

Facing cyberbullying: Review of empirical evidence regarding successful responses by students, parents and schools

Abstract

The present literature review summarizes current knowledge on successful responses to cyberbullying. We differentiate between three different response domains: reducing risks, combatting the problem, and buffering negative impact. A systematic literature search was conducted yielding 36 relevant studies. Most of these report findings regarding general prevention strategies (e.g., anti-bullying policies or cybersafety strategies) and the use of coping strategies such as seeking support, reactions towards cyberbullies (retaliation or confronting), technical solutions and avoidant and emotion-focused strategies. Whilst a few studies reported on perceived success, very few studies measure the success of the strategies in relation to cyberbullying, its risks and outcomes. In summary, although there are a number of studies investigating responses to cyberbullying, there is a clear lack of evidence concerning the question “what are successful responses”?.

Keywords: Cyberbullying, Coping, Prevention, Review.

1 Introduction

Cyberbullying is generally considered to be bullying using technology such as the Internet and mobile phones (Menesini et al. 2012, Smith et al. 2008). Cyberbullying takes a number of forms, such as sending insulting, rude or threatening messages, spreading rumours, revealing personal information, publishing embarrassing pictures, exclusion from online communication. Recent studies have demonstrated that there is a significant conceptual and practical overlap between both traditional bullying and cyberbullying, such that most young people who are cyberbullied also tend to be bullied by traditional, face-to-face methods (Cross et al. 2009, Dooley, Pyszalski, and Cross 2009, Gradinger, Strohmeier, and Spiel 2009; Riebel, Jaeger, and Fischer 2009; Sourander et al. 2010). Despite this overlap, cyberbullying differs from traditional bullying in several ways. First, a single upload of humiliating visual material to the Internet is characteristic of repetition as the content can be permanent and available to a wide audience (Heirman and Walrave 2008). Second, power imbalance in cyberbullying can be expressed with (a) technological knowledge, (b) anonymity, (c) limited option of escape. Specifically, a perpetrator dominates a victim through greater knowledge of using the internet and mobile phones and through the victim's limited possibilities to defend himself or herself as s/he does not necessarily know the bully. Moreover, in comparison to traditional bullying, cyberbullying is not limited in time and space (Heirman and Walrave 2008; Smith et al. 2008; Vandebosch and Van Cleemput 2008).

Despite its overlap with traditional bullying, being a victim of cyberbullying has been demonstrated as being an additional risk factor for the development of depressive symptoms (Perren et al. 2010; Gradinger, Strohmeier, and Spiel 2009; Juvonen and Gross 2008) and of psychosomatic symptoms like headaches, abdominal pain and sleeplessness (Sourander et al., 2010). Moreover, adolescent victims of cyber-bullying also engage in other types of problematic behaviour, such as increased alcohol consumption, a tendency to smoke and poor school grades (Mitchell, Ybarra, and Finkelhor 2007). Aggressors are at increased risk for school problems, conduct disorders, and substance use (Hinduja and Patchin 2008; Sourander et al., 2010). In sum, cyberbullying emerges as a significant concern for families, schools, and for social and healthcare professionals. The present literature review aims to summarize current knowledge on responses to cyberbullying.

1.1 Responses to cyberbullying

In the present review, responses to cyberbullying are conceptualized as reactions to this problem on the part of students, parents and schools. We differentiate between the following domains: reducing risks, combatting the problem, and buffering the negative impact such as depressive symptoms (see Figure 1).

<Insert Figure 1 here>

First, from a preventive perspective, students, parents and schools may try to handle the emerging problem of cyberbullying by means of reducing known risks. As cyberbullying is strongly associated with traditional bullying (Cross et al. 2009; Dooley, Pyszalski, and Cross 2009; Gradinger, Strohmeier, and Spiel 2009; Riebel et al. 2009), we may assume that taking action against traditional bullying and associated risk factors through such interventions as whole-school approaches and policies, social skills training or improvement of the school climate could also reduce the risk of cyberbullying. As cyberbullying occurs via the Internet or mobile phone use, it is also associated with general online risks such as risky online contacts or seeing inappropriate content (Livingstone et al. 2011). Therefore, parental mediation or Internet safety measures might also be effective in reducing cyberbullying.

Secondly, when cyberbullying occurs, a different set of actions (or coping strategies) to stop these negative behaviours may be taken by students, parents or schools. These responses include technical solutions (e.g., blocking contact), confronting the bully (e.g., constructive contacting or retaliation), ignoring (e.g., doing nothing, avoidant behaviour or emotion regulation) and instrumental support (e.g., asking someone else for help). As cyberbullying has negative consequences for victims such as depression or suicidal ideation (Gradinger, Strohmeier, and Spiel 2009; Juvonen and Gross 2008; Perren et al. 2010; Sourander et al. 2010), specific coping strategies might also be applied to enhance victims' well-being and to buffer the negative impact. Victims themselves may try to cope emotionally with the problem by adopting individual strategies, which may be healthy or unhealthy. Parents, friends or peers may offer emotional and instrumental support.

The goal of the current review was to summarize the empirical database on successful responses to cyberbullying. We aimed to identify what responses are successful. We conceptualized success in terms of (a) reducing cyberbullying risks (the *prevention* of cyberbullying), (b) *combatting* cyberbullying leading to stopping this problem, and (c) *buffering* its negative impact on victims.

1.2 Systematic literature search

A systematic literature search was conducted to identify relevant empirical studies. Different databases (PsychInfo, Pubmed, ERIC, SOCindex, Web of Science etc) were systematically searched. Selected studies had to contain the keywords cyberbullying (and related terms), coping/responses (and related terms), youth/educational settings (and related terms)¹. Articles were rated for relevance in several steps and double-checked for inter-rater agreement. Publications up to September 2010 were included. Also included were findings from the EU Kids Online II study (initial findings published in October 2010, final publication in 2011)². The database search yielded 225 publications, which were rated regarding relevance and correspondence to inclusion criteria.

The following inclusion criteria were used (a) empirical studies on cyberbullying (new data and knowledge); (b) published papers only (scientific journals, book chapters, EuKidsOnline report, dissertations, but excluding conference papers and posters; (c) parents, teacher (schools) or students/pupils responding to cyberbullying; (d) papers should include some measures of responses (= listed in the model Figure 1); and (e) papers should address at least one of our predefined research questions (prevent, combat, buffer). Thirty-six articles were rated as being partly or highly relevant to our research question. All relevant papers were systematically analysed by seven different raters (mostly members of the current author team). The raters had to review methods (i.e. the type of study, its focus, sample, types of measures and their quality) and finally to look for research evidence on the success of responses related to the domains such as reducing cyberbullying risks, combatting cyberbullying, and buffering its negative impact. The raters were given a form with predefined responses to evaluate them. Further, taking into consideration that the list of responses could not be exhaustive, the raters were asked to fill in the open-ended domain-related boxes with examined responses, including findings on the response's success or otherwise.

¹ A report describing details of the methodological approach (search terms, inclusion and exclusion criteria etc.), the category system and complete tables with descriptive results can be obtained from the first author on request.

² EU Kids Online II study is the largest (representative) study in Europe concerning this topic. They surveyed a sample of 25142 children aged 9-16 years across 25 European countries (Livingstone et al. 2011).

Most of these articles concerned the use of various responses without a consideration of positive or negative consequences of the reaction to a particular cyberbullying form. The current paper presents a selective narrative overview of the results of the systematic literature review, focussing on the question of measured *success* of responses.

2 Preventing cyberbullying

This section first presents findings and suggestions for concrete measures to prevent cyberbullying.

2.1 Suggested prevention approaches

Based on general research findings on cyberbullying and the associated risks, it is argued by several authors that we should draw upon experience from “face-to-face” bullying so as to prevent cyberbullying (Campbell 2005). In addition, the following preventative actions were suggested with emphasis on the whole school approach:

- awareness raising initiatives targeting teachers, parents and students in order to heighten awareness of cyberbullying and its risks and create a context for facilitating trust on the part of victims with regard to adult authorities (Campbell 2005; Juvonen and Gross 2008; Li 2007; Young, Young, and Fullwood 2007; Wright et al. 2009);
- school policies to respond to the challenge of cyberbullying and implement a range of preventing policies accordingly such as
 - the direct teaching of values education, empathy training and the use of stories and drama in the curriculum, along with direct teaching of “netiquette” (Campbell 2005; Dranoff 2008; Mason 2008; Stacey 2009), last but not least to create an open line of communication between students and adults in school (Genz 2010);
 - the inclusion of social and curriculum programmes to motivate students towards taking action against cyberbullying (e.g., peer help programmes, buddy programmes etc) (Campbell 2005; Stacey 2009);
 - adult supervision, especially with regard to children’s computer education and usage of technology (Campbell 2005; Rosen, Cheever and Carrier 2008) as well as education of parents concerning these matters (Stacey 2009).

The suggested prevention strategies emphasize the importance of both family and

education/school (Smith et al. 2008) for preventing cyberbullying, while stressing the need for empowering children and making them the key actors in deciding about, and implementing prevention strategies (Stacey 2009; Ybarra and Mitchell 2004; Young, Young, and Fullwood 2007). However, most of the above studies, drew their conclusions and suggested implications for prevention strategies from general empirical findings (at best).

2.2 Evidence regarding successful coping strategies to prevent cyberbullying

Although different strategies are recommended based on general research findings, only a few studies investigated the success of particular strategies in actually preventing cyberbullying. It has been suggested that peer support in the form of peer-intervention by student leaders in school may have a role in prevention of cyberbullying through creating bullying awareness in the school, developing leadership skills among students, developing bullying intervention practices and team-building initiatives in the student community, and facilitating students to behave actively as bystanders. DiBasilio (2008) showed that such peer intervention successfully led to a decline in cyberbullying, while students' understanding of bullying widened.

A second key category of prevention strategies reported in the literature focuses on parental supervision and parenting behavior. As time spent online is considered as a risk factor for cyberbullying, parental restrictive mediation (which decreases the amount of time children spend online) was found to reduce cyberbullying risks (Livingstone et al 2011; Rosen, Cheever, and Carrier 2008). Research has found that higher levels of parental warmth is negatively associated with involvement in both traditional bullying and cyberbullying (Wang, Iannotti, and Nansel 2009). Conversely, a poor parent-child relationship, which may indicate insufficient parental supervision, has been found to be associated with a higher risk of involvement in cyberbullying both as a perpetrator and as a victim (Ybarra and Mitchell 2004).

3 Responses related to combatting cyberbullying and buffering its negative impact

Besides the question concerning which strategies parents, schools and students can apply to prevent cyberbullying, research has also addressed the question about what victims of cyberbullying (or persons close to them) should do to cope with the problem. We will first outline what responses have been investigated and then present empirical evidence regarding their successfulness.

3.1 Responses to ongoing cyberbullying

In the reviewed studies there was predominant research attention to victims of cyberbullying and their responses to the problem. Victims report a range of coping strategies which can be classified from problem-focussed, emotion-focussed, to mixed (e.g., social support). According to coping theory (Lazarus and Folkman, 1984), people tend to use problem-focussed coping when they believe that their own resources or critical aspects of the situation can potentially be changed, i.e. one attempts to handle the stressful situation by tackling the problem that causes the stressful situation. On the other hand, people use emotion-focussed coping when they believe that they can do little to change the stressful situation, hereby a person attempts to control their emotional response to the stressful situation, by redefining or ignoring the situation or by focusing on the positive aspects of the situation.

Several types of coping strategies in relation to cyberbullying have been identified: reactions towards cyberbullies (retaliation, confronting), technical solutions (e.g., report abuse buttons, blocking the sender), supportive strategies (seeking support by adults, teachers, friends or external institutions), and avoidant and emotion-focused strategies (ignoring, feelings of helplessness). The next section gives an overview of the research on the use of coping strategies and their perceived successfulness in dealing with cyberbullying.

Reactions towards the bully. Confronting the bully is commonly reported by adolescents as an approach, if the victim knows the bully or is able to contact her or him (Aricak et al. 2008; DiBasilio 2008; Stacey 2009). Students consider retaliation as a less constructive way of contacting the perpetrator. When asking students what they had done to stop cyberbullying, Hoff and Mitchell (2009) reported that answers contained active and physically retaliatory behaviour, especially among boys. Although the strategy of confronting the bully is often mentioned by those affected, it has proven to be less helpful in retrospect (Price and Dalgleish 2010).

The assumption in some studies that retaliatory cyberbullying is more easily done, due to greater anonymity, and therefore more often used than “face-to-face contact”, was not confirmed. Juvonen and Gross (2008) found that, whereas 60% of the cybervictims defended themselves against the bully with traditional face-to-face methods, only 12% retaliated solely in cyberspace, and 28% used both traditional and cyberforms of retaliation.

Technical solutions. Specific cyberspace coping strategies, such as deleting or blocking threatening messages are generally used and considered as being helpful (Aricak et al. 2008; Juvonen and Gross 2008; Kowalski, Limber, and Agatston 2007; Smith et al. 2008; Stacey

2009). Livingstone et al. (2011) report that the most popular technical coping strategies are blocking the person (46%), deleting nasty messages (41%), and stopping use of the Internet (20%). Blocking was considered an effective strategy by participants.

Using a mixed methodological approach, Price and Dalgleish (2010) found that blocking was the most used technical strategy and was also considered as the most helpful online action exerted by the self-identified cybervictims. Technical solutions are often reported along with preventive strategies like banning websites and setting age appropriate limits of using the computer and internet set by parents (see also above; Kowalski et al. 2007).

Support seeking. Many students recommend asking their parents for help in relation to a cyberbullying incident (Arıcak et al. 2008; Smith et al. 2008; Stacey 2009; Topcu, Erdur-Baker, and Capa-Aydin 2008). However, some adolescents recommend not consulting adults because they fear that they may lose privileges (e.g., having and using mobile phones and Internet access), and because they fear parents would simply advise them to ignore the situation or that they would not be able to help them as they are not accustomed to cyberspace (Hoff and Mitchell 2009; Kowalski, Limber, and Agatston 2008; Mishna, Saini, and Solomon 2009; Smith et al. 2008; Stacey 2009). In a web-based survey of 12-17-year olds, of whom most had experienced at least one cyberbullying incident in the last year, Juvonen and Gross (2008) found that 90% of the victims did not tell their parents about their experiences and 50% of them justified it with “I need to learn to deal with it myself”.

Students also have a rather negative and critical attitude to teachers’ support: a larger percentage of them consider telling a teacher or the school principal as rather ineffective (Arıcak et al. 2008; DiBasilio 2008; Mishna, Saini, and Solomon 2009). Although 17% of students did report a cyberbullying incident to a teacher, in 70% of the cases the school did not react to it (Hoff and Mitchell 2009).

Asking for help from peers is a commonly used approach and is recommended (Arıcak et al. 2008; DiBasilio 2008; Stacey 2009; Topcu Erdur-Baker, Capa-Aydin 2008), although prevalence rates vary to a large extent. Price and Dalgleish (2010) reported that Australian cybervictims consider “telling a friend” as the most helpful strategy. Livingstone et al. (2011) report that in terms of confiding in others, respondents were most likely to tell a friend (52%) or a parent (42%).

Avoidant and emotion-focused strategies. In a study by Dehue, Bolman, and Vollink (2008) 7.2% of the students reported that when they were victimised online they would usually “pretend to ignore it” and/or “ignore it” (6.9%). When asked how they coped with the problem, 36% of the respondents in the EU Kids Online II study reported that they tried to

“fix the problem”, whereas 24% “hoped the problem would go away”, and 12% said that they “felt guilty” (Livingstone et al 2011).

In sum, a range of coping strategies used by victims in relation to cyberbullying have been investigated. However, most of the studies investigated the use (and not the success) of coping strategies among cybervictims, or in relation to hypothetical cyberbullying scenarios. For example the EU Kids Online II study showed that of those bullied online in the last 12 months (6% of participants), 85% reported being upset (Livingstone et al. 2011). However, the majority of victims (62%) “got over it straight away”. This finding led Livingstone et al. (2011) to conclude that children’s coping strategies were most likely effective, despite the fact that it ignores the needs of those who continued to be upset. As this is a very general conclusion, we do not know what kind of coping strategies are “likely to be effective”.

3.2 Evidence regarding successful responses

To investigate the success of responses, different approaches have been applied depending on targeted subjects and research design. From a pure methodological point of view, these approaches would range from yielding no evidence (“What do people, in general, think is effective?”) to a strong evidence base (“longitudinal studies investigating whether certain coping strategies are related to lower levels of cyber victimization or victim’s well-being?”). In reviewing the selected studies, we have identified the following taxonomy of studies.

- a) What do people, in general, think is effective?
- b) retrospective accounts of cybervictims regarding the successfulness of chosen coping strategies
- c) cross-sectional studies investigating associations between certain responses, cyber victimization and victim’s well-being
- d) longitudinal studies investigating whether certain responses or coping strategies are related to decreasing levels of cyber victimization (combatting) or victim’s well-being? (buffering)
- e) experimental studies investigating the impact of selected responses on changes in cybervictimization and victim’s well-being

Studies reporting on perceived success from a general perspective are reported above and are considered as yielding no real evidence.

Retrospective accounts of victims. Hensler-McGinnis (2008) examined the effect of coping on psychological trauma, and impaired academic / career functioning following victimization through cyberstalking. A sample of 452 college / university students, aged

between 18 and 43 years (Female: 81.2%) participated in the research. Victimization was found to be predictive of psychological trauma and impaired academic functioning. The coping strategies which were rated by victims as most effective in decreasing the cyberstalking were “retaliating using electronic methods” (65.5%), “blocked my electronic accessibility” (63%), “limited disclosure of my personal information on the Internet” (56.9%), and “decreased use of Internet, cell phone etc.” (54%). Effective coping was characterized by limiting exposure and accessibility. Psychological trauma and academic / career functioning impairment were both found to be positively related to the number of coping strategies used by the victim, suggesting that these were victims who had tried many strategies but without success. Additionally, there was no evidence that resilient coping moderated the relationship between victimization and trauma, or the relationship between victimization and academic/career functioning.

Cross-sectional associations between coping strategies and cyber victimization. Only one study reported on the relationship between different coping strategies and cyberbullying (Lodge and Frydenberg 2007). The results revealed that children with increased experience of cyber victimization used more passive coping strategies, such as wishful thinking and mental distraction, compared to children with low levels of cyber victimization. In general, children with an optimistic, relaxed and active mode of coping reported fewer cyberbullying experiences (Lodge and Frydenberg 2007). Results of this study yield first indications about what kind of coping strategies might be effective. However, as this was a cross-sectional study, we do not know whether any of the reported associations are causal.

Longitudinal associations between coping strategies and well-being. The study by Hay and Meldrum (2010) is one of the rare longitudinal studies on the topic; they measured the role of authoritative parenting and high self-control in buffering the negative impact of traditional and cyberbullying. From a sample of 426 students, aged between 10 and 21 years (female: 50%), they found that bully victimization was associated with increased reporting of self-harm and suicidal ideation. Authoritative parenting and high levels of self-control moderated the negative impact of victimization. The authors concluded that cognitive behavioural therapy could benefit vulnerable adolescents, by helping them to acknowledge their maladaptive coping and to change their behaviour. The longitudinal design advances our understanding of potential buffering effects. However, this study did not investigate specific coping strategies, but more general personal and parental characteristics that aimed to buffer the negative impact.

Experimental studies. The literature review yielded one intervention study investigating the impact of actions taken against cyberbullying. Chi and Frydenberg (2009) investigated the impact of two programmes (Best of Coping, BOC and Cyber Savvy Teens, CST) on adolescents' psychological distress and ability to cope online. The BOC programme educates participants on general coping techniques such as decision-making whereas the CST programme was designed to increase adolescents' safety skills online, including coping strategies for cyberbullying. A sample of 50 adolescents (female: $n = 28$) aged 13 to 14 years, were divided into three categories: a control; a group with CST programme; and a group with the BOC programme. Three coping styles (Productive Coping [P]; Non-productive Coping [N]; and Reference to Others [R]) and psychological distress were examined. Following the intervention, the CST group gave higher rankings to the coping strategies "keep to self" (N), "ignore the problem" (N), and a lower ranking to "focus on positive" (P), and "seek to belong" (P). However, a small increase in Productive Coping was identified. CST participants displayed increased willingness to report cyber harassment to teachers and parents post-intervention. The BOC group displayed higher ranking of "social action" (R), "physical recreation" (P), and "focus on solving the problem" (P) post-intervention, and a decrease in ranking of the strategies "ignore the problem" (N), "wishful thinking" (N), and "worry" (N). They were also more likely to report cyber harassment to a trusted adult. An increase in Reference to Others (R) was identified after the intervention. Both groups showed a decrease in the use of Non-productive Coping (N). In terms of buffering negative effect, the authors concluded that both programmes reduced participants' anxiety and symptoms of depression.

4 Discussion

This systematic literature review yielded a number of studies which reported some empirical data on responses to cyberbullying. However, the conclusions which can be drawn are limited. We found very little empirical evidence concerning the success of responses. Despite this, the studies provided some insight into what students do to cope with cyberbullying. Most of the reported coping strategies are general problem solving strategies such as looking for social support, trying to ignore or avoid the problem. Some are related to bullying (e.g., confronting the bully); others are specifically related to cyberbullying such as the use of technological strategies. To prevent cyberbullying and reduce its risks, parental supervision, general anti-bullying or social skills development strategies, as well as education in cybersafety, have been suggested.

In addition, many of the identified studies suffer from similar methodological limitations. Most of the studies used cross-sectional self-reports among adolescent samples. Responses including coping strategies were frequently only assessed with single items. Following methodological shortcomings, reactions of victims to cyberbullying did not reflect the context and ways they were victimized; more precisely there was a lack of studies on how victims responded to different forms of cyberbullying and to what extent the form of cyberbullying may determine a successful solution. Moreover, there was a lack of theoretical background regarding selected coping strategies, their potential effects and underlying mechanisms. These issues are not new and are not specific to cyberbullying. For example McGuckin, Cummins, and Lewis (2010) emphasized similar issues as being of critical importance regarding research studies exploring traditional bully/victim problems.

Future studies utilizing longitudinal and methodologically sound intervention designs are required. Longitudinal studies should address the question of whether the use of specific coping strategies is more effective in combatting cyberbullying occurrences or in buffering the negative effects. In these studies, coping strategies should be investigated as potential mediators or moderators. For example, a recent study by Machmutow et al. (2012), which was published after conducting the present literature review, shows that social support can buffer the negative impact of cyber victimization.

Intervention studies (preferably randomized controlled trials) should investigate the effectiveness of prevention strategies, either in relation to reducing risks or in relation to teaching specific responses strategies for victims, bystanders, parents and teachers. Preliminary results of the Finish anti-bullying programme KiVa (an acronym for Kiusaamista Vastaan, “against bullying”) programme, whose findings were again published after collecting studies for the literature review, suggest that prevention strategies targeting traditional bullying are able to reduce cyberbullying (Salmivalli, Kärnä, and Poskiparta 2011). Conversely, another recently published longitudinal study about the effect of “netiquette” on the reduction of cyberbullying found no significant relationship between these two variables (Kumazaki, Suzuki, Katsura, Sakamoto and Kashibuchi 2011). This indicates more intervention studies are needed to understand which measures are successful in reducing cyberbullying risks.

Our review only included studies which have been published up to September 2010. As there are a number of studies currently being carried out, and there may be relevant papers under review, we might soon expect more empirical evidence regarding the success of coping

strategies. Only then can we seriously recommend guidelines and coping strategies to students, parents, and schools.

5 References

- Aricak, Tolga, et al. 2008. Cyberbullying among Turkish adolescents. *CyberPsychology & Behavior* 11(3):253-261. doi:10.1089/cpb.2007.0016.
- Campbell, Marilyn A. 2005. Cyber bullying: An old problem in a new guise? *Australian Journal of Guidance and Counselling* 15:68-76. doi: 10.1375/ajgc.15.1.68
- Chi, Cecilia Wing, and Frydenberg, Erica. 2009. Coping in the Cyberworld: Program Implementation and Evaluation - a Pilot Project [online]. *Australian Journal of Guidance and Counselling* 19: 196-215. doi: dx.doi.org/10.1375/ajgc.19.2.196
- Cross, Donna, et al. 2009. *Australian Covert Bullying Prevalence Study (ACBPS)*. Child Health Promotion Research Centre, Edith Cowan University, Perth.
- Dehue, Franine, Bolman, Catherine, and Vollink, Trijntje. 2008. Cyberbullying: What do kids do and what do parents know? [Dutch]. *Pedagogische Studien* 85:359-370.
- DiBasilio, Amy. 2008. *Reducing Bullying in Middle School Students through the Use of Student-Leaders*. PhD diss., Saint Xavier University and Pearson Achievement Solutions.
- Dooley, Julian J., Jacek Pyzalski, and Donna Cross. 2009. Cyberbullying Versus Face-to-Face Bullying. A Theoretical and Conceptual Review. *Zeitschrift für Psychologie/Journal of Psychology* 217:182-188. doi: 10.1027/0044-3409.217.4.182
- Dranoff, Robert. 2008. *Teacher and student perceptions of bullying and victimization in a middle school*. Dissertation. New York: Dowling College.
- Genz, Heather. 2009. *Education, prevention, and intervention of traditional and electronic bullying in middle school*. PhD dissertation. College of Education, Walden University (US).
- Gradinger, Petra, Dagmar Strohmeier, and Christiane Spiel. 2009. Traditional Bullying and Cyberbullying: Identification of Risk Groups for Adjustment Problems. *Zeitschrift für Psychologie/Journal of Psychology* 217:205-213. doi: 10.1027/0044-3409.217.4.205
- Hay, Carter, and Ryan Meldrum. 2010. Bullying Victimization and Adolescent Self-Harm: Testing Hypotheses from General Strain Theory. *Journal of Youth and Adolescence* 39:446-459. doi: 10.1007/s10964-009-9502-0
- Heirman, Wannes, and Michel Walrave. 2008. Assessing concerns and issues about the mediation of technology in cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 2(2).
<http://cyberpsychology.eu/view.php?cisloclanku=2008111401&article=1>
- Hensler-McGinnis, Nancy Felicity. (2008) *Cyberstalking vicimization: Impact and coping responses in a national University sample*. PhD diss., University of Maryland.
- Hinduja, Sameer, and Justin W. Patchin. 2008. Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant Behavior* 29:129-156. doi: 10.1080/01639620701457816
- Hoff, Dianne L., and Sidney N. Mitchell. 2009. Cyberbullying: Causes, Effects, and Remedies. *SO - Journal of Educational Administration* 47:652-665.
- Juvonen, Jaana, and Elisheva F. Gross. 2008. Extending the school grounds? Bullying experiences in cyberspace. *The Journal of School Health* 78:496-505. doi: 10.1111/j.1746-1561.2008.00335.x
- Kumazaki, Ajuchi, Kanae Suzuki, Rui Katsura, Akira Sakamoto, and Megumi Kashibuchi. (2011) The Effects of Netiquette and ICT Skills on School-bullying and Cyber-bullying: The Two-wave Panel Study of Japanese Elementary, Secondary, and High School Students. *Procedia - Social and Behavioral Sciences* 29:735 – 741. doi:10.1016/j.sbspro.2011.11.299

- Kowalski, Robin M, Susan P. Limber, and Patricia W. Agatston. (2008) Cyber Bullying: Bullying in the Digital Age. *American Journal of Psychiatry* 165:780-781. doi: 10.1176/appi.ajp.2008.08020226.
- Lazarus, Richard. S., and Susan Folkman. 1984. *Stress, appraisal, and coping*. Springer, New York.
- Li, Qing. 2007. New bottle but old wine: A research of cyberbullying in schools. *Computers in human behavior* 23:1777-1791.
- Livingstone, Sonia, et al. (2011) *Risks and safety on the internet: The perspective of European children. Full findings*. LSE, London: EU Kids Online.
- Lodge, Jodie, and Erica Frydenberg. 2007. Cyber-bullying in Australian schools: Profiles of adolescent coping and insights for school practitioners. *Australian Educational and Developmental Psychologist* 24: 45-48.
- Machmutow, Katja, Sonja Perren, Fabio Sticca, and Françoise D. Alsaker (2012). Peer victimisation and depressive symptoms: Can specific coping strategies buffer the negative impact of cybervictimisation? *Manuscript submitted for publication*.
- Mason, Kimberly L. 2008. Cyberbullying: A preliminary assessment for school personnel. *Psychology in the Schools* 45:323-348. doi: 10.1002/pits.20301
- Mc Guckin, Conor, Cummins, Pauline K., and Lewis, Christopher Alan. 2010. f2f and cyberbullying among children in Northern Ireland: Data from the Kids Life and Times Surveys. *Psychology, Society, & Education* 2:83-96
- Menesini, Ersilia, Nocentini, Annalaura, Palladino, Benedetta, Frisén, Ann, Berne, Sofia, Ortega, Rosario, Calmaestra, Juan, Scheithauer, Herbert, Schultze-Krumbholz, Anja, Luik, Piret, Naruskov, Karin, Blaya, Catherine, Berthaud, Julien, Smith, Peter. 2012. Cyberbullying definition among adolescents: A comparison across six European countries. *Cyberpsychology, Behavior, and Social Networking*, in press
- Mishna, Faye, Michael Saini, and Steven Solomon. 2009. Ongoing and online: Children and youth's perceptions of cyber bullying. *Children and Youth Services Review* 31:1222-1228. doi: 10.1016/j.childyouth.2009.05.004
- Mitchell, Kimberly J., Michel Ybarra, and David Finkelhor. 2007. The relative importance of online victimization in understanding depression, delinquency, and substance use. *Child Maltreatment* 12:314-324. doi: 10.1177/1077559507305996
- Perren, Sonja, et al. 2010. Bully/victim problems in schools and in cyberspace: Associations with depressive symptoms in Swiss and Australian adolescents. *Child and Adolescent Psychiatry and Mental Health* 4:28,
- Price, Megan, and John Dalgleish. 2010. Cyberbullying: Experiences, Impacts and Coping Strategies as Described by Australian Young People. *Youth Studies Australia* 29:51-59.
- Riebel, Julia, Reinhold. S. Jaeger, and Uwe C. Fischer. 2009. Cyberbullying in Germany – an exploration of prevalence, overlapping with real life bullying and coping strategies, *Psychology Science Quarterly*, 51(3): 298-314.
- Rosen, Larry D., Nancy A. Cheever, and L. Mark Carrier. 2008. The association of parenting style and child age with parental limit setting and adolescent MySpace behavior. *Journal of Applied Developmental Psychology* 29:459-471. doi: 10.1016/j.appdev.2008.07.005
- Slonje, Robert, and Peter .K. Smith. 2008. Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology* 49: 147-154. doi: 10.1111/j.1467-9450.2007.00611.x
- Smith, Peter K., et al. 2008. Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry* 49:376-385. doi: 10.1111/j.1469-7610.2007.01846.x
- Sourander, Andre, et al. 2010. Psychosocial risk factors associated with cyberbullying among adolescents. *Archives of General Psychiatry* 67:720-728.

- Salmivalli, Christina, Antti Kärnä, and Elisa Poskiparta. 2011. Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied. *International Journal of Behavioral Development* 35:405-411.
- Stacey, Elisabeth. 2009. Research into cyberbullying: Student perspectives on cybersafe learning environments. *Informatics in education* 8:115-130.
- Topcu, Çiğdem, Özgür Erdur-Baker, and Yeşim Capa-Aydin. 2008. Examination of cyberbullying experiences among Turkish students from different school types. *CyberPsychology & Behavior* 11(6):643-648.
- Vandebosch, Heidi, and Katrien van Cleemput. 2008. Defining cyberbullying: A qualitative research into the perceptions of youngsters. *Cyberpsychology and Behavior* 11(2): 499-503. doi: 10.1089/cpb.2007.0042
- Wang, Jing, Ronald J. Iannotti, and Tonja R. Nansel. 2009. School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health* 45:368-375. doi: 10.1016/j.jadohealth.2009.03.021
- Wright, Vivian H., et al. 2009. Cyberbullying: Using Virtual Scenarios to Educate and Raise Awareness. *SO - Journal of Computing in Teacher Education* 26:35-42.
- Ybarra, Michel L., and Kimberley J. Mitchell. 2004. Youth engaging in online harassment: associations with caregiver-child relationships, Internet use, and personal characteristics. *Journal of Adolescence* 27:319-336. doi: 10.1016/j.adolescence.2004.03.007
- Young, Adena, Atrisha Young, and Harry Fullwood. 2007 Adolescent Online Victimization. *Prevention Researcher* 14:8-9.

Figure 1: Conceptualization of responses to cyberbullying

