Education for Parents to Effectively Reduce Cyberbullying and Cyber-Victimization

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Declaration of Conflicting Interests
The authors declare no potential conflicts of interest with respect to the project, authorship, and/or publication of this article.

Authors’ Roles
Kelsy Streeter: Conducted the project discussed in this paper and prepared the manuscript.

Ann Guthery: Provided project oversight and reviewed the manuscript for editing and to provide recommendations for appropriate modifications.

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Abstract

**Background:** Cyberbullying and cyber-victimization are rising problems and are associated with increased risk for mental health problems in children. Methods for addressing cyberbullying are limited, however, interventions focused on promoting appropriate parental mediation strategies are a promising solution supported by evidence and by guided by the Theory of Parenting Styles.

**Objective:** To provide an educational session to parents of middle school students that promotes effective methods of preventing and addressing cyberbullying incidents. **Design:** The educational sessions were provided to eight parents middle school student. Surveys to assess parent perception of and planned response to cyberbullying incidents and Parent Adolescent Communication Scale (PACS) scores were collected pre-presentation, post-presentation, and at one-month follow up. **Results:** Data analysis of pre- and post-presentation PACS using a Wilcoxon test found no significant difference ($Z = -.405, p > .05$). There was not enough response to the 1-month follow-up to perform a data analysis on follow-up data. **Conclusions:** Due to low attendance and participation in the follow-up survey the results of this project are limited. However, parents did appear to benefit from communicating concerns about cyberbullying with school officials. Future studies should examine if a school-wide anti-cyberbullying program that actively involves parents effects parental response to cyberbullying.

**Keywords:** Cyberbullying, cyber-victimization, parental mediation, parent education, middle school.
Cyberbullying in Middle School Students

Approximately 92% of teens, ages 13-17, report that they surf the internet at least once a day with over half reporting internet use several times a day, and 24% are on the internet almost constantly (Pew Research Center, 2015). According to the Pew Research Center (2015) the ability to have constant access to the internet is made possible by the increasing availability of smartphones, with an estimated 73% of teens owning one. While teenagers use the internet for a variety of purposes, 76% use it to access social media sites such as Facebook, Instagram, Snapchat, and Twitter (Pew Research Center, 2015). Children use these sites to communicate with friends, family, and the online networks about ideas and experiences; however, negative messages can also be communicated using these sites. As internet, social media, and cellphone use has become more frequent among children and teenagers a new form of bullying called cyberbullying has emerged.

**Background and Significance**

Cyberbullying (CB) occurs over the internet, social media, discussion boards, chat rooms, or texting and it can come in many forms such as rumor spreading, posting embarrassing pictures, or threatening messages (U.S. Department of Health and Human Services, 2015). No matter how perpetrators target victims, CB usually shares a few key traits with traditional bullying: it is repetitive, it is aggressive, and it takes advantage of a power imbalance between the perpetrator and the victim (Kowalski, Giumetti, Schroder, & Lattanner, 2014). However, there are ways that CB can be more damaging than traditional forms. In CB, negative messages can be easily spread and reproduced by peers, can be sent and received 24/7, can feel permanent, and can be revisited repeatedly (Kowalski et al., 2014). Additionally, these messages are not
limited to just one setting; if a student has a laptop, tablet, and smartphone then the message can reach them wherever they are, even in the safety of their home.

In 2013, the CDC surveyed students in grades 9th thru 12th and found that 14.8% had been victims of CB during the previous 12 months (Centers for Disease Control and Prevention, 2014). The effects of CB on victims can include mental health problems and problematic behaviors. From a mental health perspective, victims are more likely to suffer from anxiety, depression, fear, stress, loneliness, and emotional problems (Baas, Jong, & Drossaert, 2013; Gámez-Guadix, Orue, Smith, & Calvete, 2013; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Sahin, 2012). Additionally, adolescents who are victims of CB are more likely to have problems with substance use and abuse (Agency for Healthcare Research and Quality, 2014; Gámez-Guadix et al., 2013; Kowalski et al., 2014). Peer-victimization can lead to increased risk of suicidal ideation and attempts, and CB victims appear to be at greater risk for suicidal ideation compared to victims of traditional bullying (Geel, Vedder, & Tanilon, 2014).

**Problem Statement**

The impact of cyber-victimization (CV) can range from mental health problems to problematic behaviors. There is a concerning moderate correlation between CV and suicidal ideation, according to a meta-analysis conducted by Kowalski and fellow researchers (2014). Another meta-analysis conducted by Gini and Espalange (2014) noted that CV could have a stronger association with suicidal ideation than traditional bullying victimization. Rueger and Jenkins (2013) found that the experience of bullying victimization in early adolescence could result in problems with anxiety, depression, and lowered self-esteem, as well as problems with school such as poor attendance, reduced academic performance, and negative attitude.
At home, parents and guardians find themselves attempting to navigate new ground in helping their children to use the internet safely. A board member of the Parent Teacher Organization (PTO) of a suburban Arizona middle school expresses that CB and internet safety are major concerns for many of the parents in her organization. The parents of the PTO want to make sure their children are being safe online and want guidance on how to help their children. Helping parents learn to navigate resources for handling CB and how to make use of these resources could be a step toward addressing CB issues.

Furthermore, parents may not even be aware that their children are having trouble with internet harassment (Baas, O’Neil, & Craig, 2013; Dehue, Bolman, & Völlink, 2008). Children may be hesitant to tell their parents they are experiencing CV out of shame that it is happening to them or out of fear that their parents will restrict internet access or take it away (Baas et al., 2013). Based on this information, it is recommended that parents develop an understanding of how important the internet is to their children and reassure them that online privileges will not be restricted should they reveal that they have experienced CB (Baas et al., 2013). In addition, open discussion between parent and child about online behaviors and parental awareness of their child’s online activities decreases CV (Ang, 2015; Centers for Disease Control and Prevention, 2015; Kowalski, Giumetti, Schroeder, and Lattanner, 2014). Similarly, Mesch (2009) found in a survey of 935 teenagers that parental monitoring of websites visited and discussion of websites teenagers visited, including what content is on them, rules for conduct, and the risks of using them, appears to be protective. In a survey of a national sample of 12-17 year olds and their parents, Khurana, Bleakley, Jordan, and Romer (2015), also found that parental monitoring of their child’s online activities had a direct protective effect against CV.
While it is important to decrease chances of CV it is also necessary to reduce perpetration of CB. Hinduja and Patchin (2013), found that students who believed their parents disapprove of CB and were likely to discipline the student for this behavior were less likely to participate in CB. Research recommends that CB may be reduced through open conversation between parent and child, including discussion of what is appropriate online behavior, as well as parental monitoring of online activities (Ang, 2015; Hinduja & Patchin, 2013; Kowalski, Giumetti, Schroeder, and Lattanner, 2014).

Based on this information the following question is posed: In parents of middle school students (P), how does parental mediation and education on cyberbullying and cyberbullying victimization (I), compared to no education (C), affect internet awareness, reports of cyberbullying, and parent-child open communication (O) immediately after the education and at one month follow-up (T)?

**Search Strategy**

In order to address the question posed a literature search was conducted using the following six databases: PsycINFO, Cochrane Reviews, CINAHL Plus, Education Research Complete (ERIC), Academic Search Premier, and PubMed. Common terms for CB were included in most searches with the Boolean connector OR between them; these terms included cyberbullying, cyber bullying, online bullying, electronic harassment, and electronic aggression. The abstracts of studies provided by these searches were reviewed for inclusion and exclusion criteria and relevancy to the PICO question. Articles were included if they were peer-reviewed, scholarly articles, published in the last five years, in English language, and explored the effects of parental involvement on traditional bullying and CB behaviors in children ages 10-18 years old. Studies were excluded if they were written in languages other than English, studied CB in
adults, or if they were traditional bullying studies that were not meta-analyses or systematic reviews.

The search strategy described produced 469 results, ten of which were retained for evidence synthesis. These retained studies consisted of one qualitative study, one randomized control trial, one quasi-experimental study, one meta-analysis, one meta-analysis/systematic review, and five cross-sectional studies that address elements of the question posed.

**Critical Appraisal and Synthesis of Evidence**

Of the ten studies reviewed, two are level I evidence, one is level II evidence, one is level III evidence, and the rest are level VI evidence. The majority of the studies reviewed are cross-sectional in design because of the difficulty in tracking CB due to privacy measures and the nature of internet use. In the reviewed studies, definitions of CB and CV were relatively homogenous, although time-frames over which the CB was evaluated ranged from during the last 30 days to the last year. Within studies, reliability was reported as coefficient alphas in four studies all of which were above .70 indicating internal consistency (Melnyk & Fineout-Overholt, 2015). The samples covered an age range of 10-19 year old children and their parents, all but one of which either focused on or included middle-school age children. Studies were included from multiple countries resulting in heterogeneity of racial and cultural demographics.

All of the studies reviewed explored parental influence as a variable affecting bullying or CB or the protective effects of parenting on CV. Elements of parental involvement in school anti-bullying programs were explored in three of the studies; two of these studies reported statistically significant decreases in both CV/bullying victimization and CB/traditional bullying and one was not statistically significant (Cross et al., 2012; Ttofi & Farrington, 2011; Vanderhoven, Schellens, & Valcke, 2016). Two studies explored the importance of parental
communication of expectations for online behaviors with one finding a significant decrease in CB and the other finding a significant decrease in CV risk (Hinduja & Patchin, 2013; Navarro, Serena, Martínez, & Ruiz-Oliva, 2013). Parental monitoring efforts were found to correlate with decreases in CV in two studies, while one meta-analysis noted a small, negative effect size on CV (Floros, Siomos, Fisoun, Dafouli, & Geroukalis, 2013; Khurana, Bleakley, Jordan, & Romer, 2015; Kowalski, Giumetti, Schroeder, & Lattanner, 2014). The same meta-analysis found a small, negative effect size for parental monitoring on CB while another study found no statistically significant effect (Kowalski et al., 2014; Floros et al., 2013). Finally, parental restriction of internet access or overprotection was related to increased CB and CV in one study while four other studies found no statistically significant effects from these measures (Floros et al., 2013; Khurana et al., 2015; Kowalski et al., 2014; Navarro et al., 2013).

**Purpose Statement**

In middle-school age students, parental interventions that focus on monitoring activities on electronic mediums and facilitate open discussion between parent and child about acceptable online behavior shows potential for reducing CV and, to a lesser extent, CB. Involving parents in school anti-bullying efforts also shows capacity for reducing CV as well as CB. On the other hand, evidence has shown that parental interventions that involve restricting internet access at best have no significant effect on either CB or CV and at worst could increase incidences. Based on these conclusions from the research, the project was developed with the purpose of increasing parental interventions that included monitoring children’s online activities and discussing acceptable online behavior while decreasing those practices that restrict internet access.

**Theoretical Framework and Evidence-Based Practice Model**
The evidence is supportive of parental mediation as an effective approach for reducing CB and CV; however, not all forms of mediation were effective. The Theory of Parenting Styles, represented in Figure 1 in Appendix A, provides an explanation for the discrepancy between different parental approaches (Baumrind, 1966). According to this theory, an authoritarian parenting style may produce a child who is passively obedient and can reduce social skills for handling situations like CB. Parents who use internet restriction as a means of reducing risks of deviant behavior online likely fall into this authoritarian category. This theory identifies authoritative parenting as allowing the child to develop healthy decision-making processes and better skills at navigating social situations. This could explain why approaches that involve open discussion of expectations between parent and child and monitoring practices have better outcomes for children.

The evidence-based practice (EBP) model designed by Rosswurm and Larrabee (1999) was selected as a guide for implementation of the project (Appendix B, Figure 2). In the first step of this EBP model the practitioner assesses the need for a change in practice, which in this case involved speaking with stakeholders such as mental health practitioners, teachers, school officials, and parents. In the next step, link, the current interventions geared toward CB were determined as well as outcome measures that could be used to determine their success. The synthesis of evidence was conducted with evaluation and appraisal of current evidence and evidence synthesis. This information is used in the fourth step of designing the change to be implemented; in this case, the intervention will include education about appropriate parental mediation techniques and techniques to avoid. This intervention is then implemented and evaluated with the education intervention being introduced to an initial group of parents and then evaluated to determine if further changes need to be made. Finally, in the integration and
maintenance step, the intervention is carried out with other groups of parents while continuing to evaluate its effectiveness.

**Project Method**

**Settings**

The project consisted of an education session on CB being provided to parent groups at three middle schools in the Phoenix, Arizona area during the Fall 2016 school semester. Schools were selected based on openness to hosting the education sessions, an expressed interest in addressing CB, and availability of a media room due to presentation being on powerpoint and to make viewing of internet-based demonstrations possible.

**Ethics**

Before the project commenced, written permission was obtained from the principals the schools to conduct the project on school grounds with the parents of students. Then, the project was reviewed by Arizona State University’s institutional review board and determined to be exempt. Prior to the start of the educational sessions, each parent was provided with a cover letter on the first page of the pre-test surveys informing parents about the project and voluntary nature of the surveys and participation. Parents were given as much time as necessary to review the letter and decide if they wanted to participate; proceeding with the surveys after reading the cover letter was considered consent to participate in the project.

**Participants**

Participants were parents with children attending the middle schools involved in the project. For recruitment, fliers about the education session were distributed to the parents through email blast and by passing them out at a school event. At two schools, guidance counselors promoted the education session and at the third school the event was promoted by the
PTO. To be included the participant had to be a parent or guardian of a child attending the middle school, over the age 18, and English speaking.

**Intervention**

The project commenced, with parent education sessions being provided either in conjunction with Parent Teacher Organization (PTO) meetings or at information sessions, with an invitation extended to all parents with students at that school. The education sessions were presented by a Bachelor’s prepared psychiatric/mental health registered nurse in her third year of a Doctor in Nursing Practice program. The education sessions were provided through a 30-minute powerpoint presentation with an additional 10 minutes allotted for a Q&A session. The powerpoint covered an explanation of what CB is, how to talk openly with children about internet use and CB, recognizing signs that bullying is occurring, and how to address it. Based on the evidence, the aim was to promote open conversations between parents and their children about CB and parental monitoring of online activities while deemphasizing restrictive parental practices.

**Data Collection**

Data was collected through surveys distributed pre-presentation, immediately post-presentation, and at one-month follow-up. The surveys were anonymous with no personal information attached and were coded with a survey ID to allow for tracking changes between pre-, post-, and one-month follow-up. Pre- and post-presentation surveys were administered as paper surveys in-person at the time of the education session while the one-month follow-up survey was distributed through a secure, internet-based service.

**Outcome Measurement**
In order to determine this project’s effectiveness at increasing open communication between parent and child, the Parent-Adolescent Communication Scale (PACS) was administered as a part of the survey (Barnes & Olson, 1985). The PACS consist of two subscales of ten questions each, one measures open family communication and the other measures problems in family communication, with statements from both subscales intermixed to prevent responder bias. Respondents score the statements of the subscales using a Likert scale ranging from 1, strongly disagree, to 5, strongly agree. An analysis of reliability using Cronbach’s Alpha found good internal consistency (α=0.87) for the open family communication subscale, acceptable internal consistency (α=0.77) for the problems in family communication subscale, and good internal consistency (α=0.88) with the combined scale.

In order to determine parental awareness of CB and CV incidences and parental responses or planned responses to these incidences survey questions were selected from a parent survey created by prominent CB researchers, Dr. Sameer Hinduja and Dr. Justin Patchin. Questions drawn from this survey pertain to demographics, preventative measures against CB/CV, if child has experienced CV, parental responses to CV, and what the parent intends to do if the child experiences CV. Psychometric evaluation of this survey tool has not been performed to date; however, there are currently no validated instruments to measure CB perceptions or responses in parents at this time.

Data Analysis

Data analysis was completed using SPSS (version 23.0). Descriptive statistics were conducted on demographic data to provide information on participant demographics, perception of CB and CV, and practices to prevent and address CB and CV. Additionally, a Wilcoxon test
examined the results of the PACS pre-presentation and post-presentation. One-month follow-up data could not be tested due to low response rate and missing data.

**Project Results**

Eight (N=8) parents attended the sessions, as indicated in Table 1, five (62.5%) were mothers, one (12.5%) was a father, one (12.5%) was a step-father, and one identified only as a parent (12.5%). The average age of the children of parents in attendance was 12.9 (SD=0.64) years and ages ranged from 12-14 years old. Two (25%) parent’s children were in 7th grade and six (75%) were in 8th grade. Six (75%) of parents reported that they were not aware of their child being a CV, one (12.5%) was aware that their child was a CV, and one (12.5%) was uncertain.

**Table 1**

*Sample demographic characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (N=8)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>5</td>
<td>62.5</td>
</tr>
<tr>
<td>Father</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Step-father</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>Grade of Child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7th</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>8th</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>Age of Child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>13</td>
<td>5</td>
<td>62.5</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>12.5</td>
</tr>
</tbody>
</table>

As shown in Table 2, the average score on the PACS in the survey pre-presentation was 83.37 (SD=9), range 62 - 94, post-presentation average was 82.38 (SD=8.8), range 69 - 92, and one-month follow-up was 92 (SD=0), range 92 – 92. A Wilcoxon test examined the results of the pre-presentation and post-presentation PACS scores. No significant difference was found in the results (Z = -.405, p >.05). Pre-presentation scores were not significantly different from post-
presentation scores. There was insufficient response to one-month follow-up to complete data analysis for comparison. Finally, planned parental interventions to address cybervictimization are displayed in Table 3.

Table 2

*Change in Parent Adolescent Communication Scale scores*

<table>
<thead>
<tr>
<th>Survey</th>
<th>n</th>
<th>M (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-presentation</td>
<td>8</td>
<td>83.37 (9)</td>
<td>62-94</td>
</tr>
<tr>
<td>Post-presentation</td>
<td>8</td>
<td>82.38 (8.8)</td>
<td>69-92</td>
</tr>
<tr>
<td>One-month</td>
<td>2</td>
<td>92 (0)</td>
<td>92-92</td>
</tr>
</tbody>
</table>

Table 3

*Planned parental intervention to address cybervictimization*

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pre-presentation n (%)</th>
<th>Post-presentation n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor online activity</td>
<td>7 (87.5)</td>
<td>6 (75)</td>
</tr>
<tr>
<td>Limit internet access</td>
<td>1 (12.5)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Take internet</td>
<td>3 (37.5)</td>
<td>5 (62.5)</td>
</tr>
</tbody>
</table>

**Discussion**

The data analysis indicates that changes in PACS scores from pre-presentation to post-presentation were not significantly different, however, this is likely due to the short timeframe between these two surveys; parents would not have been in communication with their children between surveys. Scores were higher on the one-month follow-up surveys compared to pre- and post-presentation, but with only two completed surveys at that time point analysis cannot be conducted. Therefore, one-month follow-up scores cannot be compared to the pre- and post-
presentation surveys. In regards to planned parental response to addressing incidences of their child being a CV, one less parent reported that they would take away internet access in response to CV. However, one less parent reported that they would monitor their child’s online activity and one more said they would limit their child’s internet access in response to CV. While the former change is what was promoted during the session based on the evidence, the latter two changes were not expected based on what was taught during the education session.

When considering this project’s outcomes it is important to note a few issues that arose during its implementation that may limit the findings. Low attendance and lack of participation in one-month follow-up surveys were problems encountered at all three middle school education sessions. While attendance was promoted with fliers distributed to parents with children attending the middle schools, the presentation was promoted in different ways at each school. At the school two where the event was held as a standalone parent education night with promotion through fliers, attendance was the lowest. However, when the parent education session was provided in conjunction with a PTO meeting attendance improved somewhat.

Additionally, participation in one-month follow-up surveys was low; only three parents completed this survey. This was potentially due to lack of incentive to participate, length of time between presentation and follow-up, and follow-up via online survey format. Finally, two parents each missed entering an answer to a PACS statement on a pre-presentation and one-month follow-up survey, which had detrimental effect on the data analysis and results. Despite project limitations, positive impacts for parents involved were observed during the implementation. Parents were able to discuss experiences and methods of addressing bullying with each other. Parents were also able to voice concerns with school representatives (guidance counselors, principals) in attendance of the session and learn about school approaches to
handling bullying situations. Parents expressed to the presenter that the education session was helpful and informative.

**Conclusion**

Cyberbullying can cause significant mental health, emotional, and behavioral problems for victims if it is not prevented or addressed early. Parental intervention is an important aspect of addressing CB early; however, its effectiveness is dependent on parental awareness and response to CB and CV. Unfortunately, due to low attendance to the education sessions and limited response to follow-up surveys, conclusions cannot be made about this particular project’s effectiveness at addressing CB. These issues could be addressed in future projects by making changes to the approach to promoting education sessions to improve attendance and by improving response to follow-up surveys, perhaps by providing incentives or distribution of surveys in a different manner. Further adaptations of projects to improve open communication between parent and child about online activities by mental health nurses may provide results that are more concrete.
References

Retrieved from http://www.ahrq.gov/research/findings/factsheets/mental/mentalhth/mentalhth2.html#depression


Appendix A

Figure 1. Baumrind’s Parenting Styles Theory

Figure 1. Visual depiction of parenting traits displayed by authoritarian and authoritative parenting styles and the traits of children raised by parents who practice each of these parenting styles. Adapted from “Effects of Authoritative Parental Control on Child Behavior,” by D. Baumrind, 1966, *Child Development*, 37, p. 887.
Figure 2. Rosswurm and Larrabee’s Evidence-Based Practice Model

1. Assess
   …the need for a practice change
   - Discuss with stakeholders
   - Gather internal data & compare to external data
   - Identify the problem

2. Link
   …problem w/ intervention & outcomes
   - Using a standard system for classifying
   - Determine possible interventions
   - Identify outcome indicators

3. Synthesize
   … best available evidence
   - Search literature studying major variables
   - Critically review and weigh evidence
   - Synthesize best evidence
   - Determine feasibility, benefits, & risks

4. Design
   …change to practice
   - Define change
   - Identify resources
   - Plan process for implementing change
   - Define outcome indicators

5. Implement & Evaluate
   …change to practice
   - Pilot study
   - Evaluate process and outcomes
   - Decide to makes changes to, keep or reject practice change

6. Integrate & Maintain
   …change to practice
   - Communicate change recommendation to stakeholders
   - Educate staff on practice change
   - Integrate into standard practices
   - Monitor ongoing process and outcomes
Figure 2. Rosswurm and Larabee’s Evidence-Based Practice Model for implementing evidence-based change in practice. Adapted from “A Model for Change to Evidence-Based Practice,” by M.A. Rosswurm and J.H. Larabee, 1999, *Journal of Nursing Scholarship, 31*, p. 317. Copyright 1999 by Blackwell Publishing.