Parent–child communication and adolescents’ problem-solving strategies in hypothetical bullying situations

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The current study investigated (1) the types of solutions that students and parents generate in response to hypothetical bullying situations, (2) the effectiveness of the strategies, and (3) the effectiveness of strategies when considering parent–child communication. Two hundred twenty-five junior high school students and their parents were required to read four short scripts involving hypothetical bullying dilemmas and generate as many solutions as possible to solve each situation. Participants also filled out a parent–child communication questionnaire. Results revealed that the most common type of solutions provided by both students and parents were help-seeking strategies. Although students provided significantly more assertive solutions than parents, 41% generated at least one strategy that may worsen the situation. The overall effectiveness rating of solutions for students and parents fell slightly below effective. Finally, parent–child communication was associated with the effectiveness of solutions generated. Educational recommendations and future research steps will be discussed.

Keywords: bullying; adolescents; parent–child communication; strategies

Introduction

Bullying in schools is a pressing social issue that has become a major concern in professional, research, and public domains. Peer bullying is widespread among school-age children and appears to be most prevalent during the transition period of primary to secondary school (Due et al., 2005; Eslea & Rees, 2001; Fitzpatrick & Bussey, 2011). A wide range of adverse consequences of bullying have been documented, including poor social adjustment (Nansel et al., 2004; Rigby, 2003), high levels of psychological distress, physical health problems (Kumpulainen, Räisänen, & Puura, 2001; Rigby, 2003), and even more adverse consequences such as depression, anxiety, and suicidal ideation (Desjardins & Leadbeater, 2011; Fitzpatrick & Bussey, 2011; Machmutow, Perren, Sticca, & Alsaker, 2012).

According to Olweus’ (1994) widely accepted definition of bullying: ‘A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students’ (p. 1173). The three main characteristics of bullying, as identified by Olweus (1994), include intentional aggressiveness, recurrence over time, and an imbalance of power. This imbalance of power may be an actual or perceived power differential between bullies and victims; that is, victims are often unable to defend themselves on their own (Olweus, 1994; Smith, 2000) and have little influence on the behaviours of bullies (Hawker & Boulton, 2000; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999).

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Four types of bullying have been identified by researchers: physical, verbal, cyber, and relational. Physical bullying involves face-to-face aggression (e.g., hitting, pushing) (Hokoda, Lu, & Angeles, 2006). Verbal bullying is another form of direct aggression that involves threatening or name-calling. Verbal bullying can easily turn to cyber bullying when these threats and insults are spread throughout the Internet or use of other technology (Craig, Pepler, & Blais, 2007). And finally, relational bullying involves behaviours that intentionally harm a victim’s self-esteem and social standing through social exclusion, malicious gossip, slanderous rumours, glaring, or eye rolling (Bauman & Del Rio, 2006). Relational bullying is more subtle and harder for teachers and parents to detect and can co-occur with cyber bullying (van der Wal, de Wit, & Hirasing, 2003).

Research to date emphasises the necessity of parental involvement in prevention and intervention practices surrounding bullying (Fekkes, Pijpers, & Verloove-Vanhorick, 2005; Jeynes, 2008). Jeynes (2008) reveals that parental involvement likely has an impact beyond the educational aspects of children’s lives, and points out that lower incidences of bullying are associated with parental involvement. In addition, researchers suggest that children are more likely to reveal their victimisation to a parent than to a teacher (e.g., Fekkes et al, 2005; Whitney & Smith, 1993). In many instances parents are seen as primary supports to children in dealing with bullying situations. What we do not know, however, is whether parents are equipped to provide the best support they can. The purpose of the current study is to examine the ways in which parents and students respond to hypothetical bullying situations and investigate the effectiveness of these solutions, particularly when parent–child communication is considered.

The role of parents

The role of parents in the development of their children can be understood by examining social learning theory. Social learning theory suggests that children’s social development is shaped by parents and significant adults in their lives (Yawkey & Johnson, 1988) and emphasises the importance of modelling, role-playing, and reinforcement in child development (Lee, 2009). Some researchers investigating bully and victim behaviours over the long term suggest that bullies and victims learn maladaptive conflict resolution strategies from their parents and use these tactics when interacting with their peers (Crockenberg & Lourie, 1996; Schwartz, Dodge, Pettit, & Bates, 1997). It is apparent that the information gained through the parent–child relationship is pivotal in shaping children and their future interactions.

Parent–child communication

An important component of the parent–child relationship is communication. The way parents and their children communicate is pivotal in defining roles, boundaries, disciplinary strategies, and relationships (Lee, 2009). Communication in the parent–child relationship also influences child behaviour. Children who have better (i.e., clear and direct) communication with their parents are less influenced by their peers than children who have poorer communication (Lee, 2009). Furthermore, children from families with better communication exhibit more positive behaviours towards their classmates, as opposed to more bullying behaviour (Lee, 2009). In contrast, children who have poor communication patterns with their parents, where they feel rejected and unsupported, are at higher risk of developing behaviour problems (Barnes & Olson, 1985; Noller & Fitzpatrick, 1993). Studies have shown that children who bully are more likely to come
from family climates in which communication is limited and ineffective (Lee, 2009; Spriggs, Iannotti, Nansel, & Haynie, 2007).

Although better communication between children and parents appears to be a positive influence on behaviour, communication surrounding the topic of bullying is sometimes limited in the family. This may be explained by the general lack of awareness that parents have of their child’s bullying or victimisation experiences (Borg, 1998; Fekkes et al., 2005; Hunter, Boyle, & Warden, 2004; Rigby & Barnes, 2002; Smith, 2000). In a survey by Fekkes et al. (2005), nearly half of the parents were found to be unaware of their children being bullied. Further research suggests that only a small percentage of children who are bullied actually tell their parents (Borg, 1998; Hunter et al., 2004). Because so few children disclose their victimisation to their parents, and even fewer talk to their teachers about bullying (Fekkes et al., 2005; Whitney & Smith, 1993), it is not surprising that these children are inadequately supported and protected when it comes to peer victimisation (Matsunaga, 2009).

Parental knowledge of bullying

Research investigating parents’ knowledge of bullying is also limited; however, some studies have investigated parental definitions of bullying. In a study conducted by Smorti, Menesini, and Smith (2003), parental definitions of bullying were found to be narrow, included mainly physical bullying, and were exclusive of other forms of bullying. Research by Williams (2008) that investigated parental attitudes towards bullying also found a lack of awareness of the various forms of bullying. More recently, Sawyer, Mishna, Pepler, and Wiener (2011) asked parents to provide definitions of bullying and found that most parents were able to provide descriptions of various types of bullying. These findings may be indicative of an increase in awareness surrounding the topic of bullying.

Research has shown that parents react differently depending on their perceptions of the type of bullying their children experience (Waasdorp, Bradshaw, & Duong, 2011). Waasdorp et al. (2011) found that parents were more inclined to seek help from the school when their children were exposed to more direct forms of bullying as opposed to indirect forms. The authors concluded that parents likely perceive direct forms of bullying (e.g., physical aggression, verbal threats) as more serious than indirect forms (e.g., ignoring, spreading rumours) and seek help from the school in the case of the more serious form. These results are consistent with research by Sawyer et al. (2011) that revealed a tendency for parents to view physical bullying as the more serious type.

Altogether, these findings are concerning since indirect forms of aggression have been shown not only to have serious effects for victims (Crick, Casas, & Nelson, 2002) but also to be more prevalent during adolescence than physical bullying (Wang, Iannotti, & Nansel, 2009). Parents’ knowledge in this area and resulting actions may prove to be ineffective when their children are victims of indirect bullying. In addition to examining the general knowledge parents have around bullying, researchers have also investigated how parents and students respond to bullying situations.

Responding to bullying

Parent strategies

Research suggests that parents should provide their children with problem-solving strategies (Craig et al., 2007), as children who receive more explicit advice and positive
solutions to peer dilemmas from their parents exhibit more social competence (Laird, Pettit, Mize, Brown, & Lindsey, 1994; Mize & Pettit, 1997). Conflict resolution and advice seeking are also found to be associated with positive child outcomes (Kochenderfer-Ladd, 2004). Laird et al. (1994) found that parents who provide action-oriented and skilful strategies and help their children find positive solutions for dealing with peer difficulties have children who are rated by their teachers as more socially competent.

Unfortunately, research investigating the strategies parents provide in response to bullying is sparse. In a recent study by Sawyer et al. (2011), 20 parents were interviewed to better understand their responses to bullying. Results revealed a wide range of strategies including telling an adult, retaliating, learning pro-social skills, and ignoring the bully. Furthermore, some parents in the group normalised bullying behaviour and maintained that bullying is ‘a normal part of growing up’. In another study by Holt, Kantor, and Finkelhor (2008), more than a third of the parents supported the belief that children should fight back when bullied. Although these studies reveal that at least some parents provide effective strategies to their children, there is evidence to suggest that parents also provide strategies (e.g., ignoring, retaliation) that are ineffective and may potentially worsen the situation (Kochenderfer-Ladd, 2004; Mahady-Wilton, Craig, & Pepler, 2000). Altogether, these findings suggest that parents are in need of education regarding pro-social, non-violent strategies to cope with bullying.

**Student strategies**

Research has demonstrated that children are hesitant to report their victimisation experiences (Borg, 1998; Hunter et al., 2004). On their own, children implement a wide range of strategies for dealing with bullying; however, they are not always effective. Craig et al. (2007) investigated youth strategies for coping with bullying and found that a significant portion of youth indicated that they did nothing to stop the bullying. Youth who did respond to bullying dilemmas responded in varying ways. Girls, for example, used relational strategies such as telling someone to solve bullying dilemmas whereas boys were more likely to use confrontational strategies such as physical aggression or revenge. Research by Mahady-Wilton et al. (2000) found similar results that suggest boys are more likely to use ineffective strategies to stop bullying. Some research demonstrates that, with age, avoidance strategies (e.g., ignoring, doing nothing) become more popular (Craig et al., 2007). In contrast, research by Camodeca and Goossens (2005) found that younger children were more likely to use strategies such as non-chalance and older children were more likely to use strategies such as retaliation.

Regarding the effectiveness of these strategies, a recent study by Machmutow et al. (2012) demonstrated a positive relationship between helpless reactions (e.g., ignoring, withdrawing, self-blame) to bullying and depressive symptoms in adolescents. The researchers found, however, that the negative impact of cyber bullying may be buffered by social support. These results are consistent with research by Kochenderfer-Ladd (2004), which suggested that help-seeking solutions that involve seeking the aid of another (e.g., adult or peer) are related to resolution of bullying dilemmas. Because there is a power imbalance between bullies and victims, researchers explain that involving others in solving the dilemma may re-establish the balance (Camodeca, Goossens, Schuengel, & Terwogt, 2003; Craig et al., 2007). In addition to seeking social support, the literature also suggests that the most ideal strategies to employ when dealing with bullying situations are socially skilled assertive solutions (Camodeca & Goossens, 2005; Laird et al., 1994; Mize & Pettit, 1997).
The present study

Research that demonstrates the preference of children to report victimisation to their parents before their teachers places emphasis on the parents’ role in supporting children. Thus, one of the primary purposes of this study is to determine the types and effectiveness of solutions that parents provide to their children as generated in response to hypothetical bullying situations. Based on research by Sawyer et al. (2011), it is hypothesised that parents will provide a wide range of solutions to bullying dilemmas; however, a substantial number of these will be ineffective. This study also aims to look at the types and effectiveness of solutions that students generate on their own and how these solutions compare to parent solutions. It is hypothesised that response patterns of adolescents and parents will not differ since extensive research has shown that the much of children’s learning is the result of active imitation or modelling of parents’ behaviour (Berns, 1997; Rigby, 1993; Turner & Hamner, 1994) and there is evidence to support a relationship between child and parent styles of responding to peer dilemmas (Stevens, De Bourdeaudhuij, & Van Oost, 2002). The final purpose of this study is to determine if there is a difference in the effectiveness of parent and student strategies when taking into account parent–child communication. It is hypothesised that better communication will be associated with adolescents exhibiting more effective strategies in hypothetical bullying situations.

Method

Participants

A total of 225 students and one of their parents from seven schools in a large western Canadian urban centre participated (19% of all eligible students participated). Of the students whose parents agreed to participate, 125 were from Grade 7 and 100 were from Grade 8 (135 females and 90 males; mean age, 12.74 years). Approximately 80% of the participants reported English as their first language, while nearly 3% reported speaking primarily French and 16% reported a first language other than English or French.

Measures

Hypothetical situations task

A hypothetical situations task based on the work of Caplan, Weissberg, Bersoff, Ezekowitz, and Wells (1986) was used to assess both students’ and parents’ abilities to generate alternative solutions to hypothetical bullying problems. Four short scripts about peer interactions involving bullying were developed for participants to read. Students were instructed to imagine themselves as the story protagonist, and parents were instructed to imagine themselves as the parent of the story protagonist. The scripts used varied in theme and were related to well-known problems experienced by adolescents. The themes included problems related to physical, social/verbal, relational, and cyber bullying.

For each of the situations, students were asked what they would do if this was happening to them and to write out as many solutions to the scenarios as they could. Similarly, parents were asked to read the same hypothetical scenarios and to write out how they would discuss this situation with their child and what they would do if this was happening to their child. The solutions generated by students and parents were then coded as aggressive, passive, help-seeking, non-confrontational, and assertive using Caplan et al.’s (1986) coding manual. Finally, parent and student solutions were coded for effectiveness. Each solution was rated from 1 (very ineffective) to 4 (Effective).
Inter-rater reliability was established on the coding schemes by having a research assistant code 20% of the participant responses that were randomly selected. The per cent agreement for student solutions across each of the hypothetical bullying situations ranged from 89% to 96% (mean = 94%) and for parents solutions ranged from 95% to 100% (mean = 98%). The per cent agreement for effectiveness across all of the solutions was 92%. Overall, rater agreement for this study was considered to be very good.

**Parent-Child Communication Scale**

The Parent-Child Communication Scale (PCCS) (McCarty, McMahon, & Conduct Problems Prevention Research Group, 2003) was used to measure perceptions of communication within the parent–child relationship. The child version of the PCCS was used to assess children’s perceptions of their parents’ openness to communication. The parent version was used to assess parents’ perceptions of their openness to communication and their children’s communication skills. The child version of the PCCS involves a 10-item measure assessing children’s perceptions of their parents’ openness to communication on a five-point scale ranging from 1 (almost never) to 5 (almost always). Two sub-scales comprise this scale: parent communication and child communication. For the purposes of this study, only the child communication sub-scale was used. The reliability of the child communication sub-scale, as reported by McCarty and Doyle (2001) was $\alpha = 0.81$. With the present sample, two of the questions did not have good internal consistency with the other items comprising the child communication sub-scale and these were dropped. The resulting internal consistency for this sub-scale was $\alpha = 0.89$. The following three questions were used: Do you discuss problems with your parent? Do you think that you can tell your parent how you really feel about some things? Can you let your parent know what is bothering you?

The parent version of the PCCS involved a 20-item measure that also consisted of a five-point scale ranging from ‘almost never’ to ‘almost always’. This PCCS parent version is composed of four sub-scales: parent communication, parent restricted topics, child/empathy listening, and child emotional expression. For the purposes of this study, only the parent communication sub-scale was used. Questions from this sub-scale measured the parent’s perceptions of their communication with their child and how open they are to communication (e.g., Are you very satisfied with how you and your child talk together? Do you encourage your child to think about things and talk about them so that he/she can establish his/her own opinion?). The reliability for the parent communication sub-scale was $\alpha = 0.78$, as reported by McCarty and Doyle (2001). The internal consistency for the present sample was $\alpha = 0.72$.

**Procedure**

After ethics approval was received, a research assistant visited classes at each of the seven schools chosen. An information letter outlining the study and its procedures and a consent form were provided for students to take home for their parent(s) to sign. Parents were given the option to participate in the study with their child, or to allow their child to participate in the study independently. Students who obtained parental consent to participate were asked to complete anonymous, self-report questionnaires in the classroom or library. Those students who did not receive permission, or chose not to participate in the study were provided with reading material on bullying while their classmates completed the questionnaires.
Self-report questionnaires were also provided to students to take home to their parents who agreed to participate in the study. Parents were responsible for filling out the forms and mailing them back to the research team using prepaid envelopes. A $25 bookstore gift card was given to each family who completed both student and parent questionnaires as a token of appreciation for participating in the study.

Results

Parent solutions to hypothetical bullying situations

Descriptive statistics (see Table 1) revealed that out of all of the solutions provided by parents across all hypothetical bullying situations, nearly half of the solutions were help-seeking type solutions (48.5%), followed by non-confrontational (28%) and assertive (22%) solutions. Passive solutions made up 0.8% of the solutions and aggressive solutions were the least common representing 0.7% of all solutions provided by parents.

A frequency was derived for each of the parents’ solution types, which allowed for the calculation of the percentage of parents that provided at least one solution from each type. At least one help-seeking solution was provided to children by 100% of parents responding to hypothetical bullying situations. Approximately 81% of parents suggested at least one non-confrontational solution, and 70% of parents provided at least one assertive solution to their children. Six per cent and 4% of parents provided at least one passive solution or one aggressive solution, respectively.

Student solutions to hypothetical bullying situations

Descriptive statistics revealed that overall, the most common type of solutions used across all of the scenarios were help-seeking (36%). The next most common types of solutions reported by students were assertive (29%) and non-confrontational (20%). Aggressive solutions comprised approximately 11% of all solutions provided by students, and finally, passive solutions made up nearly 4% of the total solutions.

As with the parent data, a frequency was derived for each of the students’ solution types, which allowed for the calculation of the percentage of students that reported at least one solution from each type. Approximately 97% of students came up with at least one help-seeking solution across all of the bullying scenarios. At least one assertive solution

|                      | Percentage reporting at least one solution | Percentage of total solutions reported |
|----------------------|-------------------------------------------|---------------------------------------|
| **Parents**          |                                           |                                       |
| Aggressive           | 4                                         | 0.7                                   |
| Passive              | 6                                         | 0.8                                   |
| Help-seeking         | 100                                        | 48.5                                  |
| Non-confrontational  | 81                                         | 28                                    |
| Assertive            | 70                                         | 22                                    |
| **Students**         |                                           |                                       |
| Aggressive           | 41                                         | 11                                    |
| Passive              | 27                                         | 4                                     |
| Help-seeking         | 97                                         | 36                                    |
| Non-confrontational  | 80                                         | 20                                    |
| Assertive            | 87                                         | 20                                    |

Table 1. Descriptive statistics for frequency of type of solutions to hypothetical bullying situations.
was provided by 87% of students, followed by 80% of students who reported at least one non-confrontational solution. Nearly half of students reported at least one aggressive solution (41%) and finally, 27% of students provided at least one passive solution.

A 2 × 4 multivariate analysis of variance (MANOVA) was conducted to determine whether solutions varied by group (student or parent) and type of bullying situation (see Table 2). Group was the between-subjects variable and included parents and students. Type of hypothetical situation was the within-subjects variable and included the four types of situations: physical bullying, verbal bullying, relational bullying, and cyber bullying. The types of solutions generated by students and parents were the dependent variables.

The MANOVA analyses revealed that there was an overall between-subjects effect that was significant, $F(5,1699) = 69.27, p < 0.001$, Wilk’s $\Lambda = 0.831$, partial $\eta^2 = 0.169$. In addition, there was an overall significant within-subjects effect, $F(15,4690.6) = 16.70, p < 0.001$, Wilk’s $\Lambda = 0.866$, partial $\eta^2 = 0.047$, as well as an overall significant group by situation interaction effect, $F(15,4690.6) = 2.59, p < 0.01$, Wilk’s $\Lambda = 0.978$, partial $\eta^2 = 0.008$.

**Group differences**
First, a significant difference was found between the number of aggressive solutions reported by parents and students, $F(1,1703) = 155.43, p < 0.01$, partial $\eta^2 = 0.084$. In particular, students generated significantly more aggressive solutions than parents. Students were also found to generate significantly more passive solutions than parents, $F(1,1703) = 34.31, p < 0.01$, partial $\eta^2 = 0.02$, as well as significantly more assertive solutions than parents, $F(1,1703) = 175.12, p < 0.01$, partial $\eta^2 = 0.093$. No significant differences were found in the number of help-seeking, $F(1,1703) = 1.85, ns$, partial $\eta^2 = 0.001$, or non-confrontational, $F(1,1703) = 0.15, ns$, partial $\eta^2 = 0.000$, solutions generated.

**Situation differences**
Significant differences were found between the number of aggressive solutions reported across each of the hypothetical bullying situations, $F(3,1703) = 7.42, p < 0.01$, partial

| Source           | Solutions     | df | $F$     | $\eta^2$ |
|------------------|---------------|----|---------|----------|
| **Group**        | Aggressive    | 1  | 155.43**| 0.084    |
|                  | Passive       | 1  | 34.31** | 0.020    |
|                  | Help-seeking  | 1  | 1.85    | 0.001    |
|                  | Non-confrontational | 1 | 1.15    | 0.000    |
|                  | Assertive     | 1  | 175.12**| 0.093    |
| **Situation**    | Aggressive    | 3  | 7.42**  | 0.013    |
|                  | Passive       | 3  | 2.81*   | 0.005    |
|                  | Help-seeking  | 3  | 17.96** | 0.031    |
|                  | Non-confrontational | 3 | 37.91** | 0.063    |
|                  | Assertive     | 3  | 20.53** | 0.035    |
| **Group × situation** | Aggressive   | 3  | 4.50**  | 0.008    |
|                  | Passive       | 3  | 2.09    | 0.004    |
|                  | Help-seeking  | 3  | 2.03    | 0.004    |
|                  | Non-confrontational | 3 | 4.04**  | 0.007    |
|                  | Assertive     | 3  | 0.82    | 0.001    |

*p < 0.05, **p < 0.01.
Subsequent post hoc analysis, using Tukey’s HSD criterion, revealed where these differences occurred. Specifically, participants generated significantly more aggressive solutions for the physical bullying situation ($M = 0.25$, $SD = 0.68$) than both the relational bullying situation ($M = 0.11$, $SD = 0.41$) and the cyber bullying situation, ($M = 0.12$, $SD = 0.40$), $p < 0.01$.

When examining help-seeking solutions generated by participants, a significant within-subjects effect was revealed, $F_{(3,1703)} = 17.96$, $p < 0.01$, partial $\eta^2 = 0.031$. That is, there were differences in the amount of help-seeking solutions generated depending on the situation. Post hoc analyses using Tukey’s HSD criterion to compare every possible pair of situations, revealed significantly more help-seeking strategies generated for physical bullying ($M = 1.08$, $SD = 0.55$), verbal bullying ($M = 1.05$, $SD = 0.61$), and cyber bullying ($M = 1.01$, $SD = 0.49$) situations as compared to relational bullying ($M = 0.83$, $SD = 0.60$), $p < 0.01$.

There was a significant within-subjects effect with participants responding with non-confrontational solutions differently depending on the situation, $F_{(3,1703)} = 37.91$, $p < 0.01$, partial $\eta^2 = 0.063$. Upon further examination, it was revealed that participants responded with significantly more non-confrontational solutions to verbal bullying situations ($M = 0.68$, $SD = 0.72$) than either physical ($M = 0.43$, $SD = 0.71$) or cyber ($M = 0.35$, $SD = 0.55$) bullying situations, $p < 0.01$. Furthermore, more non-confrontational solutions were generated in response to relational bullying situations ($M = 0.77$, $SD = 0.73$) in comparison to both physical and cyber bullying situations, $p < 0.01$.

A significant within-subjects effect was revealed with regards to the number of assertive solutions reported by participants, $F_{(3,1703)} = 20.53$, $p < 0.01$, partial $\eta^2 = 0.035$. Participants responded with assertive solutions differently depending on the situation, and subsequent post hoc analyses using Tukey’s HSD criterion were conducted to determine where these differences occurred. Participants were found to generate significantly more assertive solutions to physical bullying situations ($M = 0.81$, $SD = 0.95$) than either verbal ($M = 0.52$, $SD = 0.69$), relational ($M = 0.53$, $SD = 0.73$), and cyber ($M = 0.46$, $SD = 0.71$) bullying situations, $p < 0.01$.

With regards to the number of passive solutions generated by students and parents, Table 2 shows that a significant within-subjects effect was found, $F_{(3,1703)} = 2.81$, $p < 0.05$, partial $\eta^2 = 0.005$. Post hoc analyses involving Tukey’s HSD criterion revealed that participants generated significantly more passive solutions in response to verbal bullying scenarios ($M = 0.08$, $SD = 0.29$) when compared to cyber bullying ($M = 0.02$, $SD = 0.15$), $p < 0.01$. No other comparisons differed significantly.

Interaction effects

Results from the MANOVA revealed some significant interactions. In particular, a significant group $\times$ situation interaction was found in the amount of aggressive solutions generated by participants, $F_{(3,1703)} = 4.50$, $p < 0.01$, partial $\eta^2 = 0.008$. Figure 1 allows for the examination of this interaction. Parents generated consistent numbers of aggressive solutions across each of the four situations. Students, however, responded with aggressive solutions differently depending on the scenario. They generated the most aggressive solutions for the physical bullying scenario, and the fewest for the relational bullying scenario.

The second significant group $\times$ situation interaction found involved the number of non-confrontational solutions generated by participants, $F_{(3,1703)} = 4.04$, $p < 0.01$, partial
Figure 2 displays non-confrontational solutions reported by participants across each of the four situations. Although participants responded similarly by generating the most non-confrontational solutions for relational bullying situations and the least for cyber bullying situations, their response patterns were different for the physical and verbal bullying scenarios.
Unlike aggressive and non-confrontational solutions, no significant group × situation interaction effect was found for passive solutions, $F_{(3,1703)} = 2.09$, ns, partial $\eta^2 = 0.004$. Students consistently generated more passive solutions than parents; however, this number decreased for cyber bullying situations. Similarly, no interaction effect was found for help-seeking solutions, $F_{(3,1703)} = 2.03$, ns, partial $\eta^2 = 0.004$. Both students and parents generated similar patterns of responding across each of the situations. Both groups of participants exhibited a decline in help-seeking solutions for relational bullying situations. Finally, no group × situation interaction effect was found for the number of assertive solutions generated by participants, $F_{(3,1703)} = 0.82$, ns, partial $\eta^2 = 0.001$. Both students and parents demonstrated a similar pattern of responding across each of the situations. Students consistently generated more assertive solutions for each situation.

**Effectiveness of solutions**

The mean effectiveness rating of solutions was taken across each of the four situations and Table 3 presents descriptive statistics for effectiveness of both parent and student solutions. Parents’ solutions across all of the situations ranged between ineffective and effective. Parents provided the most effective solutions for relational bullying scenarios ($M = 2.55$) and provided the least effective solutions for cyber bullying scenarios ($M = 2.33$). As with parents, students provided the most effective solutions to relational bullying scenarios ($M = 2.53$) and the least effective solutions to cyber bullying scenarios ($M = 2.34$). The mean effectiveness of student solutions fell between ineffective and effective for each of the hypothetical situations.

**Parent–child communication and effectiveness of solutions**

The PCCS parent and child reports were used to assess communication between parents and students. Scores of parent–child dyads on each of the measures were averaged and then a median split was used to separate groups of dyads into high and low communication groups. A series of $t$-tests were conducted to determine if there was a difference in the effectiveness of parent and student strategies when taking into consideration the communication between parents and students. In order to protect against Type 1 error, a more stringent alpha was set at 0.0125 using the Bonferroni correction. Table 4 contains the results of the analysis for the effectiveness of parent solutions when separated into high and low communication groups. As can be seen in the table, no significant differences in the effectiveness of solutions across each situation were found between high and low communication groups.

Table 5 presents the results of the $t$-tests for student solution effectiveness. As can be seen in the table, there was a significant difference in effectiveness of solutions between

| Bullying situation          | Parents | Students |
|----------------------------|---------|----------|
|                            | Mean    | SD       | n    | Mean    | SD       | n    |
| Physical bullying          | 2.44    | 0.43     | 215  | 2.41    | 0.48     | 224  |
| Verbal bullying            | 2.49    | 0.44     | 215  | 2.46    | 0.40     | 223  |
| Relational bullying        | 2.55    | 0.58     | 209  | 2.53    | 0.43     | 224  |
| Cyber bullying             | 2.33    | 0.43     | 209  | 2.34    | 0.46     | 221  |
high and low communication groups for the physical bullying situation, $t_{(213)} = -2.53$, $p < 0.0125$, $d = 0.36$. Specifically, the solutions of students in the high communication group were significantly more effective than the solutions of students in the low communication group. Similarly, there was a significant difference in the effectiveness of solutions generated for the cyber bullying situation, $t_{(210)} = -2.37$, $p < 0.0125$, $d = 0.33$. Again, students in the high communication group generated solutions that were significantly more effective than the solutions of students in the low communication group. In both the verbal bullying and relational bullying situations, no significant differences were found in the effectiveness of solutions generated between high and low communication groups.

### Discussion

A primary aim of this study was to determine the types of solutions parents would provide to their young adolescents in response to hypothetical bullying situations. Overall, the findings suggest that parents most frequently rely on encouraging their children to seek help from an adult in situations involving bullying. In this case, parents seem to be relying on their children’s teachers to deal with bullying, and may be lacking the confidence or knowledge to provide their own support. These findings are consistent with Sawyer et al. (2011), where parents also showed a tendency to encourage their children to report bullying to a teacher. The infrequent use of pro-social assertive responses may also be indicative of a lack of awareness of appropriate and effective responses to bullying dilemmas.
Strategies for hypothetical bullying situations provided by the student group were also examined, and like the parent group, help-seeking strategies were the most common type of solution generated. Students, however, were more likely to use assertive solutions in response to bullying than their parents. Of consequence was the high percentage (40%) of students in this study who generated at least one aggressive solution. This finding is concerning since studies have shown that responding with aggressive solutions to bullying can lead to adverse consequences, such as prolonged bullying (Kochenderfer-Ladd, 2004; Mahady-Wilton et al., 2000).

Bullying context appeared to be a factor for participants when deciding which solutions employ in response to bullying situations. Participants, for example, responded with the most help-seeking solutions to physical and verbal bullying situations and the least to relational bullying situations. Participants were more likely, however, to respond with non-confrontational solutions to verbal and relational bullying situations as opposed to physical or cyber bullying situations. Assertive solutions were generated more frequently in response to physical bullying situations than any of the other three situations. These findings may be explained by research suggesting that individuals are most familiar with physical bullying as opposed to other forms (Smorti et al., 2003) and perceive direct aggression as more serious than other types (Waasdorp et al., 2011). Because both groups of individuals are able to immediately identify physical aggression as bullying and perceive it as serious and wrong, it is possible that they are most prepared to effectively deal with this form of bullying as opposed to the other three forms.

This study also investigated the overall effectiveness of solutions generated and how solution effectiveness is related to parent–child communication. Overall, both parents’ and students’ solutions fell just below effective. Both groups appeared to have the most difficulty generating effective solutions in response to cyber bullying scenarios. Although parents and students generated effective solutions, overall, it appears that both groups are unsure of how to most effectively cope with bullying dilemmas. Overall, these findings highlight the necessity of education both in the home and in schools. If we are relying on parents to help children when faced with bullying dilemmas, then they need to be educated on the best methods of doing this. In addition, students are also in need of skills to implement immediately when they are faced with bullying conflicts. Both groups would benefit from education on the various forms of bullying, methods of responding to each, and techniques that generalise to multiple forms of bullying.

The final purpose of this study was to determine if there was a difference in the effectiveness of student strategies when looking at high and low communication groups of student–parent dyads. The findings of this study partially supported the hypothesis that families with more positive communication will have adolescents generating more effective strategies to hypothetical bullying situations (e.g., Barnes & Olson, 1985; Lee, 2009; Noller & Fitzpatrick, 1993). Students from the high communication group generated significantly more effective solutions to both the physical and cyber bullying scenarios than students in the low communication group. In both the verbal and relational bullying situations, however, no differences were found in the effectiveness of solutions generated between high and low communication groups.

Finding a significant difference between the communication groups in both the physical and cyber bullying situations suggests that better parent–child communication is related to students developing more effective strategies to solve bullying dilemmas. The results of this study are supported by research that demonstrates the influence of parent–child communication on child behaviour. Past studies have found that children with better parent–child communication were less influenced by their peers (Lee, 2009) and exhibited...
more positive behaviours towards their classmates than children who had poorer parent–child communication (Barnes & Olson, 1985; Noller & Fitzpatrick, 1993; Rigby, 1993; Spriggs et al., 2007). The present study further highlights the importance of considering parent–child communication when addressing bullying problems. In addition to educating parents and students on effective methods of dealing with bullying conflicts, the current study supports the necessity of promoting healthy parent–child communication in families.

**Limitations**

The current study extends research in the area of bullying and provides insight into parent and student knowledge regarding how to effectively cope with bullying situations. However, some key limitations have been identified and should be addressed by future research. Although a link between communication and solution effectiveness was established, it cannot be said that better communication between students and parents leads to more effective solutions. To address this limitation, future research should aim for longitudinal designs in which parent and student variables are assessed at different time periods over a longer duration.

In addition, this study included individuals who volunteered to participate and who had written consent from their parents to participate. It is possible that students who were bullied (or bully) may have chosen not to participate in the study which limits the extent to which results can be generalised. Future research should involve improving the response rate of families to ensure a more representative sample.

Finally, participants were asked to respond to four short scripts involving hypothetical bullying situations. Although these scenarios captured valuable information on the types of strategies respondents generate, at times, solutions were unclear or did not involve any sort of action. For example, one parent responded to a situation with ‘I would let my child know something would be done to bring an end to this cyber-bullying’. In addition, in order to respond to these questions, participants needed to be literate and capable of expressing the solutions they generated in written form. This format may have restricted the answers provided by individuals who had reading or writing difficulties. Future research should include more in-depth and extended interviews so that when situations like these arise, parents can be prompted to elaborate on their solutions for clarification and given the opportunity to respond orally if desired.

**Conclusion**

Despite the limitations of the study and areas in need of further research outlined above, the current study provides new insight and adds to the literature in many ways. This study revealed the various ways parents and students respond to bullying situations, how prepared parents are to help their children cope effectively with bullying, as well as the importance of parent–child communication. Parents and students were shown to exhibit less than ideal solutions when responding to bullying situations. Both groups demonstrated a tendency to seek aid from others, which may stem from insufficient knowledge of the various forms of bullying.

The struggle that both groups of individuals have in responding effectively to various bullying scenarios points to the need for school resources that support knowledge translation in this area. For example, parents may be offered the opportunity to attend educational sessions that aim to broaden their understanding of bullying and the solutions
that are available to them. The role of school psychologists, therefore, may involve running these sessions in schools and supporting parents and their children where needed.

The current study also illuminated the importance of parent–child communication by revealing that students with better communication with their parents demonstrated more effective solutions than students with poorer communication. Thus, the need to foster a healthy, supportive parenting relationship in early adolescence is underscored, and resources for parents of adolescents need to be readily available in schools and communities.

Overall, these findings highlight the absolute necessity of increasing parent and student knowledge on the various types of bullying and how to more effectively address bullying situations. Promoting healthier parent–child communication in families also appears to be a potential avenue of change for dealing more effectively with bullying. It is the aim of the present study to further the literature on bullying and equip professionals with the knowledge necessary to prepare families for the various bullying situations they may face and promote more effective methods of solving these difficult situations.

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