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The nature of cyberbullying, and strategies for prevention

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ABSTRACT

Cyberbullying has been identified as an important problem amongst youth in the last decade. This paper reviews some recent findings and discusses general concepts within the area. The review covers definitional issues such as repetition and power imbalance, types of cyberbullying, age and gender differences, overlap with traditional bullying and sequence of events, differences between cyberbullying and traditional bullying, motives for and impact of cyber victimization, coping strategies, and prevention/intervention possibilities. These issues will be illustrated by reference to recent and current literature, and also by in-depth interviews with nine Swedish students aged 13–15 years, who had some first-hand experience of one or more cyberbullying episodes. We conclude by discussing the evidence for different coping, intervention and prevention strategies.

1. Introduction

Some reviews of cyberbullying already exist (e.g., Mora-Merchán & Jäger, 2010; Smith, 2012; Smith & Slonje, 2010; Tokunaga, 2010), but the area is developing very rapidly, in part as new technologies develop and new fashions (such as particular social network sites) appear. In this review we will highlight many important aspects, covering definitional criteria such as repetition and power imbalance; types of cyberbullying; age and gender differences; sequence of events; overlap with traditional bullying; differences between cyberbullying and traditional bullying; impact of cyber victimization; and coping strategies and prevention/intervention possibilities. We also highlight victims' knowledge of the perpetrators and the reluctance of victims to tell adults about their experiences.

In addition we illustrate these aspects with data from semi-structured in-depth interviews with nine students (five girls, four boys) aged 13–15 years; all had been recruited in a previous study by the authors (Slonje, Smith, & Frisen, 2012). They came from five different schools in Sweden, and all had some knowledge about cyberbullying, as victims (7) and/or perpetrators (3) or only as a bystander (1). The interviews were carried out individually in 2008, and lasted 30–45 min. The questions used in the interviews focused on the same issues mentioned above.

2. Definitional issues

Over the last decade awareness of cyberbullying, followed by research activity and publications, has increased very rapidly. Much of the literature (though not all) is on cyberbullying in young people. Also, much of the literature (though not all) stems from a psychological perspective, and has built on a 30-year tradition of research on what is often called traditional bullying, or offline bullying. This carry-on includes both early definitions of cyberbullying, as well as the kinds of topics pursued (such as characteristics of cyber-bullies and cyber-victims). Nevertheless, other disciplinary perspectives are also present, and the area presents some new challenges as well as opportunities for researchers (Smith, 2010).

Bullying is generally seen as intentional behavior to harm another, repeatedly, where it is difficult for the victim to defend himself or herself (Olweus, 1999); it is based on an imbalance of power; and can be defined as a systematic abuse of power (Rigby, 2002; Smith & Sharp, 1994). By extending the definition from traditional bullying, cyberbullying has been defined as 'an aggressive act or behavior that is carried out using electronic means by a group or an individual repeatedly and over time against a victim who cannot easily defend him or herself' (Smith et al., 2008). From this perspective, cyberbullying is a systematic abuse of power which occurs through the use of information and communication technologies (ICTs).

Although the definition mentioned above (or similar ones) is quite common within the cyberbullying context, some of these definitional aspects are under debate. Two criteria particularly separate bullying, from more general aggression (i.e. intent to cause harm). These are the aspects of repetition, and power imbalance. Both can be seen as relatively clear for traditional bullying, but having more difficulties in application to cyberbullying.

First, the idea of repetition within cyberbullying is not as straightforward; one cyberbullying act may readily 'snowball' out of the initial control of the bully, due to the technology used. An

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example is a picture that is sent (or uploaded onto the Internet), that at a later stage is distributed by other people (not the initial perpetrator). Thus a single act by one perpetrator may be repeated many times by others, and experienced many times by the victim. If the repetition is not carried out by the perpetrator, is this still cyberbullying? Slonje et al. (2012) asked what 'actively targeted bystanders' (pupils who had been sent or shown information intended to cyberbully someone else) do with the information they had seen. Although the majority (72%) of these did nothing further to distribute the material, others did (9% forwarded the material to other friends, whilst 6% showed or forwarded it to the victim to bully him/her further). On a positive note, 13% showed/forwarded the material to the original victim in order to help him/her.

The second definitional issue is that of power imbalance. Olweus (1993) referred to this in traditional bullying by describing the victim as 'weak', which could be not only physical weakness but also psychological. In addition, a power imbalance might be by virtue of numbers, or popularity/rejection in a peer group context. Such forms of power imbalance within the cyberbullying context are not so clear. Physical strength is not necessary for perpetration of cyberbullying, nor is strength of numbers. However two other possibilities of power imbalance in cyberbullying are technical ability with ICTs, and anonymity.

Vandebosch and Van Cleemput (2008) argued that a greater knowledge of ICT's may contribute to a power imbalance; they found that pupils with more advanced Internet skills were more likely to have experience with deviant Internet and mobile phone activities. Ybarra and Mitchell (2004) found that cyberbullies do rate themselves as Internet experts to a higher degree compared to those who do not cyberbully others. While some cyberbullying such as sending a nasty text message is easy, other types (such as impersonating someone else on a website) does require some more technological expertise. However, it does not take too much expertise for one to take a picture of someone else in order to use it in an abusive manner, be it uploading it onto Internet for others to see or showing around amongst friends. Perhaps in certain environments (e.g., 'second life' – a virtual world, see Coyne, Chesney, Logan, & Madden, 2009), greater expertise may enable someone to become more powerful than others and so intentionally do them harm. However, in much of the text message and website bullying experienced by pupils of school age, technological skill is arguably a minor factor.

Vandebosch and Van Cleemput (2008) also argued that anonymity can contribute to a power imbalance. A number of studies (Raskauskas, 2010; Slonje & Smith, 2008; Smith et al., 2008) have shown that often the victim does not know who the person bullying him/her is. It is more difficult to respond effectively if you do not know the identity of the perpetrator. In our interviews, the notion of anonymity was clearly indicated by one student when asked to say the first three words that came to mind when hearing the word cyberbullying: *'Cyberbullying is probably the not knowing and the anonymity about those that bully…Well that you don't really know what is happening…And you only know that it is someone that is out to get you'* (girl, 13). In fact, the students that had been cyberbullied usually did not know initially who it was that cyberbullied them.

Conversely, if a victim does know the perpetrator, then the more conventional criteria of physical/psychological strength and peer group popularity may come back into play (i.e., a victim may be fearful of retaliating against a popular and stronger pupil who may take further revenge offline). When a victim does know the identity of the perpetrator, it is often someone from the same school or someone from their vicinity (Smith et al., 2008). All the pupils we interviewed, when knowing eventually who targeted them, stated it was someone from their school or local area. One student talking about being text message bullied by someone at their school illustrated this link: *'like worried if one for example becomes threatened. One is worried. Hardly dares to go to school'* (girl, 13).

A different aspect of power imbalance in cyberbullying has been suggested by Dooley, Pyzalski, and Cross (2009); that since the material exists in cyberspace it is harder to remove or to avoid it, and that this in itself can make the victim feel more powerless.

Although it is possible to mount a defense of the criteria of repetition and imbalance of power in the cyberbullying domain, there are clearly difficulties. In practice some studies actually measure cyber-aggression or cyber-abuse since they do not clearly include these two aspects. For example, Law, Shapka, Hymel, Olson, and Waterhouse (2011, Study 2) do not invoke either repetition or imbalance of power as criteria to demarcate cyberbullying, which they also refer to as 'internet victimization'. This broader approach is sometimes clearly stated: for example, Law, Shapka, and Olson (2010) explicitly used an "online aggression" scale. Wang, Iannotti, and Nansel (2009) compared different types of bullying, including cyber, and did include imbalance of power in their definition of cyberbullying; but they explicitly examined only *once or twice or more* because "it is not uncommon in the literature of cyber bullying to count a single incident as an experience of cyber bullying" (p. 370).

In summary, defining cyberbullying may not be as clear cut as defining traditional bullying, due to difficulties in the criteria of repetition and power imbalance. These issues, and the extent to which cyberbullying can usefully be distinguished from a broader concept of cyber aggression or cyber victimization, are being debated.

3. Types of cyberbullying

Some studies just look at cyberbullying as a single construct (e.g., Study 1 in Law et al., 2011). While suitable for some purposes, many aspects of cyberbullying (such as gender differences, or impact) do seem to vary by the specific type of cyberbullying experienced.

Some studies have divided cyberbullying into the two main media of Internet and mobile phone bullying (e.g., Ortega, Elipe, Mora-Merchan, Calmaestra, & Vega, 2009). However in recent years the advent of smart phones makes it possible to send and receive emails via a mobile phone as well as use these phones to access the Internet more broadly; this makes the earlier distinction between mobile phone and Internet bullying, problematic.

Some studies have investigated cyberbullying via a range of more specific media. Smith et al. (2008) used seven main media described by secondary school pupils: mobile phone calls, text messages, picture/video clip bullying, e-mails, chatroom, instant messaging, and websites. Hinduja and Patchin (2010) used a 9-item cyber victimization scale, covering similar media. Wachs and Wolf (2011) used a 5-item scale, again covering similar media but grouping some of those together (e.g., text message/mobile phone calls). In South Korea, cyberbullying in Internet game contexts has been found to be a very common form (Tippett & Kwak, 2012). These lists of types of cyberbullying and aggression are not exhaustive, and as technology develops, new forms of cyberbullying emerge.

An alternative to looking at the medium used, is to look at the type of action, or its content. Willard (2006) described seven categories: flaming, online harassment; cyberstalking, denigration (put-downs), masquerade, outing, and exclusion, which are to some extent independent of the media used. Rivers and Noret (2010) described the content of abusive text messages and e-mails, in an English sample. Their 10 main categories were: threat of physical violence, abusive or hate-related, name calling (including homophobia), death threats, ending of platonic relationship(s),

sexual acts, demands/instructions, threats to damage existing relationships, threats to home/family, and menacing chain messages. Huang and Chou (2010) investigated types of cyberbullying behavior across three different role groups: victims, perpetrators and bystanders. The most frequent behavior reported by victims and cyberbullies was threatening or harassment, followed by making jokes about/fun of, and lastly rumor spreading. For bystanders the order was different, with making jokes about/fun of as most frequent, followed by threatening or harassment and then rumor spreading.

In our interviews, some students brought up specific media of cyberbullying (instant messaging, chat rooms and online games); however others responded in terms of the type of action: some mentioned threats, while others mentioned both exclusion and nasty words; for example: '*That someone has recorded someone or done something and uploaded it. . . . . .or threatens someone on the Internet maybe*' (boy, 15). We also asked the students whether they had seen any act of cyberbullying that was meant to bully someone else (as bystanders). Both media and actions were mentioned, such as nasty comments posted on websites, chat rooms or in instant messaging; these comments were often related to information a student had uploaded onto their website such as a personal photo, a video clip or list of their musical preferences; one had witnessed a friend who had been persistently bullied first via text messaging and then on a web-page: '*It was a girl in our school. She had been on a sun bed or something. And then they had taken pictures of her and uploaded it on Internet. . .*' (boy, 15).

The ways young people communicate through ICT are rapidly changing. Over the last few years the spread of smart-phones enables users to use his/her mobile phone both for Internet as well as text messaging and calling. There has been a rapid increase in popularity of social-network sites such as 'my-space' or 'facebook'. Twitter has been another recent development, with for example a college student prosecuted for racial remarks made on his twitter account (Guardian, March 18th 2012). New descriptive words are coming in: for example 'sexting' describes the circulation of sexualized images on mobile phones or the Internet without the persons consent; 'trolling' describes persistent abusive comments on a website; 'griefing' describes harassment of someone in a cyber game or virtual world. Researchers in the field need to keep up to date with such changes and expansions regarding new modes of cyberbullying and cyber aggression.

In summary, the diversity of cyberbullying has been investigated in terms of the main media used (mobile phones, Internet), more specific ways of using ICT (text messages, Instant messaging, email, web-pages) and by type of behavior (threats, flaming, outing, exclusion).

4. Age and gender

Tokunaga (2010) argued that the trend with age across studies is for a curvilinear relationship for victimization, with the greatest incidence at seventh and eighth grades (around 13–15 years). Involvement in cyberbullying continues through adult life, but does decrease after older adolescence (Ševciková & Šmahel, 2009). The students we interviewed often expressed the view that older students were more often the perpetrators: *'Yes, I think that younger ones bully less. . .. Well, I believe they* [older] *do it more rougher'* (boy, 13);'*. . .firstly. . .younger ones don't tend to have these mobiles. They don't know much about it, writing. Otherwise it is just swear words what I think.... And older are more like I said that there are more threats'* (boy, 15);'*. . .that it is easier* [for older students] *to have knowledge about what one does actually'* (girl, 13).

Tokunaga (2010) described the area of gender differences as more complex and "fraught with inconsistent findings" (p. 280). Examples can be found of boys being more involved than girls (e.g., Calvete, Orue, Estévez, Villardón, & Padilla, 2010; Fanti, Demetriou, & Hawa, 2012; Salmivalli & Pöyhönen, 2012); few or no significant differences (e.g., Smith et al., 2008; Livingstone, Haddon, Görzig, & Ólafsson, 2011); and girls being more involved than boys (e.g., Rivers & Noret, 2010). Nonetheless, there may be *relatively* greater involvement of girls in cyberbullying, just as there is in relational bullying, when compared to traditional physical (mainly boys) or verbal bullying (Smith, 2012). One of the students we interviewed remarked: *'I would say that girls do it more. Well, there occurs more cyberbullying because I believe one doesn't want to be as open with what one does. One can be pretty like secretive*' (girl, 13).

In summary, reviews (e.g., Smith, 2012; Tokunaga, 2010) suggest that adolescence is a peak period for involvement in cyberbullying. Compared to traditional bullying, girls may be relatively more involved, but gender differences remain inconsistent across studies, probably due to different samples, methodologies (definitions, and types of cyberbullying assessed) and historical changes (such as increased use of social networking in girls especially; Patchin & Hinduja, 2010).

5. Overlap with traditional bullying and sequence of events

A well replicated finding is a large overlap between involvement in traditional bullying and cyberbullying (e.g., Salmivalli & Pöyhönen, 2012). One aspect of this is that there is a quite strong link between those who are involved as cyberbullies and traditional bullies (Raskauskas & Stoltz, 2007; Smith et al., 2008), perhaps more so in boys (Gradinger, Strohmeier, & Spiel, 2009). Regarding cybervictims, Livingstone et al. (2011) found that the biggest risk factor of being bullied online was to bully others online. They concluded that being bullied online may be seen as two-way interaction where children bully others and are bullied themselves. This was especially seen between girls.

Little is known about the sequence of events that may lead up to cyberbullying. Ybarra and Mitchell (2004) suggested that some cyberbullies may be traditional victims who, being unable to retaliate face-to-face, may do so by electronic means as a form of compensation. This was not confirmed by Vandebosch and van Cleemput (2008), but partially supported by Smith et al. (2008) who found a trend for traditional bully-victims to also be cyberbullies.

Amongst the students we interviewed, in most cyberbullying cases the bullying had either started from a face-to-face argument or vice versa. One pupil who started to become victimized in a traditional sense stated: *'It is like small things that one becomes enemies for. Then one starts text messaging and then it becomes even more'* (girl, 13).

6. Differences between cyberbullying and traditional bullying

Cyberbullying has been found to differ from traditional bullying in a variety of ways. Smith (2012) described seven features: (1) it depends on some degree of technological expertise; (2) it is primarily indirect rather than face-to-face, and thus may be anonymous; (3) relatedly, the perpetrator does not usually see the victim's reaction, at least in the short term; (4) the variety of bystander roles in cyberbullying is more complex than in most traditional bullying (the bystander may be with the perpetrator when an act is sent or posted; with the victim when it is received; or with neither, when receiving the message or visiting the relevant Internet site); (5) one motive for traditional bullying is thought to be the status gained by showing (abusive) power over others, in front of witnesses, but the perpetrator will often lack this in cyberbullying;

(6) the breadth of the potential audience is increased, as cyberbullying can reach particularly large audiences in a peer group compared with the small groups that are the usual audience in traditional bullying; (7) it is difficult to escape from cyberbullying (there is 'no safe haven'), as the victim may be sent messages to their mobile or computer, or access nasty website comments, wherever they are.

Some students in our interviews raised these issues when asked what they thought was the biggest difference between cyberbullying and traditional bullying: '*... it is very much that you don't know what can happen. And you don't see what the other person does...one is being like stalked in a different way. If someone has the mobile number, then the other person can always reach you and...Yes, it is like, traditional bullying is something that is really face-to-face and then one can get rid of it by going home or something*' (girl, 13).

In summary, cyberbullying has been found to differ from traditional bullying in a number of ways. These are not absolute differences (Pyzalski, 2011), but they may affect other aspects such as motives for perpetration, and impact on victims.

7. Motives for perpetration and impact on victims

The motives for cyberbullying were investigated by Varjas, Talley, Meyers, Parris, and Cutts (2010) in a qualitative study using semi-structured individual interviews with 20 students aged 15–19 years. They found that these motives could be categorized as either internal - revenge, boredom, jealousy, trying out a new persona or redirecting feelings; or external - no consequences, non-confrontational ('when a cyberbully did not want to have a face-to-face encounter with the victim or expressed fear of actually facing the person' (p. 271) or that the target was different in some way e.g., appearance.

All forms of bullying have negative impacts on the victims, and indeed on all those involved. However the relative impact of traditional and cyberbullying may be affected by the differences between them, summarized above. Some factors, such as the breath of audience or anonymity, may particularly contribute to the negative impact (e.g., Slonje & Smith, 2008; Wang, Nansel, & Iannotti, 2011), but sometimes a difference between traditional bullying and cyberbullying can work both ways, so far as impact on the victim or incentive for the perpetrator is concerned. For example the potentially large audience size that cyberbullying may attract, could mean that the victim feels worse due to greater feelings of embarrassment and shame (Slonje, 2011; Slonje & Smith, 2008). However one positive aspect of this is that due to the large audience, the victim may more readily receive help since adults may become aware of the episode. This may also contribute to lesser feelings of being lonely in ones suffering.

If the perpetrator does not see the victim, then s/he may have less awareness of the consequences and the effects that their actions are causing. This is also two-sided. On the one hand, the satisfaction of seeing the victim suffer, or the public display of power in the peer group, may be less available to motivate the perpetrator. On the other hand, without the direct feedback that traditional bullying may offer there may be fewer opportunities for empathy or remorse (Slonje et al., 2012) and therefore the bullying may continue for longer. In our student interviews there were some indications that incidents of cyberbullying did continue for longer periods than incidents of traditional bullying: *'They prank call very, very, very often. Three, four times per day for about a year' (boy 13)*; *'on the net and stuff one dares to say more maybe then one would do in reality'* (girl, 15).

Ortega et al. (2009) compared what different emotions victims might feel if they experienced traditional bullying (direct, indirect) or cyberbullying (mobile, internet). The emotions reported were not bothered, embarrassed, angry, upset, stressed, worried, afraid, alone, defenseless, and depressed. More of the negative emotions were reported when being traditionally bullied, in particular being the victim of direct bullying, than in cyberbullying. Other research (Beran & Li, 2007; Didden et al., 2009; Patchin & Hinduja, 2006) shows that victims of cyberbullying express a variety of emotions such as: anger, sadness, frustration, embarrassment, stressed, fright, loneliness and depression. Hay, Meldrum, and Mann (2010) found a greater impact of cyber victimization compared to traditional victimization on internalizing measures such as self-harm and suicidal ideation.

The students we interviewed brought up a variety of emotions such as: helplessness, anger, sadness, worrying, loneliness, frustration: for example *'I didn't sleep the whole evening. It was...creepy'* (boy, 15); *'Anger and such! Then one feels singled out and like totally lonely. One feels like an outsider* (girl, 14). These emotions can also have a long lasting impact; one student explained that even one and a half years after the cyberbullying occurred she still avoided her perpetrator if she saw her on the street at a distance. However some pupils were 'not bothered', as "*I don't give a shit about what they said*' (boy, 15).

In fact, although many victims do feel distressed after cyberbullying incidents, many studies (e.g., Ortega et al., 2009; Patchin & Hinduja, 2006; Smith et al., 2008) also report that some victims do 'not feel bothered'. In Ortega et al. (2009), between 36% and 44% reported being not bothered, with the highest frequencies found in Internet bullying and the lowest in mobile phone bullying. Ortega et al. (2009) also found that different types of bullying may evoke different emotions; for example for mobile phone victimization more students reported they felt 'worried', and generally higher levels of fright, feelings of defenselessness and depression, compared to Internet victimization. .

As discussed above, future research needs to discriminate more amongst different types and actions of cyberbullying. For example Smith et al. (2008) found that certain categories (in particular photo/video clip bullying) were perceived as having a greater negative impact compared to traditional forms of bullying, others as having equal impact to traditional bullying (e.g., text message bullying), whilst some were perceived as having less of an impact (e.g., email bullying). Straude-Műller, Hansen, and Voss (2012) found that 'relational aggression that attacks the victim's social network with defamation and slurs on reputation is more serious than verbal and sexual harassment.' (p. 271). Some studies (Mishna, Cook, Saini, Wu, & MacFadden, 2009a; Spears, Slee, Owens, & Johnson, 2009) have tried to pinpoint what it is within the cyberbullying context that has a negative impact on the victims and suggest that it is the anonymity and the 'no safe haven' that may contribute most to this.

The students we interviewed were asked whether different forms of cyberbullying evoke different emotions. Most reported that no matter which form they had been bullied through, it all felt equally bad, resulting in similar feelings. However, one student felt that cyberbullying through instant messaging was worse compared to text messaging because *'one writes much faster than one does on the mobile. So it comes more and more you know'* (boy, 15).

When asked which form (cyberbullying or traditional bullying) they perceived as being more harmful, those who perceived cyberbullying to be worse compared to traditional bullying (four students) gave the reason of anonymity of the bully and that it could happen at any time at any place. Those students (4) who perceived traditional bullying to be worse, stated that they thought so due to the physical risk involved in traditional bullying, which was absent in cyberbullying; for example: '*Like face-to-face bullying, someone comes and says something. There you can just jump on him, and becomes trouble and fight. But on the net there one just writes anything. Nothing can happen there*' (boy, 15).

In summary, the impact of cyberbullying is clearly negative, including feelings of anger, fright, depression and embarrassment. However, some victims report being 'not bothered' about it, in part because it is not 'real' or physical. Overall, cyberbullying and traditional bullying appear to have broadly similar negative impacts; but some features of cyberbullying, especially anonymity, lack of a safe haven, and embarrassment due to the potentially large breadth of audience, can make the impact of cyberbullying especially strong, for some young people and in some circumstances.

8. Student coping strategies

When children and adolescents are asked what they think they would do if cyberbullied, the most often suggested ways of coping has been through different ways of technically protecting oneself from harassment online (Aricak et al., 2008; Smith et al., 2008). These technical solutions can consist of blocking certain people from contacting you online, changing passwords, user names or e-mail addresses and deleting anonymous text messages without reading them. Smith et al. (2008) asked respondents to choose the best ways to stop cyberbullying from a list of suggestions produced by focus groups; 'blocking messages/identities' was the option chosen by most respondents. Aricak et al. (2008) also found this to be the most selected way to stop cyberbullying.

The pupils we interviewed often suggested practical strategies such as blocking, changing numbers, not giving out ones number, track IP-addresses or permanently blocking abusers by contacting administrators of various web-sites. *'But on the mobile... one should maybe not give ones number to whomever. But that on the chat room I really don't know'* (girl, 14); *'The person that actually creates the chat sites and stuff, checks it more. And for example if bullying occurs then one like erases the account or like don't get to access the home page anymore'* (girl, 13).

There are however other coping strategies often mentioned by cybervictims. These include switching one's name on online accounts or changing phone numbers (Aricak et al., 2008; Juvoven & Gross, 2008; Smith et al., 2008). Some respondents select more confrontational ways of online coping such as responding online, telling the bully to stop (Aricak et al., 2008) or even bullying back (Dehue, Bollman, & Völlink, 2008). Of course, many students are pessimistic: one of our student interviewees stated: '*...well it is almost unstoppable*' (girl, 14).

Adults generally encourage student victims to tell a teacher or parent if they are being bullied. This has had some success in traditional bullying; although many victims are unwilling to tell adults about their victimization, especially older pupils and boys (Smith & Shu, 2000). Slonje and Smith (2008) found this reluctance to tell to be even more marked in cyberbullying, and in their Swedish sample not a single cybervictim had told an adult at school about being targeted.

Cassidy, Jackson, and Brown (2009) asked Canadian students who they would tell if they were subject to cyberbullying; 74% said they would tell a friend, 57% would tell a parent/guardian and 47% would tell school staff. Within the sample, the willingness to tell either school staff or a parent decreased with age. Although these percentages look fairly encouraging, they fall dramatically when victims are asked what they actually did.

Of the Dutch adolescents studied by Dehue et al. (2008), 13% had told a friend when cyberbullied, 9% had told their parent(s), 7% did not tell anyone and only 2% had told a teacher. Smith et al. (2008) found that 16% of cyberbullied respondents had sought help from parents and 9% from teachers. However, Livingstone et al.'s (2011) study involving children aged 9–16 years old in 25 different countries found that 77% of the cybervictims had talked to someone about their experience; 52% told a friend, 13% told a sibling, 42% talked to a parent, 8% to another adult they trust and 7% told a teacher.

For the students we interviewed, reporting a cybervictimization incident seemed to be the last course of action, if followed at all: *'Well, I have no clue. I think that is such stuff that you keep to yourself'* (girl, 14); *'Well I don't trust her* [counselor] *because she says that it is confidential, but I don't believe her. I don't believe she keeps it. I don't trust she will really keep it. Because they don't care about the whole thing. I have been bullied for eight years, so they don't care about it'* (boy, 14). Nevertheless one student mentioned that the school had taken successful action when she told adults about her experience: *'We reported it to the school. She went to the same school. They said that this was to be reported to the police. It is like terrorizing and stuff ... so it stopped in the end'* (girl, 14).

Slonje and Smith (2008) found that students perceived adults to be unaware of the problem; this could mean that students think adults are not able to handle the problem well. One student we interviewed clearly mentioned this lack of awareness: *'Get people to like notice it. I don't really know how... what the best way. But well, that people are aware of it...that it exists. That it is occurring'* (girl, 13).

In summary, students often report technical coping strategies such as blocking people online, changing ones password, username or mobile phone number. Most studies (but not Livingstone et al., 2011) find that rather few actually seek help from others; a consistent finding is that if they do tell somebody, their first choice has been to tell a friend, then a parent and lastly a teacher.

9. School-based intervention/prevention

There are many programs devised for traditional bullying, which as Ttofi and Farrington (2011) have shown, often have reasonable success rates. These programs can arguably be extended to include cyberbullying without major changes; clearly cyberbullying needs to be incorporated in components of these programs, such as a whole-school anti-bullying policy, and awareness-raising and curriculum-based activities. An example of a successful general anti-bullying program is the KiVa program in Finland, which includes computer based classroom activities, and support for victims from high-status peers. Although primarily designed with traditional bullying in mind, evaluations so far show that KiVa is as effective in reducing cyberbullying as it is for a range of traditional forms (Salmivalli, Kärna, & Poskiparta, 2011).

Other programs dealing with bullying advocate that it is important for the bully to understand what s/he has done (e.g., Pikas, 1989). This idea may be of particular importance within the cyberbullying context compared to that of traditional bullying. Slonje et al. (2012) investigated the difference of remorse felt by students after bullying others; 70% of those who had only traditionally bullied others reported feeling remorse after their actions whilst only 42% of those who had only cyberbullied others reported the same. If pupils do not feel remorse for what they do, there could also be less opportunity for any empathy to occur.

One student mentioned this potential for increasing understanding and empathy in the perpetrator: '*Well in some way, well what is hidden under is, well to understand how it actually feels. And if one then would understand then one would not bully. So that ... yes. How I don't really know ... the one that bullies is ... has to be pretty insecure himself. So that, well ... that is difficult ...*' (girl, 13).

Another intervention used occasionally in traditional bullying is quality circles; here, students in small groups find out information about a problem, use structured discussion techniques, and come up with solutions which are presented and considered by teachers and the school. This has been used successfully in cyberbullying,

and is particularly helpful for teachers aiming to keep abreast of fast moving changes in the kinds of cyberbullying students are experiencing (Paul, Smith, & Blumberg, 2012).

In addition new technical developments may help. A U.K. charity, Beatbullying, launched a new form of virtual peer support called CyberMentors in 2009. Students are trained as cybermentors, log on and mentor on demand. Cybermentors can refer mentees onto senior cybermentors and counselors for further support if necessary. This scheme has been evaluated quite positively by Banerjee, Robinson, and Smalley (2010) and Thompson and Smith (2011). As another example of a technical advance specifically regarding cyberbullying, Moore, Nakano, Enomoto, and Suda (2012) describe an automated way of not only identifying aggression online, but also the aspect of anonymity.

Not many intervention or prevention programs exist that deal specifically with cyberbullying; a Campbell review by Mishna, Saini, and Solomon (2009b) documented four short-term programs, that had had little effect. However resources are being developed, for example, in England, Thompson, Robinson, and Smith (in press) evaluated two e-safety films used by secondary schools, Childnet International's *Let's Fight It Together* about cyberbullying and Child Exploitation and Online Protection's (CEOP) *Exposed* about sexting. Both films and resources were rated as good by pupils and staff (http://bullyingandcyber.koinema.com/en/).

In summary, programs dealing with traditional bullying can often be extended to deal with cyberbullying. In addition, new technical developments can be taken advantage of (as in cybermentoring), and specific interventions can be devised for cyberbullying (as in films and information brochures and websites).

10. Conclusions

Although cyberbullying research is vigorous and has already achieved a lot, it faces some notable challenges. In particular, definitional and measurement issues need to be more fully resolved. Issues that need to be addressed more clearly include when the incident should be regarded as cyberbullying (with repetition) or cyber-aggression (a one off act); and the notion of power imbalance. A more standardized approach to measurement in this area is now urgently needed. A complication here is that the rapid historical changes in ICTs means that researchers need to continually modify instruments and be aware of new developments. These developments may have an influence on a variety of aspects such as gender and age differences or distribution processes of the bullying material.

The field also lacks an overall theoretical approach, although this can be said to be true of the field of bullying research generally (Monks et al., 2009). The notion of ostracism could be one helpful approach; that is, how the group acts towards an individual whom they perceive has broken the norm of the group, which then leads the other group members to use aversive behaviors (including bullying) make the individual fall back into the group norm. If the target does not change his/hers behavior, then exclusion from the group may occur. This threat of exclusion has been explored most for traditional bullying (Dixon, 2011), but deserves possible consideration in the cyberbullying area.

However there are also many opportunities in cyberbullying research (Smith, 2012). One is a broader disciplinary basis of research than is found in traditional bullying, including besides psychology and education, strong input from sociology, media studies, public health, law, and other social sciences; and a greater combination of qualitative and quantitative approaches perhaps following from this disciplinary breadth. There is the potential to make more use of young people themselves, not only as participants in focus groups, but also by involving them as researchers themselves, in the design of the study, and gathering data (Spears et al., 2009).

The nature of cyberbullying phenomena also inevitably directs us to broader contextual and developmental aspects. Contextually, we know that (even for school-aged children), most cyberbullying is not experienced in school; the perpetration, the witnessing, and the reception of cyberbullying acts will often be in homes, clubs, outside areas. Developmentally, cyberbullying may show more age permeability than traditional bullying; traditional bullying appears to vary substantially between the school setting and the workplace setting; but cyberbullying occurs in cyberspace, whatever age group is taking part.

We need to explore and contrast in more detail the motives for cyberbullying, compared to traditional bullying. There also appear to be important national or cultural differences in cyberbullying which call for explanation (Genta et al., 2012).

If we face the challenges and build on the opportunities that the field offers us, this will be an important and exciting program of research that may help us minimize the abuse of new technologies and ensure that cyberspace is primarily a happy and satisfying arena for human relationships.

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