Cybervictimization as a Predictor of Overt Aggression Among Adolescents: Gender, Depression, and Social Support as Potential Moderators

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Introduction

Cyberbullying, a variety of hostile behaviors involved in engaging with others via electronic modalities (Tokunaga, 2010), is becoming a serious social concern for adolescents (Cook et al., 2010). Adolescents experiencing cybervictimization typically have higher levels of cyberbullying and other types of aggression (Schulte-Krumbholz & Scheithauer, 2009), which may be more overt in boys compared to girls (i.e., given previous gender findings; Smith et al., 2010).

A meta-analysis showed that children who are bullied, in general, are more likely than children who are not bullied to develop internalizing problems such as depression (Cook et al., 2010).

Similarly, children who are cyberbullied are at heightened risk for increased anxiety, depressive symptoms, self-harm behaviors, and suicide (Schneider, O’Donnell, Stueve, & Coulter, 2012).

Research has demonstrated that depressive symptoms are positively correlated with aggression, whereas social support is negatively correlated with aggression (Dutton & Karakanta, 2013).

Thus, depression and social support may be a risk factor and a protective factor, respectively, in the relation between cybervictimization and aggression.

Current Study and Hypotheses

- Taken together, the literature demonstrates that victimization and, more recently, cybervictimization are associated with negative consequences in the short and long term.
- Given that the phenomenon of cybervictimization is still relatively new, the available research is largely limited to descriptions of the individuals typically involved and the subsequent consequences of cybervictimization.
- For the current study, it was predicted that cybervictimization and depression would each positively relate to overt aggression, whereas social support and gender (coded Male = 0, Female = 1) would each negatively relate.
- Furthermore, gender, depression, and social support were expected to moderate the relation between cybervictimization and overt aggression, with gender ameliorating the relation, depression exacerbating the relation, and social support ameliorating the relation.

Method

Participants
- 144 adolescents and their parents
- Adolescents were between the ages of 12 and 18 years (M = 14.90, SD = 1.76)
- Adolescent Gender: 48% male, 52% female
- Parent Gender: 26% male, 74% female
- Adolescent & Parent Ethnicity: 89% Caucasian, 6% Hispanic, 5% Other

Instruments and Procedure

- Adolescents completed:
  - Youth Reported Internet Harassment (YRIH)
  - Peer Conflict Scale (PCS)
  - Revised Child Anxiety and Depression Scale (RCADS)
  - Child and Adolescent Social Support Scale (CASSS)

Statistical Analyses and Results

- Zero-order correlations indicated that cybervictimization ($r = .18$, $p = .03$) and depression ($r = .39$, $p < .001$) both were positively and significantly related to overt aggression; Table 1.
- Zero-order correlations also indicated that social support ($r = -.24$, $p = .004$) and gender ($r = -.22$, $p = .009$) both were negatively and significantly related to overt aggression; Table 1.
- Three moderated multiple regression analyses were conducted to test the hypothesized interactions predicting overt aggression.
  - In the first analysis, gender and cybervictimization remained significant unique predictors accounting for the other, but the interaction was not significant.
  - In the second analysis, cybervictimization remained a significant unique predictor accounting for social support, but the interaction was not significant.
  - In the third analysis, depression remained a significant unique predictor accounting for cybervictimization, and the interaction between cybervictimization and depression significantly predicted overt aggression, $\Delta R^2 = .02$, $b = -.02$, $SE = .01$, $p = .046$ (Table 2).
- Post-hoc plots of the significant interaction indicated that adolescents with higher depression are generally higher in overt aggression regardless of whether they experience relatively higher levels of cybervictimization. However, adolescents with lower depression are shown to be less overtly aggressive when their levels of cybervictimization are relatively lower and more overtly aggressive when their levels of cybervictimization are relatively higher (Figure 1).
- Thus, only adolescents with lower levels of depressive symptoms are significantly impacted (in terms of their level of overall overt aggression) by cybervictimization.

Table 1. Intercorrelations Among Variables of Interest

<table>
<thead>
<tr>
<th></th>
<th>Overt Aggression</th>
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</thead>
<tbody>
<tr>
<td>Cybervictimization</td>
<td>.18***</td>
</tr>
<tr>
<td>Depression</td>
<td>.39***</td>
</tr>
<tr>
<td>Social Support</td>
<td>-.24***</td>
</tr>
<tr>
<td>Gender</td>
<td>-.22***</td>
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</tbody>
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Table 2. Results of Moderated Multiple Regression Analysis of Cybervictimization and Depression predicting Overt Aggression

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Criterion Variable</th>
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<tbody>
<tr>
<td>Cybervictimization</td>
<td>-.02 ( .08)</td>
</tr>
<tr>
<td>Depression</td>
<td>.38 (.08)***</td>
</tr>
<tr>
<td>Interaction Model $R^2$</td>
<td>.20***</td>
</tr>
<tr>
<td>Cybervictimization</td>
<td>.07 (.09)</td>
</tr>
<tr>
<td>Depression</td>
<td>.44 (.09)***</td>
</tr>
<tr>
<td>Cybervictimization X Depression</td>
<td>-.02 (.01)*</td>
</tr>
</tbody>
</table>

Discussion

- Results indicated cybervictimization was a unique predictor of overt aggression among adolescents.
- As hypothesized, depression significantly moderated the relation between cybervictimization and overt aggression, such that if depression was lower, overt aggression was also lower regardless of cybervictimization (low depression was a protective factor).
- Although gender and social support were related to overt aggression, they did not moderate the relation between cybervictimization and overt aggression.
- These findings further support the link between cybervictimization and aggressive outcomes, consistent with identified bully-victims (Perren et al., 2010).
- The finding that cybervictimization relates to overt aggression differentially, depending on level of depression, could be particularly valuable when treating overt aggression in adolescents.
- Specifically, this finding emphasizes the need to address symptoms of depression when working with overtly aggressive children and adolescents.

Figure 1. Interaction Between Cybervictimization and Depression Predicting Overt Aggression

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