Understanding the Psychology of Bullying

Moving Toward a Social-Ecological Diathesis–Stress Model

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With growing recognition that bullying is a complex phenomenon, influenced by multiple factors, research findings to date have been understood within a social-ecological framework. Consistent with this model, we review research on the known correlates and contributing factors in bullying/victimization within the individual, family, peer group, school and community. Recognizing the fluid and dynamic nature of involvement in bullying, we then expand on this model and consider research on the consequences of bullying involvement, as either victim or bully or both, and propose a social-ecological, diathesis–stress model for understanding the bullying dynamic and its impact. Specifically, we frame involvement in bullying as a stressful life event for both children who bully and those who are victimized, serving as a catalyst for a diathesis–stress connection between bullying, victimization, and psychosocial difficulties. Against this backdrop, we suggest that effective bullying prevention and intervention efforts must take into account the complexities of the human experience, addressing both individual characteristics and history of involvement in bullying, risk and protective factors, and the contexts in which bullying occurs, in order to promote healthier social relationships.

Keywords: bullying, victimization, diathesis–stress, social-ecological

Bullying is a unique but complex form of interpersonal aggression, which takes many forms, serves different functions, and is manifested in different patterns of relationships. Bullying is not simply a dyadic problem between a bully and a victim, but is recognized as a group phenomenon, occurring in a social context in which various factors serve to promote, maintain, or suppress such behavior (e.g., Olweus, 2001; Rodkin & Hodges, 2003; Salmivalli, 2001). Accordingly, researchers have argued for the utility of a social-ecological framework in understanding school bullying (Espelage, Rao, & de la Rue, 2013; Espelage & Swearer, 2010; Hong & Garbarino, 2012; Swearer & Espelage, 2004; Swearer et al., 2012). Social ecological theory (Bronfenbrenner, 1979) conceptualizes human development as a bidirectional interaction between individuals and the multiple systems in which they operate—home, neighborhood, school, community, and society. Thus, bullying behavior is not just the result of individual characteristics, but is influenced by multiple relationships with peers, families, teachers, neighbors, and interactions with societal influences (e.g., media, technology). Peer witnesses to bullying are also at risk for negative outcomes (Rivers, Poteat, Noret, & Ashurst, 2009), even after controlling for involvement as bullies or victim (Bonanno & Hymel, 2006).

Complicating our understanding of the consequences of bullying and victimization is recent research documenting the dynamic and fluid nature of children's involvement in bullying across roles and over time. Among youth who are involved in bullying, Ryoo, Wang, and Swearer (2014) found that frequent victims and frequent perpetrators were the least stable subgroups, and that students assumed different roles in bullying across school years. Indeed, youth can observe bullying (i.e., bystanders), experience bullying (i.e., victims), and perpetrate bullying (i.e., bullies) across different situations and/or over time. Across contexts, for instance, a student may be victimized by classmates at school but bully his or her siblings at home. Longitudinal studies by Haltigan and Vaillancourt (2014) and Barker, Arseneault, Brendgen, Fontaine, and Maughan (2008) explored the joint trajectories of involvement in bullying and victimization over time among 9- to 12-year-old and 11- to 16-year-olds, respectively, with similar results. Most students (73% and 75%, respectively) showed low levels of

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bullying and victimization over time (low/uninvolved students), and 11% (both studies) showed trajectories that would identify them as bullies. Another 10% and 3% of students, respectively, would be classified as victims and 2% (Barker et al. only) as bully-victims. However, 6% and 3% of students, respectively, showed a pattern of declining victimization and increased bullying over time (victim to bully subgroup), a trajectory that was more likely than one in which bullies are increasingly victimized. Importantly, these distinct patterns of involvement are associated with different mental health outcomes.

Researchers have long demonstrated that being involved as both a perpetrator and victim seems to compound the impact of bullying, with bully-victims experiencing worse outcomes than either bullies or victims, being at greater risk for anxiety, depression, low self-esteem, self-harm, suicidal ideation and suicidality, physical injury, substance abuse, negative attitudes toward school, absenteeism, poor perceptions of school safety, aggression, and delinquency (e.g., Berkowitz & Benbenishty, 2012; Copeland, Wolke, Angold, & Costello, 2013; Kumpulainen, Räsänen, & Puura, 2001; Srabstein & Piazza, 2008). In their trajectory analysis, Haltigan and Vaillancourt (2014) further demonstrated that, relative to low-involvement students and after controlling for initial psychopathology, stable victims showed elevated levels of depression, attention-deficit hyperactivity disorder, and anxiety, whereas stable bullies reported higher levels of anxiety, and those who shifted from victimization to bullying reported more anxiety, depression, and somatization. Such findings underscore the importance of considering a child's history of involvement in bullying over time, and to move beyond the "dyadic bias" (Espelage & Swearer, 2003) and view bullying as a dynamic experience, influenced by the social ecology. In this article, we summarize some of these complexities in support of a social-ecological perspective on bullying, and then expand our lens to propose the application of a diathesis–stress model that can further our understanding of the dynamics of bullying among children and youth.

Correlates and Contributing Factors in the Bullying/Victimization Dynamic

Individual Influences

In terms of individual factors, bullying perpetration has been associated with callous-unemotional traits (Muñoz, Qualter, & Padgett, 2011; Viding, Simmonds, Petrides, & Frederickson, 2009), psychopathic tendencies (Fanti & Kimonis, 2012), endorsement of masculine traits (Gini & Pozzoli, 2006; Navarro, Larrañaga, & Yubero, 2011), conduct problems (Cook, Williams, Guerra, Kim, & Sadek, 2010), antisocial personality traits (Ferguson, San Miguel, & Hartley, 2009; Vaughn et al., 2010), susceptibility to peer pressure (Monks & Smith, 2006; Pepler, Craig, & O'Connell, 2010), anxiety (e.g., Craig, 1998; Kaltiala-Heino, Rimpelä, Rantanen, & Rimpelä, 2000), and depression (e.g., Ferguson et al., 2009). At least some students who bully their peers have been found to be higher in social intelligence (Björkqvist, Österman, & Kaukiainen, 2000; Sutton, Smith, & Swettenham, 1999a,1999b) and social status (Vaillancourt, Hymel, & McDougall, 2003), with researchers distinguishing between socially integrated and socially marginalized bullies (e.g., Farmer et al., 2010; see Rodkin, Espelage, & Hanish, 2015).

Being bullied by peers (victimization) has been linked with poor physical health (e.g., Gini & Pozzoli, 2013; Knack, Jensen-Campbell, & Baum, 2011) and poor school adjustment, including being unhappy, feeling unsafe, being truant, performing poorly and, in some cases, dropping out of school (e.g., Card, Isaacs, & Hodges, 2007; Graham, Bellmore, & Juvonen, 2007; Juvonen, Nishina, & Graham, 2000; Konishi, Hymel, Zumbo, & Li, 2010; Slee & Rigby, 1993; Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). Victimization has also been associated with a host of internalizing and externalizing difficulties (see Card et al., 2007, and Espelage & Holt, 2001,for reviews), including loneliness and withdrawal (e.g., Graham & Juvonen, 1998a; Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä, & Rantanen, 1999), anxiety and social avoidance (Craig, 1998; Espelage & Holt, 2001; Graham, & Juvonen, 1998b), depression (e.g., Craig, 1998; Kaltiala-Heino et al., 1999), and suicidal ideation (Bonanno & Hymel, 2010; Kaltiala-Heino et al., 1999), as well as hyperactivity (Kumpulainen et al., 2001), delinquency, and aggression (e.g., Hanish & Guerra, 2000). Victims are also less well liked (e.g., Spriggs, Iannotti, Nansel, & Haynie, 2007), less accepted, and more rejected by peers (Cullerton-Sen & Crick, 2005; Graham et al., 2007; Veenstra et al., 2007).

Unfortunately, the causal nature of these relationships is unclear. Given the multidirectionality of the social-ecological model and the principles of equifinality and multifinality (Cicchetti & Rogosch, 1996), it is likely that con-

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text influences the extent to which these individual factors function as antecedents, contributing factors, or consequences of involvement in bullying. An aggressive youth diagnosed with conduct disorder might bully others because of a predisposing trait related to the diagnosis of conduct disorder. Alternatively, youth who are "rewarded" for bullying behaviors (e.g., through enhanced status or popularity, access to goods) may continue bullying, develop further aggressive behaviors, and eventually meet criteria for a diagnosis of conduct disorder. Shy youth might appear more vulnerable, making them appealing targets of victimization. Alternatively, someone who is bullied may develop a shy and withdrawn, perhaps anxious, demeanor as a result of such treatment. Thus, our understanding of the psychology of bullying/victimization is much like the "chicken or egg" conundrum.

Family Influences

A number of family characteristics have been linked to bullying perpetration, including family members' involvement in gangs, poor parental supervision, negative family environment, parental conflict, domestic violence, low parental communication, lack of parent emotional support, authoritarian parenting, inappropriate discipline, and parental abuse (Baldry, 2003; Baldry & Farrington, 1999; Barboza et al., 2009; Bowes et al., 2009; Cook et al., 2010; Espelage, Bosworth, & Simon, 2000; Espelage & Swearer, 2010; Ferguson et al., 2009; Pepler, Jiang, Craig, & Connolly, 2008). Although such findings are consistent with arguments that aggressive modeling and poor parental supervision contribute to bullying, causal direction has not been clearly established and the impact of families after controlling for hereditary influences remains unclear, as genetic factors have been shown to account for 61% of the variation in bullying behavior (Ball et al., 2008). Family influences on victimization have been more elusive, but include links to abuse, neglect, and overprotective parenting (see Duncan, 2011).

Peer Influences

Youth spend much of the day interacting with peers in schools, neighborhoods, communities, and through social media, and bullying behaviors almost always occur within the peer context (Pepler et al., 2010). Bullying and victimization are more likely in classrooms characterized by peer norms that support bullying (e.g., Craig & Pepler, 1997; Salmivalli & Voeten, 2004), and by high peer conflict (Pepler et al., 2010). Affiliation with aggressive peers is also associated with greater bullying perpetration (Espelage, Holt, & Henkel, 2003; Ferguson et al., 2009), as is peer victimization (Barboza et al., 2009), and negative relationships with classmates (Bacchini, Esposito, & Affuso, 2009). Again, however, the correlational nature of these studies makes causal interpretation difficult, and several of these associations may simply reflect *homophily*, the tendency to affiliate with similar peers.

One of the most extensively researched peer influences on school bullying is that of bystanders. Observational studies have shown that, on average, two to four peers are present in the vast majority (85% to 88%) of bullying incidents (O'Connell, Pepler, & Craig, 1999; Pepler et al., 2010). Bystanders, however, often respond in ways that encourage rather than discourage bullying (Doll, Song, & Siemers, 2004; Pellegrini & Long, 2004). For example, Craig and Pepler (1997; and see O'Connell et al., 1999) observed that peer bystanders actively joined in with bullying 21% of the time, only intervened on behalf of victims in 25% of incidents, and were most often observed to passively watch (54%)—a response that may well be interpreted as condoning such behavior. According to peer perceptions (Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen, 1996), about 20% of students are viewed as encouraging bullying, and another 7% as actively supporting or participating in the bullying. Only 17% of students, mostly girls, are identified by peers as defenders who intervened on behalf of victims. Given these findings, many focus on bystanders as a critical resource in antibullying efforts (e.g., Hazler, 1996), with peer support emphasized as a key component in school-based antibullying efforts (e.g., Salmivalli, Kärnä, & Poskiparta, 2010). Unfortunately, with age, bystanders become increasingly passive in their responses and less likely to advocate for victims (Marsh et al., 2011; Trach, Hymel, Waterhouse, & Neale, 2010). Those who defend victims have greater empathy (at least boys) and greater social self-efficacy (Gini, Albiero, Benelli, & Altoè, 2007, 2008), are usually higher in social status (popularity) and better liked (e.g., Caravita, DiBlasio, & Salmivalli, 2009; Salmivalli et al., 1996), not only by the victims they defend but also by the broader peer group (Sainio, Veenstra, Huitsing, & Salmivalli, 2011). High social status may lend confidence to one's capacity to intervene and reduce concerns about retaliation. Bystanders are also more likely to defend victims if they feel angry

(Rocke Henderson & Hymel, 2011; Sokol, Bussey, & Rapee, 2014), what Vitaglione and Barnett (2003) refer as *empathic anger* in adults.

School Influences

Bullying has been most studied in the school context, and the positive or negative climate of the school impacts the frequency of bullying and victimization (e.g., Gendron, Williams, & Guerra, 2011; Marsh et al., 2012; Richard, Schneider, & Mallet, 2011; Wang, Berry, & Swearer, 2013). Higher levels of bullying and victimization have been linked to inappropriate teacher responses (e.g., Bauman & Del Rio, 2006), poor teacher–student relationships (Bacchini et al., 2009; Doll et al., 2004; Richard et al., 2011), lack of teacher support, and lack of engagement in school activities (Barboza et al., 2009). Students are also less likely to report bullying if they see their school climate as negative (Unnever & Cornell, 2004). The relationship between school climate and bullying/victimization may be bidirectional, however, with poor school climate contributing to bullying and vice versa.

Community/Cultural Influences

Beyond families, peers, and schools, there is the influence of communities and the larger society, with higher levels of bullying linked to negative or unsafe neighborhoods (e.g., Chaux, Molano, & Podlesky, 2009; Espelage et al., 2000), gang affiliation (e.g., White & Mason, 2012), and poverty (Bradshaw, Sawyer, & O'Brennan, 2009). Research has also linked bullying perpetration to exposure to violent TV (Barboza et al., 2009) and video games (Ferguson et al., 2009; Janssen, Boyce, & Pickett, 2012; Olson et al., 2009). Generally, increased bullying and victimization are found in communities in which violence is modeled and/or condoned, although, again, the causal nature of these relationships remains unclear.

Summary

As these findings suggest, bullying and victimization do not occur in isolation. Rather, bullying stems from complex interactions between individuals and the contexts in which they function, both proximal (i.e., family, peers, school climate) and distal (i.e., societal, cultural influences). Accordingly, multiple systems must be targeted in order for bullying prevention and intervention programs to be effective (e.g., O'Donnell, Hawkins, & Abbott, 1995; Rodkin, 2004; Swearer & Espelage, 2004). Although demonstrations of causality remain an important task for future research, these findings begin to set out a road map that guides prevention and intervention efforts, both in schools and communities (see Bradshaw, 2015).

Consequences of Bullying/Victimization

Although it is widely understood that involvement in bullying causes problems for victims (see McDougall & Vaillancourt, 2015), children and youth who bully are also at risk for many of the same problems. Studies addressing issues of causality have found that bullying perpetration often leads to anxiety and depression (Baldry, 2004), social withdrawal and delinquent behavior (Bender & Lösel, 2011), poor academic achievement (Ma, Phelps, Lerner, & Lerner, 2009), and adult diagnosis of antisocial personality disorder (Copeland et al., 2013). Thus, bully perpetrators experience adverse psychosocial consequences, a result that does not garner much empathy, given the public's advocacy for suspension, expulsion, and incarceration for aggressive behavior. To understand how involvement in bullying/victimization can lead to such diverse outcomes, we consider a diathesis–stress model, borrowed from developmental psychopathology, magnifying the social-ecological lens.

Understanding the Relationship Between Psychopathology and Bullying/Victimization

Diathesis–stress models propose that psychopathology occurs as the result of the combination of individual cognitive or biological vulnerabilities (i.e., diatheses) and certain environmental stressors (Cicchetti & Toth, 1998; Lazarus, 1993). Further, these models posit that both negative life events and one's cognitions about those events contribute to the development of internalizing and externalizing psychopathology. In exploring the utility of a diathesis–stress model in understanding school bullying, we consider involvement in bullying, as either a victim or perpetrator, as a negative life event that, when mixed with certain cognitive, biological, and social vulnerabilities (i.e., diatheses), leads to the development of internalizing and externalizing psychopathology and impaired social relationships. Diathesis–stress models have received considerable empirical support (e.g., Garber & Hilsman, 1992; Gibb & Alloy, 2006), and have contributed to our understanding of relational stressors and depressive symptoms (Chango, McElhaney, Allen, Schad, & Marston, 2012), peer exclusion (Gazelle & Ladd, 2003), and compulsive Internet use (van der Aa et al., 2009). We view bullying as a stressful life event that places vulnerable youth at risk for a host of negative outcomes (Ferguson et al., 2009; Kaltiala-Heino et al., 2000), regardless of type of involvement (e.g., bully, bully-victim, victim).

Diathesis–Stress and Internalizing Problems

Stressful life events play a primary role in the development of depression (Garber & Horowitz, 2002; Hammen & Rudolph, 2003), anxiety (Leen-Feldner, Zvolensky, & Feldner, 2006), and posttraumatic stress disorder (Bernstein et al., 2005). For example, major negative life events (e.g., parental loss or divorce, peer problems) are related to the onset and maintenance of depressive symptoms (Hammen, 1991; Hammen & Rudolph, 2003) that, in cyclical fashion, lead to additional negative life events and later depressive symptoms (e.g., Potthoff, Holahan, & Joiner, 1995). Negative life events are also related to the onset and maintenance of anxiety disorders, with anxious individuals seeing the world as a threatening place, and interpreting events through a lens of worry and fear (Beck, Emery, & Greenberg, 1985). Gazelle and Ladd (2003) suggest that

children's feelings of anxiety about social situations, when paired with behavioral inhibition, can serve as a cognitive diathesis, with peer victimization functioning as an added stressor. Schmidt, Polak, and Spooner (2001) found that the experience of stressful life events, such as peer rejection, by individuals with a genetic diathesis can lead to different physiological reactions (e.g., changes in heart rate, cortisol, electroencephalogram [EEG] activity), which are too uncomfortable for the individual to maintain engagement in the social situation. Negative peer experiences, in turn, confirm that the world is a threatening place, leading to more worry about peer interactions, which, in turn, are linked to internalizing and externalizing difficulties (Kearney, 2001).

One rather clear example of the potential applicability of a diathesis–stress model to the outcomes associated with the stress of peer victimization considers the impact of a biological vulnerability. Consistent with a diathesis–stress model, recent research on the biological factors underlying depression has documented the moderating role played by the serotonin transporter gene, 5-HTTLPR, in the relationship between stress and depression (Karg, Burmeister, Shedden, & Sen, 2011). For example, Caspi and colleagues (2003) found that maltreated children who possess a "short-short" allele for the 5-HTTLPR polymorphism were far more likely to be depressed as adults than those with a short-long or long-long allele, who were found to be no more risk for depression than nonmaltreated children. Extending the diathesis–stress model of depression to our understanding of childhood peer victimization, researchers have shown that victimized children with the short-short allele are more likely to be depressed than those with the long-long allele (Benjet, Thompson, & Gotlib, 2010; Iyer, Dougall, & Jensen-Campbell, 2013). Longitudinally, victimized children with the short-short allele for 5HTTLPR have also been found to be at greater risk for emotional problems (Sugden et al., 2010; see Vaillancourt, Hymel, & McDougall, 2013, for a fuller discussion).

Consistent with our arguments for consideration of both a diathesis–stress model and a social-ecological model of peer victimization, recent twin research by Brendgen and colleagues has shown how the impact of genetic predispositions can vary as a function of school context. Specifically, they found that a genetic disposition for aggression placed students at greater risk for peer victimization in classes in which norms for aggressive behavior were negative, but seemed to operate as a protective factor, reducing the likelihood of peer victimization, when students were in classrooms with norms favoring aggression (Brendgen, Girard, Vitaro, Dionne, & Boivin, 2013a). Brendgen et al. (2011) also found that a positive teacher–student relationship mitigated the link between peer victimization and a genetic predisposition for aggression. Thus, the diathesis–stress model, in combination with a social-ecological framework, holds promise in understanding peer victimization, but what about bully perpetration?

Diathesis–Stress and Externalizing Problems

Ferguson and Dyck (2012) argue for the application of a diathesis–stress model to explain the development of aggression, suggesting that the approach has greater explanatory power for understanding aggressive behavior than social–cognitive and social learning theories, and offers an important heuristic for understanding the complexities of aggression. Some research has begun to examine externalizing behavior from a diathesis–stress perspective. For example, parental psychopathology and maltreatment are diatheses for the development of externalizing problems in youth (Walker, Downey, & Bergman, 1989), and disengaged coping mediates the relationship between peer stress and overt aggression among boys (Sontag & Graber, 2010). Increased aggression has also been associated with greater depression, mediated by peer rejection in school (Panak & Garber, 1992). In a study examining the link between peer victimization and child aggression among 506 6-year-old twins, Brendgen et al. (2008) found support for a diathesis–stress model, with peer victimization as a diathesis for the development of aggression in boys, regardless of genetic vulnerability. Finally, Brendgen, Girard, Vitaro, Dionne, and Boivin (2013b) found that a strong genetic predisposition for physical aggression was more likely to be expressed when peer group norms favored aggressive behavior but not when peer norms disfavored such behavior. Thus, a diathesis–stress model takes into account the interaction of individual vulnerabilities, specific life stressors, and aggression. Of interest here is whether the model can be applied to bullying perpetration, a subcategory of aggression.

At least two lines of research demonstrate the potential utility of applying diathesis–stress models to our understanding of peer bullying—one considering a potential biological vulnerability (the hereditable tendency for psychopathy) and the other considering a cognitive vulnerability (the capacity for moral disengagement). With regard to the former, studies have demonstrated links between bullying perpetration among youth and callous-unemotional traits (e.g., Thornton, Frick, Crapanzano, & Terranova, 2013; Viding et al., 2009), indifference to the harm caused to others (Rigby & Slee, 1993), and willingness to manipulate others for one's own gain (Sutton & Keogh, 2001). More recently, Fanti and Kimonis (2012) followed 1,416 adolescents in Greece-Cyprus from Grades 7 through 9 to investigate the links between bullying and the three traits identified as core characteristics of psychopathy in youth—callous-unemotional traits, narcissism, and impulsivity. Impulsivity and narcissism predicted high levels of bullying in early adolescence, regardless of levels of callousness or conduct problems. However, all three psychopathic traits contributed to greater levels of reported bullying, and the combination of callous-unemotional traits and conduct problems predicted the highest levels of bullying, even as levels of bullying generally declined with age. Thus, for a small subsample of bullies, early psychopathic tendencies may serve as a diathesis for bullying

perpetration, a tendency that Cullen (2009) suggests in explaining the 1998 Columbine massacre.

With regard to the latter—cognitive vulnerability—a recent meta-analysis by Gini, Pozzoli, and Hymel (2014) documents the tendency for children and youth who bully others to *morally disengage*, a cognitive mechanism that allows individuals to justify and rationalize cruel behavior in ways that make it seem less harmful (see Bandura, 1999, 2002; Hymel & Bonanno, 2014; Hymel, Schonert-Reichl, Bonanno, Vaillancourt, & Rocke Henderson, 2010). Although the tendency to morally disengage may function as a cognitive vulnerability (diathesis) contributing to the likelihood of bullying, this tendency is also affected by peer experiences with victimization, underscoring the utility of also considering a social-ecological framework. Specifically, in one of the early studies examining bullying involvement and moral disengagement, Hymel, Rocke Henderson, and Bonanno (2005) found that youth who never bullied reported low levels of moral disengagement for bullying, and youth who bullied frequently reported high levels of moral disengagement, but youth who reported that they sometimes bullied others varied in level of moral disengagement as a function of their experiences with victimization. The more often they experienced victimization themselves, the less likely they were to morally disengage regarding bullying. Thus, emerging research suggests that a diathesis–stress model, considered within a social-ecological framework, may serve as a useful heuristic for understanding involvement in bullying and may provide greater explanatory power for research findings on the bully-victim phenomenon.

A Social-Ecological Diathesis–Stress Model of Bullying: Applications and Limitations

According to diathesis–stress models, the development of psychological difficulties occurs through the interaction of an individual's biological and cognitive vulnerabilities and stressful life experiences. Involvement in bullying is conceptualized as a stressful life event, influenced by multiple social stressors. However, the presence of social stressors does not fully explain the development of psychological difficulties like depression, anxiety, and aggression. Rather, stressful life events can be exacerbated by biological vulnerabilities and can activate cognitive vulnerabilities, leading to more significant, negative outcomes. Cognitive diathesis is conceptualized as a distorted lens through which individuals interpret life events (Chango et al., 2012; Hammen & Rudolph, 2003). If negative events are attributed to global, stable, and internal cognitive schemas, and negative beliefs about self, world, and future, individuals are at increased risk for internalizing and externalizing problems. In one study that supports the utility of a social-ecological, diathesis–stress model of peer victimization, Bonanno and Hymel (2010) explored why some victimized youth are more vulnerable to suicidal ideation than others, finding more suicidal ideation among victims who felt more socially hopeless (cognitive diathesis) and who reported less family support (an environmental protective factor).

Beliefs about the self, world, and future are rooted in early experiences, with stable cognitive structures beginning to solidify around the age of 9 (Stark et al., 1996). By adolescence, abstract thinking becomes more advanced, allowing youth to develop more stable concepts about themselves, the world, and the future. Negative self-concept has been shown to be a critical element in predicting involvement in both bullying and victimization (Marsh, Parada, Yeung, & Healey, 2001). Peer victimization can activate negative self-schemas (e.g., "I'm a loser; everyone hates me"), leading to perceptions of the self as unlovable and/or worthless (characterological self-blame; Graham & Juvonen, 1998b), to experiencing the world as hostile, and to the development of a negative outlook on the future, enhancing one's risk for depression (Stark et al., 1996). Alternatively, bullying perpetration might result from activation of a threat schema (e.g., "Everyone is going to bully me"), which can promote negative self–other beliefs (e.g., "I'd better ruin her reputation before she ruins mine"), leading the individual to become aggressive in social relationships in order to maintain power and control. Individuals who bully others might also operate from hostile schemas about self or others (e.g., "I deserve what I can take from others" or "Losers deserve what they get"), leading to negative beliefs about others and a sense of entitlement, supporting the tendency to morally disengage regarding bullying.

In this article, we have argued for the integration of a social-ecological diathesis–stress model to address bullying and victimization, one which recognizes the complex and dynamic nature of bullying involvement across multiple settings (i.e., home, neighborhood, school, and community) and over time. The social-ecology model takes into account the interconnections in a child's world, and the diathesis–stress model allows for an understanding of the complexity of stressors and risk/protective factors that influence both engagement and intervention in bullying. We recognize, however, that the proposed integrated model is primarily applicable in cases in which bullying and victimization contribute to significant psychological and mental health difficulties. For many children and youth, bullying involvement reflects developing capacities for social engagement and explorations of the exercise of power, and for these youth, bullying may be best addressed though educational efforts to enhance the social skills and awareness needed for effective and positive interpersonal relationships (see www.prevnet.ca and www.casel.org). When bullying and victimization lead to clinical difficulties, however, we believe that application of a social-ecological diathesis–stress perspective holds considerable promise. Future research is needed to test the applicability of this integrated model, and our hope is that this review helps stimulate such research and enhance our efforts to understand and address the complexity of bullying among children and youth.

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