Profiles of internalizing and externalizing symptoms associated with bullying victimization

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ABSTRACT

This study identified profiles of internalizing (anxiety and depression) and externalizing (delinquency and violence against peers) symptoms among bullying victims and examined associations between bullying victimization characteristics and profile membership. The sample consisted of 1196 bullying victims in grades 8–10 (Mage = 14.4, SD = 1.01) who participated in The Context Study in three North Carolina counties in Fall 2003. Five profiles were identified using latent profile analysis: an asymptomatic profile and four profiles capturing combinations of internalizing and externalizing symptoms. Associations between bullying characteristics and membership in symptom profiles were tested using multinomial logistic regression. More frequent victimization increased odds of membership in the two high internalizing profiles compared to the asymptomatic profile. Across all multinomial logistic regression models, when the high internalizing, high externalizing profile was the reference category, adolescents who received any type of bullying (direct, indirect, or dual) were more likely to be in this category than any others.

Bullying is a pervasive public health problem. Between 20 and 40% of children experience bullying at least once during their school careers (Shetgiri, Lin, & Flores, 2013). Numerous studies have found that bullying victimization has negative effects in childhood and adolescence and, furthermore, evidence suggests that victims of bullying are at heightened risk for psychological maladjustment in adulthood (Arseneault, Bowes, & Shakoor, 2010; Copeland, Wolke, Angold, & Costello, 2013; Hawker & Boulton, 2000; Menard, 2002).

Not all victims respond to bullying the same way (Arseneault et al., 2010). For some, being bullied may result in internalizing problems (i.e., those harmful to self). These negative impacts include a range of deleterious mental health conditions including heightened social isolation, depression, and anxiety (Faris & Felmlee, 2014; Kaltiala-Heino, Fröjd, & Marttunen, 2010; Nansel et al., 2001; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Zwierzyńska, Wolke, & Lereya, 2013). Others may experience externalizing sequelae (i.e., those harmful to others). These include violent behavior towards others, carrying a weapon, and becoming a perpetrator of bullying behaviors (Arseneault et al., 2006; Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008; Kim, Leventhal, Koh, 2010).
Hypothetical maladjustment profiles were used to describe externalizing symptoms (e.g., physical, verbal, overt, covert, relational), the terms “direct” and “indirect” bullying, the terms used in this study, capture this variation. Direct bullying includes anything requiring direct interaction between the bully and victim, such as physical acts of aggression and name calling. Indirect bullying comprises spreading rumors, attempts at social exclusion, and talking behind the victim's back (Arseneault et al., 2010; Dukes, Stein, & Zane, 2009). In variable-centered studies, bullying victims' symptoms have been found to differ depending on the type of bullying experienced. Specifically, a 2017 meta-analysis by Casper and Card found direct victimization to be more strongly associated with direct aggression, whereas relational victimization was more strongly related to internalizing problems, underscoring the importance of measuring these different types of victimization and understanding their differential associations with psychopathology (Casper & Card, 2017).

Victims' symptoms have also been found to vary with the frequency of victimization. Frequency of bullying is defined here as the number of times a person has been bullied over a reference time period. Penning, Bhagwanjee, and Govender (2010) found that frequency of being bullied (with no distinction made between bullying types) was associated with higher mean scores on five trauma subscales (anxiety, depression, posttraumatic stress, dissociation, and anger) of the Trauma Symptom Checklist for Children (TSCC). Similarly, Klomke et al. (2009) found that the more frequent involvement in bullying (either as a victim or a perpetrator; no distinction made between bullying types), the more likely an individual was to be depressed, to have serious suicide ideation, or to have attempted suicide (Kломke et al., 2009). Champion and Clay (2007) also found that more frequently victimized children responded to victimization with more intense feelings of anger, more motivation to retaliate, less motivation to improve the situation, and more frequent intentions to aggress (Champion & Clay, 2007). Taken together, these studies suggest that greater frequency of victimization is associated with more intense internalizing and externalizing symptoms among victims.

1. Hypotheses

Based on extant literature on internalizing and externalizing symptoms among bullying victims as well as the Kretschmer et al. (2015) maladjustment profiles in early adolescence, we hypothesized (Hypothesis 1) that the following profiles would be identified through LPA: one profile low on both internalizing and externalizing (an asymptomatic profile, corresponding to Kretschmer et al.'s “Low” profile), one profile high on internalizing and low on externalizing (corresponding to Kretschmer et al.'s “Internalizing” profile), one profile low on internalizing and high on externalizing (corresponding to Kretschmer et al.'s “Externalizing” profile), and one profile high on both internalizing and externalizing (corresponding to Kretschmer et al.'s “Comorbid” profile).

We hypothesized (Hypothesis 2) that adolescents who experienced any direct victimization would have a greater likelihood of membership in profiles characterized by high externalizing symptoms than in profiles not characterized by high externalizing symptoms. This hypothesis is supported by the empirical literature meta-analyzed by Casper and Card (2017), but also by Social Cognitive Theory (SCT) which posits that individuals model behavior they witness and experience in their social contexts (Bandura, 2006; Nansel, Overpeck, Haynie, Ruan, & Scheidt, 2003; Reijntjes et al., 2011; Ttofi, Farrington, & Lösel, 2012; Valdebenito, Ttofi, Eisner, & Gaffney, 2017). Another set of victims may experience both types of symptoms simultaneously (Arseneault et al., 2010). For example, Hemphill et al. (2011) found that being victimized by bullying in grade 10 predicted a twofold increased likelihood of depressive symptoms as well as increased likelihood of weapon-carrying, theft, and violent behavior in grade 11 (Hemphill et al., 2011). Lastly, some victims of bullying show very few signs of internalizing or externalizing and this has been attributed to the presence of other sources of support in (e.g., social connections, family relationships) in the victims’ lives (Sapouna & Wolke, 2013).

This variation in response to bullying victimization suggests that there may be different typologies, or profiles, of symptoms associated with victimization. Many studies examining psychopathology associated with bullying victimization focus on either internalizing or externalizing symptoms. Such variable-centered approaches focusing on a single outcome ignore underlying heterogeneity in symptoms among bullying victims and exclude more complex symptom constellations that incorporate internalizing and externalizing elements. By grouping individuals into categories based on similarity with one another and differences from those in other categories, person-centered approaches can unmask this underlying heterogeneity to reveal group differences in symptom patterns (Laursen & Hoff, 2006; Muthén & Muthén, 2000).

Latent profile analysis (LPA) is a person-centered statistical approach used to determine the number of subpopulations—or profiles—that exist for a given set of indicators, with what probability each individual is in each profile, and which variables are most strongly associated with profile membership (Collins & Lanza, 2010; Nylund, Asparouhov, and Muthén, 2007). Kretschmer, Barker, Dijkstra, Oldehinkel, and Veenstra (2015) conducted a latent profile analysis of maladjustment in a sample of students in early-mid adolescence and assessed the influence of peer victimization on membership in the latent profiles, finding that peer victimization increased risk for internalizing problems. Their latent profile analysis, however, was conducted on a sample that included both victims and non-victims, limiting the ability to describe victims' maladjustment. For example, it is possible that the nature of the maladjustment profiles of victims could be distinct from the nature of the profiles of non-victims. The focus of the present study, therefore, is solely on the victims of bullying. Furthermore, we build upon the work of Kretschmer and colleagues by using more finely grained measures of bullying that allow for evaluation of associations between type and frequency of bullying and the identified profiles. The aims of this study were to 1) determine whether there are different profiles of internalizing (depression and anxiety) and externalizing (peer violence perpetration and delinquency) symptoms in a sample of 8th–10th grade self-identified victims of bullying and 2) examine whether characteristics of the bullying victimization (i.e., type of bullying and frequency) are associated with symptom profile membership. The goal of these aims was to identify symptom co-morbidity in victims of bullying and to understand whether bullying characteristics are associated with these symptoms.

Bullying types are defined based on the mode through which harm is perpetrated against the victim. Although numerous terms have been used in the literature to describe types of bullying (e.g., physical, verbal, overt, covert, relational), the terms “direct” and “indirect” bullying, the terms used in this study, capture this variation. Direct bullying includes anything requiring direct interaction between the bully and victim, such as physical acts of aggression and name calling. Indirect bullying comprises spreading rumors, attempts at social exclusion, and talking behind the victim's back (Arseneault et al., 2010; Dukes, Stein, & Zane, 2009). In variable-centered studies, bullying victims' symptoms have been found to differ depending on the type of bullying experienced. Specifically, a 2017 meta-analysis by Casper and Card found direct victimization to be more strongly associated with direct aggression, whereas relational victimization was more strongly related to internalizing problems, underscoring the importance of measuring these different types of victimization and understanding their differential associations with psychopathology (Casper & Card, 2017).
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