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Matching Interventions to Bullying Subtypes:

Ensuring Programs Fit the Multifaceted Needs of Children Involved in Bullying

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INTRODUCTION

Bullying Prevalence and Its Psychosocial Consequences

Bullying, a type of peer aggression characterized by repeated and systematic coercive use of power, is a major concern for educators and health practitioners because of its prevalence and its considerable impact on those who bully, are victimized, or are bystanders (Marini, Dane, Bosacki, & YLC-CURA, 2006a; Olweus, 2001; Smith, Pepler, & Rigby, 2004). Research has shown that involvement in bullying is pervasive, with estimates ranging from as low as 10% to as high as 30% of the student population (Marini, McWhinnie, & Lacharite, 2004; Nansel, Overpeck, Pilla, Ruan, Simons-Morton, & Scheidt, 2001). Although the prevalence statistics are dependent on the way bullying is measured, there is considerable agreement that about 10 to 15% of students are likely to report being bullied, with 5 to 10% reporting having bullied others (Nansel et al., 2001; Rigby, 2001). In addition, there is an emerging group, ranging from 10 to 15%, who are dually involved in both bullying others and being victimized (Craig, 1998; Marini et al., 2006a; Olweus, 2001; Shwartz, Proctor, & Chein, 2001).

Engagement in bullying is associated with a range of psychosocial problems including peer rejection, psychiatric difficulties such as conduct and anxiety disorder, and poor academic performance (Coie, Dodge, & Kupersmidt, 1990; Haynie, Nansel, Eitel, Crump, Saylor, Yu, et al., 2001; Loeber, Green, Lahey, & Kalb, 2000; Nansel et al., 2001; Olweus, 2001). Furthermore, several aspects of maladjustment in adulthood have been linked to childhood and adolescent aggression or bullying, including criminal convictions, unemployment, smoking and substance use, partner abuse, depression and anxiety, lower level of education, high school drop out, and lower status occupation (Farrington, 1993; Moffitt, Caspi, Harrington, & Milne, 2002; Rigby, 2001). Students who are victimized often report an array of internalizing difficulties related to anxiety, depression and self-esteem, as well as a heightened risk of suicide (Craig, 1998; Grills & Ollendick, 2002; Rigby, 2001). In addition to the large spectrum of psychosocial problems associated with bullying and victimization, these aggressive incidents in the school may disrupt classroom activities by diverting teachers' time from other students, affecting the overall school climate, and contributing to a classroom atmosphere that is not conducive to learning (Nucci, 2006).

One obstacle to understanding and preventing bullying and victimization is that bullying is a more complex and heterogenous concept than was originally believed to be the case (Little, Brauner, Jones, Nock, & Hawley, 2003; Toblin, Schwartz, Hopmeyer-Gorman, & Abou-ezzeddine, 2005). For instance, there appear to be several subtypes or variations of bullying, characterized by differences in the manifestation of the bullying behaviour. One distinction is whether the form of bullying is direct, hitting and name calling for example, or indirect, which involves circuitous attacks such as social exclusion or rumour spreading (e.g., Little et al., 2003; Vaillancourt, Brendgen, Boivin, & Tremblay, 2003a). An additional consideration is whether its function is reactive, entailing provoked, emotional, defensive aggression, or proactive, involving planned, reward-driven, instrumental aggression (Little et al., 2003). In addition, recent research has shown that a substantial proportion of students who report involvement in either bullying or victimization indicate that they have experienced both (about 33%) (Marini et al., 2006a).

One caveat worth mentioning before proceeding is that the subtypes are not mutually exclusive categories, but rather are moderately to highly correlated. Correlations between proactive and reactive aggression range from .09 to .87, with the majority being above .70 (Camodeca,

Goossens, Meerum Terwogt, & Schuengel, 2002; Dodge, Price, Bachorowski, & Newman, 1990; Kupersmidt, Willoughby, & Bryant, 1998; Price & Dodge, 1989). The low correlation of .09 involved direct observations rather than the questionnaire ratings that are more typically used. Furthermore, pure reactive aggression is more common than pure proactive aggression and it is not unusual for children to show both subtypes of aggressive behaviour (Merk et al., 2005). In a similar vein, indirect and direct aggression are moderately correlated, with correlations of .44 and .45 reported in two recent studies (Marini et al., 2006a; Vaillancourt et al., 2003a). However, despite being correlated, the literature suggests that each subtype is uniquely associated with different potential causal factors and consequences, which supports making conceptual distinctions among varieties of bullying (see below). Whereas children who bully may well use multiple methods of aggression in perpetrating their attacks, it appears that some children use one type of bullying predominantly (Crick & Dodge, 1996; Crick & Grotpeter, 1995; Vaillancourt et al., 2003a). Thus, one goal of the present paper is to delineate the heterogeneity of bullying in order to raise awareness among those who work with children and youth as to the different forms it may take. A second objective is to explore possibilities for individualizing interventions to meet the specific needs of students who manifest difficulties mainly with a particular type of bullying, or to ensure that interventions are sufficiently comprehensive to address the features of each subtype.

BRIEF REVIEW OF INTERVENTIONS FOR BULLYING AND VICTIMIZATION

Four core strategies are incorporated, either alone or in combination, into established bullying intervention programs, including: (1) Whole-school approaches; (2) Participant-role approaches; (3); Social Competence Training; and (4) Parent Management Training.

Whole-School Approach

The whole-school approach engages multiple levels of the school community in the bullying prevention initiatives. At the school level, meetings and discussion groups are held with teachers and administrators to raise awareness and to coordinate school-wide strategies for reducing bullying, such as effectively monitoring students during break times. Within classrooms, teachers establish clear rules against bullying, hold meetings with students to discuss bullying issues, and organize meetings with parents. Finally, when incidents of bullying arise, school staff talk with those who bullied and were bullied, as well as with their respective parents, to address strategies for managing the problem. When appropriate, the students involved are directed to appropriate services (Olweus, 2004).

Participant-Role Approach

This method of intervention involves three steps, the first of which entails raising students' awareness of bullying through class discussions. Participant roles in bullying incidents are emphasized, with special attention given to the role that bystanders can play in de-escalating bullying conflicts, and the challenge of translating anti-bullying attitudes into action. The second step is to encourage students to reflect on their usual roles in bullying incidents, and thirdly, students rehearse different roles through dramas and role play, to increase confidence in their ability to try different prosocial roles in real-life encounters, such as actively protecting a victimized student rather than being a passive bystander (Salmivalli, Kaukiainen, & Voeten, 2005).

Social Competence Training

Social competence training programs are used to teach skills in problem solving, social skills, and self-control. For example, problem solving skills training is used to teach children to identify the problem, generate multiple possible solutions, and evaluate the positive and negative consequences of these potential actions (Kazdin, 2003). Specific social skills that might improve children's peer relations are incorporated into these interventions, such as learning how to join a group, how to start a conversation, and how to handle teasing, (Conduct Problems Prevention Research Group, 1999). To reduce impulsive, explosive outbursts of aggression, children are also taught to consider multiple perspectives on a problem rather than assuming hostile intentions on the part of a peer. They are taught to use self-talk and relaxation techniques to calm down when angry (Lochman & Wells, 2004). Social competence training programs can be used on a class-wide basis for primary prevention or as part of secondary prevention or treatment initiatives, to target specific students with behavioural difficulties.

Parent-Management Training

The primary purpose of parent management training is to improve parents' effectiveness by teaching them to establish clear rules, consistently reward appropriate behaviour, and effectively discipline inappropriate behaviour using procedures such as time out or privilege removal rather than harsh punishment (Kazdin, 2005). Parents are also taught to give effective instructions and establish clear age-appropriate rules. Role play, discussion and homework exercises are used to teach these skills. Parent-management training programs have been integrated into comprehensive school-based violence prevention programs (Conduct Problems Prevention Research Group, 1999) and have also been used with children referred to clinical settings (Kazdin, 2005).

Effectiveness and Limitations in Bullying Interventions

Researchers involved in evaluating whole-school approaches to bullying prevention have reported varying degrees of effectiveness (see Smith, Ananiadou, & Cowie, 2003; Rigby, 2004). It is worth pointing out that although there is an overabundance of programs aimed at reducing bullying, the number of studies which have employed a systematic evaluation methodology are surprisingly scarce. Overall, those studies that have used some degree of reliable evaluation reveal "mixed results." Numerous studies have shown whole-school bullying prevention programs to be effective, particularly in the short-term, in reducing bullying behaviour and improving peer relations (Olweus, 1991; Ortega & Lera, 2000; Smith et al., 2004). Other studies, however, have reported more modest success and in some cases no effect at all (see Galloway & Roland, 2004; Rigby, 2004; Roland & Munthe, 1997; Smith, D. J., Stewart, & Cousins, 2004).

Two large scale studies of bullying programs based largely on a whole-school approach have reported a high reduction in rates of bullying and victimization. One of the first of its kind was carried out in Bergen, Norway by Olweus (1991) and reported a 50% reduction in bullying and victimization, and the other was carried out in Seville, Spain by Ortega and Lera (2000), who reported 57% reduction in bullied students. Other studies such as the Sheffield project have reported lower rates of reduction in the victimization rate, ranging from 14% to 30% (Whitney, Rivers, Smith, & Sharp, 1994). Reflecting the difficulties in carrying out solid evaluations of bullying prevention programs, most of the studies mentioned above had some methodological limitations, ranging from lack of true comparison between the experimental and control schools, to the failure of a large number of schools to participate in post-intervention data collection.

In an evaluation of an intervention program based on the participant-role approach to school bullying, Salmivalli and her colleagues (2005) reported that the intervention had a positive impact on several outcome variables, including increases in perceived efficacy in handling bullying, and reports of decreases in observed and experienced bullying. While the pattern of results is complex, the range of reduction was considered moderate (i.e., reduction from 15% to 29%) in schools with a low level of implementation and considerably higher (i.e., reduction from 46% to 57%) in schools where a high degree of the program was implemented .

Social competence training programs have been shown in numerous studies to be effective, particularly in the short-term, in enabling students to learn the program skills, reducing student behavioural difficulties and improving peer relations (Schneider, 1992). However, one key limitation is that effect sizes pertaining to the learning of program skills are moderate to large in magnitude, whereas effect sizes for behavioural change are small albeit significant (Beelman, Pfingsten, & Loesel, 1994; Schneider, 1992). These results suggest that children may learn the skills taught in the program, but may have difficulty applying these skills to everyday situations that involve heightened emotions and greater complexity than scenarios practiced in role plays. Furthermore, evidence of long-term behavioural changes is weaker than that for shorter-term improvements (Schneider, 1992).

Meta-analyses of parent-management-training programs have reported large effect sizes for the reduction of aggression in children up to the age of 10 (Serketich and Dumas, 1996), whereas effect sizes for conduct problems and delinquency in adolescent populations were in the small to moderate range (Woolfendon, Williams, & Peat, 2002; Farrington & Welsh, 2003).

In general, it appears that many programs have demonstrated some degree of success but also have been found to have important limitations. Thus, to make improvements in these programs, it may be essential to individualize interventions to address the specific needs of students, tailoring the intervention to the various subtypes of bullying.

MATCHING INTERVENTIONS TO BULLYING SUBTYPES

Customizing Interventions to fit Direct and Indirect Forms of Bullying

As shown in Table 1, individuals involved in indirect bullying show a different pattern of psychosocial adjustment than children who engage in direct bullying. Several facets of the table are particularly worth noting. First, directly aggressive students have a more pervasive or consistent pattern of deficits in regard to social information processing or to social skills in general compared to indirectly aggressive students, who evidence a mixture of strengths and weaknesses. Specifically, direct bullying is associated with biases in several steps of the social information processing sequence, including a greater likelihood of making hostile attributions to explain ambiguous, instrumental provocations (Crick, Grotpeter, & Bigbee, 2002), and of positively evaluating overtly aggressive responses (Crick & Werner, 1998), as well as with a lack of social awareness and the ability to interpret social cues (Andreou, 2006). In contrast, there is a less pervasive pattern of social information processing deficits related to indirect bullying with the main problem being a tendency toward making hostile attributions in the face of relational provocations (Crick et al., 2002). Furthermore, there is a positive association with social intelligence, suggesting heightened ability to read people's intentions and emotions, and to be persuasive (Andreou, 2006; Kaukiainen et al, 1999). On the other hand, direct and indirect bullying are both associated with low empathy (Kaukianen et al., 1999).

Related to the above findings, it appears that some degree of social competence or social status may facilitate involvement in indirect bullying. Evidence to this effect comes from research demonstrating that popular children with prominent social standing (e.g., perceived popularity, high

social impact, high social preference) are more likely to engage in indirect aggression in follow-up assessments one to three years later (Cillesen & Mayeux, 2004; Rose, Swenson & Waller, 2004). Although the causal direction is less clear, additional findings from cross-sectional research are consistent with this pattern, demonstrating that sociability, social intelligence and involvement in highly visible peer groups (i.e., high network centrality) are associated with greater risk of engagement in indirect bullying (Kaukiainen et al., 1999; Park et al., 2005; Xie et al., 2002). Looking at this issue from another direction, it also seems that indirect bullying may yield social rewards for some students. Specifically, girls who engaged in a high level of indirect bullying were subsequently perceived by their peers as more popular, and as being part of more prominent social groups (Rose et al., 2004; Zimmer-Gembeck et al., 2005).

There are fewer differences between indirect and direct bullying with regard to parenting. Physical punishment, parental responsiveness, and maternal coercion have similar relations to both direct and indirect bullying. Only fathers' psychological control (i.e., guilt trips, love withdrawal) was differentially associated with the two forms of bullying, being significantly related to indirect aggression but only marginally associated with direct forms of bullying (Hart et al., 1998; Nelson & Crick, 2002).

Although Table 1 reveals important differences in the correlates of direct and indirect bullying, there are very few studies that describe interventions tailored to address the specific needs and deficits of indirectly aggressive children, and also very few evaluations to assess whether prevention programs are effective in reducing indirect aggression and victimization. We were only able to identify two studies with data that speak to the impact of prevention programs on relational bullying and victimization. Leadbetter, Hoglund and Woods (2003; this volume) evaluated the W.I.T.S. program, which was used to teach Grades 1 and 2 students to walk away, ignore, or to talk or seek help when being bullied. Parent-school and school-police liaisons were also established, and children were "deputized" to encourage them to help other children during bullying incidents. The program evaluation indicated that involvement in the intervention did not reduce the level of relational victimization in the schools, whereas the degree of physical victimization was attenuated in schools of high and medium levels of poverty. The description of the program does not explicitly mention whether components were modified to address issues that specifically pertain to indirect bullying, which may partly explain the program's lesser impact on this form of aggression. Van Schoiack-Edstrom, Frey and Beland (2002) evaluated the Second Step prevention program for students in Grades 6 to 8, which consisted of social problem solving, social skills training, anger management, empathy lessons and a participant-role approach, to determine whether it reduced physical, verbal and social aggression. Following the second year of the curriculum, there was a reduction in the program students' endorsement of all three types of aggression from pre-test to post-test, whereas comparison students showed an increase in their endorsement of social exclusion. It is important to note that the Van Schoiack-Edstrom et al. (2002) study differed from the Leadbetter et al. (2003) evaluation in examining changes in attitudes regarding bullying rather than bullying behaviour itself. Furthermore, consistent with the program described by Leadbetter et al. (2003), it is not clear whether program components were modified to differentially target direct and indirect bullying.

In contrast, Pepler, Walsh and Levene (2004) discuss how the Earlscourt Girls Connection intervention was developed to specifically address the unique aspects of girls' aggression, including relational forms of aggression. For example, based on research showing that mother-daughter relationships may be particularly salient to the development of girls' behavioural difficulties (Fagot & Kavanagh, 1990; Pakaslahti, Spoof, Asplund-Peltola, & Keltikangas-jarvinen, 1998), the program gives particular emphasis to building a positive attachment relationship between mothers and daughters. The program also includes parent management training and social competence training

components. The latter includes a focus on social information processing, and Pepler and colleagues suggest that it may be useful during this component of the program to discuss the subtle social signals that may be used in episodes of social and relational aggression. Whereas the authors reported a reduction in frequently reported behavioural problems for girls, including temper tantrums, crankiness, being angry and resentful, defiant and argumentative, as well as improved relations with adults and peers, they do not report program outcomes concerning indirect bullying.

Additional modifications of prevention programs may be useful to address some of the unique features of indirect bullying outlined in Table 1. Given that indirect aggression is positively associated with indexes of social competence such as social intelligence, perceived popularity, and high peer network centrality, social competence training components typically used in programs for direct aggression may need to be altered. For example, social problem solving units are designed to reduce biases in social information processing, and since indirectly aggressive children have difficulties with making hostile attributions but fewer problems with evaluating the consequences of aggressive strategies, it may be helpful to focus greater attention on the former issue through exercises designed to promote perspective taking and anger management (e.g., Lochman & Wells, 2004). Furthermore, social problem solving components may be enhanced by exercises designed to build empathy, which is lacking in relationally aggressive children (Kaukiainen et al., 1999), by teaching children to think of how others are hurt by social exclusion, rumour spreading and so on. This latter augmentation may be especially important considering evidence that indirect bullying may yield attractive benefits to the perpetrator, insofar as it has been linked to increased perceived popularity, social impact, and dating popularity in girls (Rose et al., 2004; Vaillancourt, Balshine, & Clark, 2003b; Zimmer-Gembeck et al., 2005). Therefore, children may need to be persuaded that it is wrong to hurt others in the pursuit of social advantages for the self and shown more prosocial means to attain status and leadership.

In addition, making reference to participant roles in bullying situations, teachers might emphasize that supporters and bystanders make indirect bullying possible. For a child to be excluded and ostracized, or be the victim of a rumour, supporters must cooperate with the student who indirectly bullies in forming a coalition against an unliked peer, and bystanders must let it happen without comment. A major goal of this program segment might be to encourage supporters and bystanders to become defenders of the victimized child, by refusing to exclude him or her from social activities and by actively seeking to include isolated and rejected children in games and group activities that might occur on the playground.

As mentioned earlier, Pepler and colleagues (2004) discussed the potential benefits of emphasizing the mother-daughter relationship in parent or family-focused interventions for girls' aggression. It is interesting to note in Table 1 that children's relationship with the father (i.e., paternal responsiveness, psychological control) also seems to have an important bearing on indirect bullying for both boys and girls. Thus, where possible, it may be beneficial to incorporate the father in parent-focused interventions.

Modifying Interventions to address the Function of Reactive and Proactive Bullying

As illustrated in Table 1, there are several key differences between reactive and proactive bullying. Children who bully reactively are characterized by impulsivity, emotional reactivity, a tendency to make hostile attributions, and a proneness to frustration and hostility, all of which may predispose them to emotional or explosive aggressive reactions to perceived provocation (e.g., Dodge et al., 1997; Vitaro et al., 2002; Raine et al., 2006; Little et al., 2003). It is possible that this emotional volatility is connected to exposure to aversive parenting, as reactively aggressive children have been shown to experience more controlling, punitive and physically abusive parenting than both

nonaggressive and proactively aggressive peers (Bown & Vitaro, 1998; Dodge et al., 1997). Another notable issue that distinguishes reactive from proactive bullying is poor peer relations, as indicated by greater levels of rejection and victimization and lower degrees of popularity (Prinstein & Cillesen, 2003; Dodge et al., 2003).

In contrast, the central thread in the deficits demonstrated by proactively aggressive children are factors that contribute to the positive evaluation of aggressive actions. With regard to social information processing, several studies have shown that proactively aggressive children anticipate positive instrumental, intrapersonal and relational outcomes for aggressive behaviour (Hubbard et al., 2001; Crick & Dodge, 1996; Orobio de Castro et al., 2005; Smithmyer, Hubbard, & Simons, 2000). Additional research suggests that children who bully proactively have relationships with parents and peers wherein proactive aggression may be modeled and reinforced, such that they might learn of its potential advantages. Specifically, the parents of proactively aggressive individuals establish fewer household rules and monitor their whereabouts and activities and to a lesser extent than the parents of nonaggressive and reactively aggressive children, making it less likely that the child will be given appropriate consequences for misbehaviour, including aggression (Poulin & Dishion, 2000). In addition, whereas their peer relations are generally better than those of reactively aggressive individuals, proactively aggressive youngsters tend to associate with proactively aggressive friends, and moreover, these friendships have been linked to increases in proactive bullying over a one-year period (Poulin & Boivin, 2000b).

There is a paucity of published research on interventions including components explicitly designed to address the biases and difficulties uniquely associated with reactive and proactive aggression, or that have evaluated differential program effects for reactive and proactive bullying (Merk et al., 2005). Lochman (2004; cited in Merk et al., 2005) reported unpublished data indicating that the Coping Power program was more effective for proactive than reactive aggression, but this is the only such evaluation that we were able to locate. The Coping Power program comprises a child component addressing anger management through emotional awareness, coping self-statements, distraction techniques and relaxation exercises, as well as instruction in social problem solving, study skills, and peer refusal skills. A parent-focused parent management training component is also included in this program. It is not clear which components were beneficial in reducing reactive and proactive aggression because program children participated in all aspects of the program (Merk et al., 2005).

A number of cogent suggestions have been made in the literature regarding program components that could be used to target the differential impairments exhibited in reactive and proactive bullying (Larson, 1994; Merk et al., 2005). To address reactive aggression, some investigators have indicated that programs should include anger management modules (see Coping Power program described above) to decrease hostile attribution biases in social information processing (see also Hudley & Graham, 1993), training in social skills to improve peer relations and instill confidence in the use of non-aggressive solutions to social problems, and parent-focused interventions to increase warmth in the parent-child relationship (Merk et al., 2005). In contrast, interventions for proactive bullying should emphasize outcome evaluation biases in social information processing, enabling children to better appreciate the negative consequences of aggressive behaviour, while simultaneously illustrating that non-aggressive strategies can yield positive outcomes. In addition, in light of the lack of household rules and poor monitoring shown by parents of proactively aggressive children, parent management training should be helpful in facilitating more consistent discipline (Merk et al., 2005).

We believe that a few additional modifications may improve program effectiveness for children who bully proactively. To reduce biases concerning expectations of positive outcomes for aggression, it may be useful to include exercises for building empathy and for changing school

attitudes regarding bullying. Proactive aggression may yield benefits for the perpetrator, and in light of findings linking proactive aggression to popularity and perceptions of leadership skills (Dodge & Coie, 1987; Prinstein & Cillesen, 2003), it may be difficult for program leaders to convincingly link proactive aggression to negative relational consequences. A further challenge is that proactive aggression has been linked to low remorse and empathy in adult violent offenders (Cornell et al., 1996) and to narcissistic exploitativeness in early adolescents (Washburn et al., 2004), such that proactively aggressive children may focus mainly on consequences for themselves rather than harm befalling others as a result of their aggression.

To increase attention to the damage that proactive aggression does to others, leaders of intervention programs should give particular emphasis to consequences for others when guiding proactively aggressive children through social problems solving components geared to getting children to think about the negative consequences of aggression. Proactively aggressive students may be biased toward thinking only of the consequences for themselves (e.g., getting into trouble, losing friends), which they may easily dismiss as less important than the potential instrumental and social benefits that they may achieve through aggression, and thus it may be essential for program leaders to consistently prompt these individuals to think of their actions from the perspective of others if they hope to persuade them that non-aggressive strategies will produce better outcomes than aggressive ones. School-wide components and participant-role approaches may be also be used to tackle this issue, insofar as they may facilitate less tolerant attitudes toward bullying amongst the students. For example, if bystanders can be encouraged to assist victimized students, and to refrain from implicitly or explicitly approving of bullying (e.g., laughing, praising), then it may be easier to convince students who bully proactively that the negative consequences of aggression outweigh the benefits.

We also suggest that parent-focused components designed to increase parental monitoring might be improved by adding a module to enhance the parent-child relationship. Previous research has shown that parental knowledge of children's whereabouts and activities is best obtained through the child's self-disclosure (Stattin & Kerr, 2000), and self-disclosure is more likely when children have a positive relationship with parents characterized by a secure attachment (Kerns et al, 2001). Elements from attachment-based interventions (Van IJzendoorn, Juffer, & Duyvesteyn, 1995) could be used to supplement parent management training components, to help parents develop a relationship with their child wherein open communication is encouraged, which in turn may enable parents to monitor child behaviour more effectively. An added advantage of improving parental monitoring is that well-monitored children are less likely to form friendships with other aggressive children (e.g., Granic & Patterson, 2006; Marini et al., 2006a), which in turn would reduce exposure to modeling and social reinforcement processes within these friendships that have been shown to increase proactive aggression (Poulin & Boivin, 2000b).

Modifying Interventions for Children Who are Dually Involved (i.e., Bully-Victims)

A glance at Table 1 suggests that children involved in both bullying and being victimized have much in common with reactively aggressive children. For example, they have a number of temperamental characteristics that may predispose them to reactively aggressive behaviour, including irritability, low frustration tolerance and emotionality (Hess & Atkins, 1998; Marini et al., 2006a; Pellegrini & Bartini, 2000), social information processing biases for blame, anger and retaliation (Camodeca et al., 2003), and difficulties with emotion regulation (Toblin et al., 2005). An additional similarity is that their peer relations are poor (Mouttapa et al., 2004; Toblin et al., 2005). The findings summarized in Table 1 suggest three unique features of children involved in both bullying and victimization. First, internalizing problems seem to be a major challenge for these youth, given that they are more lonely than students who only bully and those who are uninvolved. The dually

involved students are more anxious than both students who bully and those who are victimized (Toblin et al., 2005; Schwartz, 2000). Students involved in both bullying and victimization are less assertive than those who bully and and nonaggressive students and they are more submissive than those who bully or those who are victimized (Toblin et al., 2005). These internalizing problems and unassertive behaviour may lead other students to view them as easy targets for victimization. With regard to the family context, children involved in both bullying and victimization are similar to children displaying other subtypes of aggression in being exposed to restrictive discipline and maternal hostility, but a key difference is that they experience more marital aggression and parental aggression than children who only bully, children who are victimized, and uninvolved children (Schwartz et al., 1997).

　　　　We were unable to find any studies that discussed specific program modifications to address the needs of children dually involved in bullying and victimization, nor any outcome studies that evaluated program effectiveness for these individuals. However, given the similarities noted between these dually involved and reactively aggressive children, we believe that these children would benefit from program components used to target reactive aggression, including anger-management modules, social skills training and parent-focused components designed to enhance the parent-child relationship and the effectiveness of discipline (Lochman & Wells, 2004; Merk et al., 2005).

　　　　As discussed above, children involved in both bullying and victimization differ from those who only bully in having particular difficulties with internalizing problems such as anxiety, depression and loneliness. Cognitive-behavioural programs for anxiety and depression in children and adolescents have similar components to those for aggressive children, and it would therefore seem feasible to incorporate elements of these programs into cognitive-behavioural approaches used to address bullying per se. For example, Kendall and colleagues (Kendall, Aschenbrand & Hudson, 2003) have developed a program in which anxious children are taught to recognize thoughts that contribute to anxiety, to challenge them, and ultimately to replace them with more adaptive and more realistic thoughts that reduce anxiety levels. To give a concrete example, a student may learn to recognize that his anxiety levels rise when he assumes that all of his classmates would "think he is stupid" if he were to give an incorrect answer in class. Instead, he may be encouraged to take a more realistic view, recognizing that everyone makes mistakes, and that when other people make mistakes, he does not usually think badly of them. To reinforce this perspective, the student might use some encouraging self-talk, such as "It's OK to make mistakes; it's how we learn." For programs targeting dually involved children, this cognitive restructuring exercise might be a useful supplement to those typically used to address cognitive distortions relating to hostile attribution biases (e.g., Lochman & Wells, 2004).

　　　　Children who bully and are victimized are also more likely than those who only bully or those not involved in bullying to face problems with depression (Craig, 1998). Consequently, it may be necessary to combine cognitive-behavioural components that target depression with those typically used in the treatment of aggression. There are a number of effective cognitive-behavioural programs for the treatment of depression in children and adolescents (Weisz et al., 2003; Clarke, DeBar, & Lewinsohn, 2003). Consistent with the approaches that target aggression, these programs include problem-solving components used to identify adaptive strategies for dealing with stress and cognitive restructuring exercises designed to identify, challenge and replace negative thoughts that exacerbate depression (as described above in regard to anxiety). Decreasing levels of depression and anxiety around peer victimization would be beneficial in itself for dually involved children, but it may have the added benefit of reducing factors that create situations in which aggressive confrontations are likely to arise. For one thing, to the extent that it improves peer relations, it may reduce the potential for conflicts leading to aggression. In addition, aggression is more likely to take place when an individual is in a negative mood (Berkowitz, 1993), so a reduction of anxiety and depression may

reduce the tendency for dually involved children to engage in explosive, emotional and reactive aggression (Salmivalli et al., 2004).

Two additional modifications may be useful. Social skills training components could be employed to improve assertiveness and reduce submissiveness in dually involved children, because improvements in this area may decrease perceptions on the part of their peers that they are easy targets for victimization. Finally, couples therapy may be a beneficial adjunct to parent-focused interventions that are typically used for parents of children who bully, given the high level of martial and parental aggression to which these children are reportedly exposed.

Caveat

We must qualify our suggestions about modifying interventions to address subtype differences by acknowledging that the modality (i.e., individual or group) or setting (clinic or school) of the program will likely constrain the extent and nature of tailoring that is feasible. Consequently, the program modifications suggested above may need to take one of two forms. A targeted or customized program may be attempted with individuals presenting problems with predominantly one subtype of aggression, such that clinical time and resources are devoted to the most salient issues for this subtype. This approach may be most feasible in the context of individual therapy in a clinical setting. In the context of group therapy or classroom-based primary prevention programs, a comprehensive approach may be needed to ensure that psychosocial factors relating to each subtype are addressed. For example, participant-role approaches could be broadened to highlight the fact that bystanders can play a role in supporting those vulnerable to victimization and preventing bullying incidents in either direct or indirect domains. Similarly, parent-focused components that typically focus primarily on fostering consistent discipline may be expanded to include modules designed to improve parent-child relationships, so that parenting factors applicable to both reactive and proactive aggression are addressed.

Conclusion

As previously discussed, existing bullying interventions and related programs for the prevention and treatment of aggressive behaviour have produced mixed results (Smith et al., 2004; Rigby, 2001; Schneider, 1992). Since bullying remains a major social and educational issue in schools and in society more generally, it behooves us to seek means to improve these programs. One reason for the limited success in preventing bullying may be that it is a more multifaceted construct than was originally believed. As shown in Table 1, subtypes of bullying differing in form (direct versus indirect), function (proactive versus reactive) and type of involvement (in bullying, victimization, or both) have distinct relations with psychosocial factors such as temperament, social cognition, co-morbid psychopathology, parenting, and peer relations. The purpose of this chapter was to provide some suggestions that practitioners may use to modify bullying interventions to better address the unique features of the various subtypes of aggression. Currently, there is a paucity of research concerning the modification of programs or the evaluation of program effectiveness in the reduction of different subtypes of bullying, and we hope that this discussion will serve as a basis for future efforts in this regard by researchers and practitioners alike.

Key Messages

1.	Bullying involves a multi-faceted range of behaviours that has both direct (e.g., hitting, insulting) and indirect (e.g., social exclusion, rumour spreading) forms, reactive (e.g., defensive,

emotional response to provocation) and proactive (planned, reward-oriented aggression) functions, as well as the possibility of dual involvement in both bullying and victimization.

2.   Educators and other professionals working with children and youth with an awareness of the various subtypes of bullying may be better able to monitor incidents of bullying in school and other community settings and to ensure the safety and well-being of children who may be victimized by bullying, insofar as they may recognize peer maltreatment in all of its guises (e.g., indirect as well as direct bullying).

3.   Because different subtypes of bullying appear to be associated with distinct risk factors and consequences, bullying interventions may be tailored to emphasize the particular needs of children and youth involved with different subtypes of bullying, in order to improve the overall effectiveness of these programs.

4.   Given the lack of research on this topic, it is important for researchers and practitioners working with children who bully and/or who are bullied to develop, implement and systematically evaluate interventions tailored to address differences in the subtypes of bullying with which children and adolescents are involved.

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Table 1 Studies Comparing the Psychosocial Adjustment of Bullying Subtypes

Subtype Characteristics

Subtype	Temperament	Social Cognition/ Social Skills	Co-morbid Psychopathology	Parenting	Peer Relations
Form					
Direct	Shyness -r [25]	Hostile attribution bias > NA for instrumental provocations [29]		Maternal coercion +r [31]	Peer rejection +r [33]
				Paternal responsiveness -r [31]	Perceived popularity -r [27]
		Positive evaluation of overtly aggressive strategies > NA [30]		Maternal physical punishment +r boys OA; paternal physical punishment -r boys' and girls OA [32]	
		Social intelligence -r [28]			
		Social skills -r [27]			
		Empathy –r [28]			
Indirect	Shyness -r [25]	Hostile attribution bias > NA for relational provocations [29]	Loneliness > NA [34]	Paternal responsiveness -r [31]	Peer rejection +r [33]
	Sociability +r [26]		Depression > NA [34]	Maternal coercion +r [31]	Perceived popularity +r [27]
					Perceived popularity +r later IA; > girls [37]
		Evaluation of IA responses not different than NA [30]		Paternal psychological control +r for girls' RA [32]	IA +r later perceived popularity; > girls [36]
					Social preference, social impact +r later
				Maternal physical punishment +r to boys' RA; paternal physical punishment –r to boys' RA [32]	IA for boys only [35]
		Social intelligence +r [27, 28]			Social preference -r [37]; > girls
					Network centrality +r [38]
		Empathy –r [28]			RA +r later social impact, girls only [35]
					Dating popularity, number of romantic partners [39, 40]

Function

Function					
Proactive	Reduced responsiveness to distressing stimuli [22]	Positive outcome evaluation and self-efficacy for aggression > NA [17,19] [20]	Delinquency +r [1,14]	Monitoring < NA, RA [4]	Perceived as leaders [21]
	Withdrawal > NA[1]	Anticipated positive intrapersonal consequences in SIP > RA, NA [3]	Conduct Disorder +r[1] [14]	Household rule < NA, RA [4]	Reciprocated friendships > RA [9]
		Positive relational outcome expectancies +r [24]	Adult criminality +r [15]		Friends' proactive aggression +r [8]
			Low remorse or empathy [51]		Friends' proactive aggression +r increase in PA over 1 year [8]
			Drug use +r [16]		Popularity +r [6]
			Internalizing > NA [3]		
			Narcissistic exploitativeness +r [52]		
Reactive	Inattention > NA[1]	Hostile attributions > NA [3,12,17,18,20]	ADHD +r in DBD boys [12]	Controlling > NA, PA [2]	Popularity, social preference –r with overt RA; +r with relational RA [6]
	Reactivity > NA[1]	Suppressed attention to rejection, ridicule, failure [18]	Classroom disruption +r [10]	Punitiveness > NA, PA [2]	Peer victimization +r [6]
	Withdrawal > NA[1]	Aggressive responses generated in SIP > NA, PA [3,21]	Social skills < NA [1]	Physical abuse > NA, PA [3]	Peer rejection +r [7]
	Activity > NA[1]	Endorsement, self-efficacy of aggression in SIP > NA [3]	Anxiety > NA [1]	Harsh discipline > NA [3]	Social preference < NA, PA [3,5]
	Impulsivity +r [23]	Instrumental outcome expectations -r [12]	Depression > NA [1]		
			Dating violence +r [53]		
			Internalizing > NA [3]		
			Academic performance -r [11]		
			Inattention > NA [1,3]		
			Frustration/hostility > NA [13]		

Involvement

Bully-Victim	Emotionality +r [41] Irritability +r [42] Frustration tolerance -r [42] Positive mood < U [43] Activity level >U [43] Approach -r [42]	Problem-solving control < B, V, U [44] Emotion dysregulation > B, V, U [45] Assertiveness < B, U [45] Submissiveness > B, V [45] Blame, anger, retaliation in SIP > U [47]	Depression > U [45] Loneliness > B, U [45] Anxiety > B, V [48] Academic competence < V, U [48] School refusal > B, V [49] Hyperactivity > B, V, U [49]	Restricive discipine > B,V, U [50] Marital conflict > V, U [50] Maternal hostility > B, V, U [50] Marital aggression > B, V, U [50] Parental aggression > B, V, U [50]	Social preference < B, V, U [45] Friends' aggression +r [46]

Note : +r = positive correlation (i.e., as one variable increases, so does the other, or vice versa); -r = negative correlation (i.e., as one variable increases, the other decreases, or vice versa; e.g., see top of table, under heading temperament; this entry indicates that the greater the level of direct bullying, the lower the level of shyness). Please note that in the interest of clarity, we used the symbol r to signify a statistically significant relation between two variables, without distinguishing between specific statistical indices (e.g., zero-order correlations, regression coefficients).

> = greater than (e.g., see top of the table, under heading Social Cognition/Social Skills; the first entry indicates that the Direct subtype has a greater hostile attribution bias than nonaggresive comparison participants); < = less than

B = children who bully ; V = children who are victimized ; B/V = children who are dually involved (bully/victim); U = uninvolved group; NA = non-aggressive; OA = overt aggression; IA = indirect aggression; RA = relational aggression; PA = proactive aggression; DBD = disruptive behaviour disorder; SIP = social information procesing