystander's "empathic understanding of the victim's plight". The KiVa program also introduces

strategies for bystanders to support and defend their victimized peers without compromising their own safety (Herkama 2012).

As (Jimerson et al. 2010) point out, the individual defines themselves through social feedback from interactions with others. If the peers understand the positive role their own feedback can play, and are equipped with the means to provide such feedback safely, they can help to change the ecology into a compassionate one.

The current SACSAA campaign, on the other hand, neglects to address the role of the bystander in cyberbullying adequately. Bystanders are *mentioned* in lessons 4 and 16, and *advised* to stand up for victims and report cyberbullying. However, they are not equipped to so safely, and the complex relationship between victim-bully-bystander is not explained at all. The analysis of the posters, also clearly shows this lack of focus on fostering a compassionate ecology. Out of all cyberbullying related posters submitted since 2011, only one, shown in Figure 1, indicated any form of compassion when on the internet. The poster shown in Figure 1 also clearly has very little direct cyberbullying relevance. There is just a major need to improve this aspect of the current campaign.



Figure 1: Poster showing compassion

The current SACSAA campaign can be described as *dyadic* where the individual's role as bully or victim is seen as fixed, and the audience is a passive observer. The interventions thus targets individuals. Whereas the KiVa program is *triadic* and focusses on bully-victim-bystander roles that are constantly in flux and the audience have an active role in the bullying behaviour. The interventions for a triadic system focus on the climate (ecology) within which bullying occurs (Jimerson et al. 2010).

Currently the SACSAA campaign material has been predominantly developed by cyber security researchers. Previous work has focused on improving these campaigns

from an education perspective and borrowed from formal pedagogical theory (Reid & van Niekerk 2014). In order to improve the content and delivery of the campaign so that it can be effective in the fostering of a 'compassionate ecology', the campaign material would have to be based on a sound theoretical basis from the field of psychology. It is the author's opinion that experts from the field of psychology should thus be involved in the revision of the current campaign.

6. Conclusion

Cyberbullying is a multifaceted challenge that affects many children. The SACSAA campaign was developed using sound educational pedagogical principles, but did not address the psychosocial aspects that a cyberbullying campaign should - specifically the bully-victim-bystander relationship. Future research will incorporate more of these psychosocial aspects into the SACSAA campaign to attempt to address the complex social architecture of bullying. Cyberbullying is a complex problem that should ideally be approach from a multi-disciplinary perspective.

7. References

Antoniadou, N. & Kokkinos, C.M., 2014. Cyber and school bullying: Same or different phenomena? *Aggression and Violent Behavior*, 25, pp.363–372. Available at: http://dx.doi.org/10.1016/j.avb.2015.09.013.

Antoniadou, N., Kokkinos, C.M. & Markos, A., 2016. Possible common correlates between bullying and cyber-bullying among adolescents. *Psicología Educativa*. Available at: http://linkinghub.elsevier.com/retrieve/pii/S1135755X16000063.

CBC News, 2015. Rehtaeh Parsons's mother hopes new anti-cyberbullying law will be drafted: Nova Scotia Department of Justice says 800 complaints were dealt with under the Cyber-Safety Act. *CBC News*. Available at: http://www.cbc.ca/news/canada/nova-scotia/rehtaeh-parsons-cyberbully-law-supreme-court-1.3361864?cmp=rss.

EU Online, 2014. EU Kids Online: findings, methods, recommendations (deliverable D1.6). *EU Kids Online, LSE, London, UK*. Available at: http://eprints.lse.ac.uk/60512/.

Garandeau, C.F., Lee, I.A. & Salmivalli, C., 2014. Differential effects of the KiVa antibullying program on popular and unpopular bullies. *Journal of Applied Developmental Psychology*, 35(1), pp.44–50. Available at: http://dx.doi.org/10.1016/j.appdev.2013.10.004.

Herkama, S., 2012. KiVa Anti-bullying program: Program contents and evidence of effectiveness. In *Solutions for safe and respectful schools*. Latvia.

Jimerson, S.R., Swearer, S.M. & Espelage, D.L., 2010. *The handbook of bullying in schools: An international perspective*,

Juvonen, J. et al., 2016. Journal of Consulting and Clinical Psychology Can a School-Wide Bullying Prevention Program Improve the Plight of Victims? Evidence for Risk \times Intervention Effects Can a School-Wide Bullying Prevention Program Improve the Plight of Victims? Evidence for., 84(4), pp.334–344.

Kärnä, A. et al., 2011. A Large-Scale Evaluation of the KiVa Antibullying Program: Grades 4-6. *Child Development*, 82(1), pp.311–330.

Krippendorff, K., 2004. Content Analysis: An Introduction to Its Methodology (second edition), SAGE Publications.

Lievens, E., 2014. Bullying and sexting in social networks: Protecting minors from criminal acts or empowering minors to cope with risky behaviour? *International Journal of Law, Crime and Justice*, 42(3), pp.251–270. Available at: http://dx.doi.org/10.1016/j.ijlcj.2014.02.001.

Luxenberg, H., Limber, S.P. & Olweus, D., 2014. Bullying in U.S. Schools: 2013 Status Report,

Mishna, F. et al., 2014. Students in distress: Unanticipated findings in a cyber bullying study. *Children and Youth Services Review*, 44, pp.341–348. Available at: http://dx.doi.org/10.1016/j.childyouth.2014.04.010.

Modecki, K.L. et al., 2014. Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health*, 55(5), pp.602–611. Available at: http://dx.doi.org/10.1016/j.jadohealth.2014.06.007.

Van Niekerk, J., Thomson, K.L. & Reid, R., 2013. Cyber safety for school children a case study in the nelson Mandela metropolis. *IFIP Advances in Information and Communication Technology*, 406, pp.103–112.

Ong, R., 2015. Cyber-bullying and young people: How Hong Kong keeps the new playground safe. *Computer Law and Security Review*, 31(5), pp.668–678. Available at: http://dx.doi.org/10.1016/j.clsr.2015.07.005.

PewResearchCentre, 2015. Teens, social media and technology overview 2015: Smartphones facilitate shifts in communication landscape for teens. *Pew Research Center*, (April), pp.1–47.

Reid, R. & Van Niekerk, J., 2015. A Cyber Security Culture Fostering Campaign through the Lens of Active Audience Theory. *9th International Symposium on Human Aspects of Information Security & Assurance*, (HAISA), pp.34–44. Available at: http://www.cscan.org/default.asp?page=openaccess&eid=16&id=256.

Reid, R. & van Niekerk, J., 2014. Brain-compatible, web-based information security education: a statistical study. *Information Management & Computer Security*, 22(4), pp.371–381. Available at: http://www.scopus.com/inward/record.url?eid=2-s2.0-84918538680&partnerID=tZOtx3y1.

Ringrose, J. et al., 2012. A qualitative study of children, young people and "sexting": A report prepared for the NSPCC. , pp.1–75.

Salmivalli, C., Karna, a. & Poskiparta, E., 2011. Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied. *International Journal of Behavioral Development*, 35(5), pp.405–411.

Sari, S.V. & Camadan, F., 2016. The new face of violence tendency:Cyber bullying perpetrators and their victims. *Computers in Human Behavior*, 59, pp.317–326. Available at: http://linkinghub.elsevier.com/retrieve/pii/S0747563216300796.

Slonje, R. & Smith, P.K., 2008. Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, 49(2), pp.147–154. Available at: http://doi.wiley.com/10.1111/j.1467-9450.2007.00611.x.

Smith, J.D. et al., 2004. The Effectiveness of Whole-School Antibullying Programs: A Synthesis of Evaluation Research. *School Psychology Review*, 33(4), pp.547–560.

Smith, P.K. et al., 2008. Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), pp.376–385. Available at: http://doi.wiley.com/10.1111/j.1469-7610.2007.01846.x.

Von Solms, S. & Von Solms, R., 2014. Towards Cyber Safety Education in Primary Schools in Africa. *Proceedings of the Eighth* ..., 3(Haisa), pp.185–197. Available at: http://books.google.com/books?hl=en&lr=&id=EF_pBgAAQBAJ&oi=fnd&pg=PA185&dq=T owards+Cyber+Safety+Education+in+Primary+Schools+in+Africa&ots=ZnxVnVdtoI&sig=m tumkTGRH0gpaKB_akcD2P95sMU.

Tokunaga, R.S., 2010. Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, 26(3), pp.277–287. Available at: http://dx.doi.org/10.1016/j.chb.2009.11.014.

Tomşa, R. et al., 2013. Student's Experiences with Traditional Bullying and Cyberbullying: Findings from a Romanian Sample. *Procedia - Social and Behavioral Sciences*, 78(2009), pp.586–590. Available at: http://linkinghub.elsevier.com/retrieve/pii/S1877042813009257.

UK Council for Child Internet Safety Evidence Group, 2015. Risks Research: Social Media and Interactive Services - An Overview,

Vivolo-Kantor, A.M. et al., 2014. A systematic review and content analysis of bullying and cyber-bullying measurement strategies. *Aggression and Violent Behavior*, 19(4), pp.423–434. Available at: http://dx.doi.org/10.1016/j.avb.2014.06.008.

Wahab, N.A., Yahaya, W.A.J.W. & Muniandy, B., 2015. The Use of Multimedia in Increasing Perceived Knowledge and Awareness of Cyber-bullying among Adolescents: A Pilot Study. *Procedia - Social and Behavioral Sciences*, 176, pp.745–749. Available at: http://www.sciencedirect.com/science/article/pii/S1877042815005728.

Yüksel-Şahin, F., 2015. An Examination of Bullying Tendencies and Bullying Coping Behaviors Among Adolescents. *Procedia - Social and Behavioral Sciences*, 191, pp.214–221. Available at: http://linkinghub.elsevier.com/retrieve/pii/S1877042815026750.