

Bullying Among Chinese Adolescents: The Roles of Parental Practices and Empathy

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Abstract

Bullying at school is recognized as a global phenomenon and has serious impacts on students' well-being. Previous studies have explored how parental practices as well as children's empathy were separately linked to children's bullying behaviors. However, few studies have examined the combined association between parental practices, adolescents' empathy, and their bullying behaviors. The present study investigated the relationship among Chinese adolescents' perceived parental practices (parental warmth, parental autonomy support, and parental psychological control), empathy (cognitive empathy and affective empathy), and bullying behaviors. Participants of this study included 277 Chinese adolescents from grade seven to grade twelve. Using the structural equation model, results indicated that affective empathy mediated between maternal warmth (but not paternal) and bullying behaviors. In addition, both parental autonomy support and psychological control were mediated by cognitive empathy, which, in turn, were linked to bullying behaviors. Findings from this study are expected to contribute to better understanding of how bullying behavior is related to parenting and adolescents' empathic development. Further the information obtained in this study will provide parents and educators with useful insights in reducing bullying in the Chinese context.

Résumé

L'intimidation à l'école est reconnue comme un phénomène mondial ayant de graves répercussions sur les élèves. Bien que des études antérieures ont exploré la relation entre les pratiques parentales et l'empathie chez les enfants, séparément des comportements d'intimidation chez ceux-ci, peu d'études ont examiné/analysé l'interrelation des pratiques parentales, l'empathie des adolescents et leurs comportements d'intimidation. L'objectif de la présente étude tente d'établir la relation entre les pratiques parentales perçues par des adolescents chinois (chaleur parentale, soutien à l'autonomie des adolescents par les parents et contrôle psychologique parental), l'empathie (empathie cognitive et empathie affective) et les comportements de harcèlement. Pour ce faire, les données de 277 adolescents chinois de septième à douzième année ont été recueillies. L'analyse de ces données, suivant le modèle d'équation structurelle, démontre que l'empathie affective était un médiateur entre le comportement chaleureux, uniquement de la mère, et des actes d'intimidation. De plus, le soutien à l'autonomie des adolescents des parents et le contrôle psychologique, qui étaient médiés par l'empathie cognitive, étaient liés aux comportements d'intimidation. Les résultats de cette étude devraient contribuer à une meilleure compréhension de la relation entre les comportements d'intimidation et le développement de l'empathie chez les parents et les adolescents. De plus, les données de cette étude fourniront aux parents et aux éducateurs des informations utiles pour aider à réduire l'intimidation dans le contexte chinois.

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Introduction

School bullying has been recognized as a global phenomenon affecting students' well-being (Kibriya, Xu, & Zhang, 2017). The United Nations Educational, Scientific and Cultural Organization (UNESCO) documented in 2016 that 246 million children and adolescents reported that they have been experiencing violence and school bullying every year (UNICEF, 2016). Children who were involved in bullying behaviors showed higher rates of school failure and dropouts (Coie & Dodge, 1998; Kim, Leventhal, Koh, Hubbard, & Boyce, 2006); higher levels of depression (O'Moore & Kirkham, 2001); more suicidal and self-injury behaviors (Holt et al., 2015) than students who have not been involved in bullying. Longitudinal research has also shown that being bullies in childhood were likely to have long-term consequences such as displaying more aggression and antisocial behaviors in adulthood (Farrington & West, 1993; Sourander, Helstelä, Helenius, & Piha, 2000). Understanding variables that are associated with bullying is important for designing effective bullying prevention and intervention programs.

There is ample evidence to suggest that parental styles are related to their children's bullying behaviors at school; for example, the authoritarian parental style was associated with greater levels of children's bullying behaviors (Kaufmann et al., 2000; Martínez, Murgui, García, & García, 2019) as compared with the other parental styles such as authoritative (Baldry, & Farrington, 1998). However, how the role of *parental practices* (e.g. support and control) would be related to bullying behaviors has been less discussed in previous studies.

Parental practices have been suggested as critical factors contributing to aggressive and bullying behaviors (Loewenberg Ball, Thames, & Phelps, 2008). For example, some studies have demonstrated that bullies were more likely to report less organized family environments

and having parents with lower warmth and higher control (Baldry & Farrington, 2000; Bowers, Smith, & Binney, 1992). Poor parent-child relationships have also been associated with high bullying behaviors (Rigby, 1994). On the contrary, adolescents whose parents were warm, sensitive, and supportive were more likely to show prosocial behaviors and lower aggressive behaviors (Coie & Dodge, 1998; Eisenberg & Fabes, 1998). In addition, parental psychological control has shown to be associated with physical, relational aggression, and cyberbullying (Fousiani, Dimitropoulou, Michaelides, & van Petegem, 2016; Nelson, Hart, Yang, Olsen, & Jin, 2006).

In the field of the bullying literature, the role of empathy has been considered important (Davis, 1983; Miller & Eisenberg, 1988). Research has demonstrated that children involved in bullying demonstrated less empathy than those who were not involved in bullying (Van Noorden, Haselager, Cillessen, & Bukowski, 2015). In the meantime, the parenting literature has suggested the critical association between parenting and children's empathy (Eisenberg & Valiente, 2002; Knafo, Zahn-Waxler, Van Hulle, Robinson, & Rhee, 2008; Miklikowska, Duriez, & Soenens, 2011). Studies have demonstrated that adolescents who received high support (i.e., greater parental warmth and autonomy support, and less psychological control) from their parents displayed an increased capacity of empathy (Miklikowska et al., 2011).

The present study examined how parenting and empathy together would be associated with bullying behaviors. Much research has focused on the bully-victim relationship, investigating personal characteristics, the mental health, as well as interpersonal effects of being a bully, a victim or a bully-victim (Arseneault, Bowes, & Shakoor, 2010; Baldry & Farrington, 2000; Hodges & Perry, 1999; Perren & Alsaker, 2006). However, relatively few studies have investigated the relationship between parental practices, adolescents' empathy,

and their bullying behaviors all together despite the potential link between these variables. Furthermore, a majority of previous studies have been conducted in the Western contexts, leaving vast unknown areas in other cultural backgrounds, including China (Chen, Liu, & Li, 2000; Han, Zhang. G, & Zhang. H, 2017). Therefore, this study investigated the context of China.

Literature Review

Bullying

Bullying is a subtype of aggressive behaviors which refers to a person or a group of people intentionally and repeatedly dominating, oppressing, and humiliating a powerless person (Olweus, 1993, 2010; Salmivalli, 2010; Salmivalli & Peets 2009). There are three critical components of bullying behaviors: intentional, repeated, and imbalanced (Olweus, 1993; Ostrov, 2010; Whitney & Smith, 1993).

Traditional bullying has been classified into the following forms: physical, verbal, relational or social (Wang, Iannotti, & Nansel, 2009). Physical bullying includes face-to-face physical actions such as hitting, pushing, and kicking (Olweus, 2010; Wang et al., 2009). Verbal bullying involves the use of verbal languages such as name-calling, nasty teasing, and verbal threatening to hurt victims (Smith, 2014; Wang et al., 2009). Relational or social bullying refers to the bullying behaviors which involves social manipulation such as social exclusion and spreading rumors (Crick & Grotpeter, 1995; Olweus, 2010; Smith, 2014; Wang et al., 2009). Moreover, with the development of technology, cyberbullying has become a new type of bullying. Cyberbullying takes place in cyberspace via technological devices such as computers and mobile phones and it can remain anonymous (Hinduja & Patchin, 2008; Menesini & Nocentini, 2009; Raskauskas & Stoltz, 2007).

Being bullied has been associated with various mental health problems, self-harm, and suicidal behaviors (Holt et al., 2015; Lereya, Copeland, Zammit, & Wolke, 2015); high depression and low self-esteem (Hawker & Boulton, 2000); as well as high levels of anxiety and loneliness (Storch, Brassard, & Masia-Warner, 2003). Bullying perpetration has also been found to be related to various psychosocial problems such as greater levels of disliking school,

school failure, and dropping out (Coie & Dodge, 1998; Kim et al., 2006; Nansel, Craig, Overpeck, Saluja, & Ruan, 2004); lower happiness and more symptoms of depression (O'Moore & Kirkham, 2001); greater levels of suicidal behaviors (Holt et al., 2015); and more delinquent behaviors in the later time (Kumpulainen & Rasanen, 2000).

In general, rates of bullying appear to increase through the elementary years, peaking at the time of school transition, then decline during the high school years (Brown, Birch, & Kancherla, 2005; Oliver, Hoover, & Hazler, 1994; Pellegrini, 2002, 2004; Pepler et al., 2006). A study in the U. S. (Gendron, Williams, & Guerra, 2011) has shown that compared with the other two age groups (e.g. 10 -12 years of age and 16 -19 years of age), children in the group of 13-15 years old were more likely to report bullying behaviors. Another study in Germany (Scheithauer, Hayer, Petermann, & Jugert, 2006) has also documented a similar peak period of bullying behaviors from grades 6-9, with a decline in grade 10. Consistent with these findings obtained from Western countries, studies conducted in Chinese samples (He, 2002; Qiao, Xing, Ji, & Zhang, 2009) have found that the prevalence of bullying has declined as the grade has increased in latter adolescence.

Prevalence of bullying. School bullying continues to be a serious problem around the world (Juvonen & Graham, 2014; Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). UNESCO reported that in 2016, 246 million children and adolescents every year experience school violence and bullying in some form (UNICEF, 2016). Two-thirds of 100,000 young people reported that they had been victims of bullying among eighteen countries (UNICEF, 2016). A meta-analysis study revealed that the mean prevalence rate of participating in traditional bullying behaviors was 35% and that in cyberbullying was 15% among 80 studies (Modecki et al., 2014). Minority groups of students are often targets of bullying. For

example, LGBT students have reported being targets of school violence and bullying three to five times higher than their non-LGBT peers (UNICEF, 2016). Some studies showed that ethnic-cultural minority groups were more vulnerable to be involved in bullying as both bullies and victims than majority groups (Cooc & Gee, 2014; Durkin et al., 2012; Monks Ortega-Ruiz, Rodríguez-Hidalgo, 2008).

Even though a number of studies (Forbes, Zhang, Doroszewicz, & Haas, 2009; Li, Wang. M, Wang. C, & Shi, 2010) suggested that China would be one of the countries with low school bullying behaviors, this behavior has been a common occurrence and becoming an intense issue impacting learning environments in schools (Bergeron & Schneider 2005; Eslea et al., 2004). Indeed, a recent study in China (Qiao et al., 2009) reported that 66.1% of boys and 48.8% of girls (grades 7-12) have been suffered from school bullying in China. Another study in China, a national survey collected in 2016, has documented that the rates of being bullied and bullying others were 26.10% and 9.03% respectively in Chinese schools (Han et al., 2017). In terms of different bullying forms, a study by Xu (2008) in China has indicated that bullying prevalence is high in Chinese middle schools. For example, approximately 29.4% of students reported that they were physically aggressive towards a peer, 11.9% of students admitted that they were spreading rumors about other peers, and 12.9% of students reported that they were intentionally excluding other students from a group (Xu, 2008). In addition, according to a national survey in China, the Chinese School Bullying Survey (2017), verbal bullying was becoming the main form of school bullying, accounting for 23.3%.

Gender differences in bullying. Based on a systematic review study, Craig et al. (2009) found that higher rates of bullying behaviors (i.e., bullying others) among boys than girls in all countries reviewed in the study (i.e., 40 countries). Moreover, boys were more likely to bully

other boys than to bully girls (Archer, 2004).

Regarding the forms of bullying in relation to gender, results have consistently shown that boys were more involved in direct bullying such as physical and verbal bullying than girls when considering traditional bullying (Li, 2006; Olweu, 1993; Underwood & Rosen, 2011).

However, there have been inconsistent results of gender differences in social bullying and cyberbullying. Some Western studies demonstrated that girls were more involved in indirect bullying such as relational exclusion (Björkqvist, 1994; Farrington & Baldry, 2010; Owens, Shute, & Slee, 2000; Olweus, 1991; Smith, 2014) or cyberbullying (Connell, Schell-Busey, Pearce, & Negro, 2014) than boys. On the other hand, several studies in China and other collectivistic-oriented countries such as Japan, Colombia, and Thailand found that there was no gender differences for social bullying (Lansford et al., 2012; Tseng, Banny, Kawabata, Crick, & Gau, 2013) or cyberbullying (Mura & Diamantini, 2014; Shin & Ahn, 2015), and even higher rates of social bullying (Kawabata, Crick, & Hamaguchi, 2010; Lansford et al., 2012; Zhang, Chen. L, & Chen. G, 2016) or cyberbullying (Wong, Chan, & Cheng, 2014; Zhou et al., 2013) were found among boys. To respond to the inconsistent findings from previous studies, the current study investigated whether there were gender differences in bullying in the context of China.

Parenting and Bullying

According to numerous studies, parenting context has been considered as an important role in studying bullying development. Children could develop their understanding of others' perspectives through interacting with family members and parents as the primary agents show children how to behave appropriately when interacting with others (Dunn, 2006; Hinde, 2002; Zahn-Waxler & Radke-Yarrow, 1990). Adolescents' delinquent, aggressive, or antisocial

behaviors have been consistently found to be related to parental styles, parental behaviors, and parent-child relationships (Eron, Huesmann & Zelli, 1991; Garnefski & Okma, 1996; Mussen & Eisenberg-Berg, 1977). Previous studies demonstrated that authoritarian parental style is positively related to externalizing problems (Georgiou & Stavriniades, 2013; Olweus, 2013). In addition, previous studies consistently found that bullies often had authoritarian parents (Baldry & Farrington, 2000; Boel-Studt & Renner, 2013). On the contrary, children with authoritative parents were less likely to be involved in bullying (Baldry & Farrington, 1998; Farrington, 1993; Georgiou, Fousiani, Michaelides, & Stavriniades, 2013; Idsoe, Solli, & Cosmovici, 2008; Ladd, 1992). With regards to parent-child relationship, Kazdin (1992) indicated that coercive conflicts between parents and children were strongly associated with children involved in bullying at school. In addition, children whose parents commonly displayed aggressive behaviors, were tolerant for delinquent behaviors, and used power-assertive disciplining strategies, were found to have higher possibility of bullying behavior (Flouri & Buchanan, 2003; Olweus, 1980; Schwartz, Dodge, Pettit, & Bates, 1997). Similar to those former studies described above (Boel-Studt & Renner, 2013; Flouri & Buchanan, 2003; Fousiani et al., 2013), Chinese studies also revealed the associations of bullying behaviors with negative parent-child relationships (Georgiou et al., 2013; Yu et al., 2006), with high levels of psychological control parental practices (Nelson et al., 2006), and with insufficient parental supervision (Hazemba, Siziya, Muula, & Rudatsikira, 2008).

The association between parental styles, parent-child relationship, and bullying has been widely investigated in previous studies. Currently, research examining the relationship between parental *practices* (i.e., psychological control and autonomy support) and bullying (Roth, Kanat-Maymon, & Bibi, 2011; Taylor, Lopez, Budescu, & McGill, 2012) has just emerged, with

recognition of the possible important roles of parental practices in bullying behaviors.

Parental autonomy support. As a critical component of parental practices, parent autonomy support is defined as a parental approach providing children a healthy psychological autonomy development environment (Barber & Olsen, 1997). Autonomy supportive parenting is characterized as empathic to children's perspectives, encouraging and providing choice to children to make self-endorsed decisions which reflects their internalized values and interests (Soenens et al., 2007). A growing body of research has been showing the associations between parental autonomy support and various outcomes of children, including bullying behaviors (Barber, Stolz, Olsen, Collins, & Burchinal, 2005; Roth et al., 2011; Wong, 2008). Specifically, some studies have reported the negative association between parental autonomy support and antisocial behaviors among adolescent (Barber & Olsen, 1997; Barber et al., 2005; Roth et al., 2011). However, Idsoe et al. (2008) found that greater parental autonomy support was associated with children's bullying behaviors, but only for boys among grade 8 in Norway. Further, a longitudinal study conducted by Rajendran, Kruszewski and Halperin (2016) in the U.S. showed that greater autonomy support received from parents at ages of 4-5 years was linked to a decrease of bullying behaviors at age of 9 years. Indeed, Bandura (1986) contended that children who perceived low parental autonomy support were less likely to perceive themselves to be capable to manage potential threats and more likely to use defensive behavior when dealing with conflicts.

Parental psychological control. Parental psychological control is another important element of parental practices and it refers to a maladaptive parenting strategy. The nature of maladaptive parenting includes emotionally manipulative and coercive tactics or approaches such as withdrawing love, instilling anxiety, inducting guilt to control children's thoughts and

feelings (Barber, 1996; Soenens & Vansteenkiste, 2010). This particular parental practice (i.e., psychological control) also includes approaches of invalidating the child's perspective as well as responding badly to their psychological and emotional needs (Barber, 1996; Barber & Harmon 2002; Barber, Maughan, & Olsen, 2005; Soenens & Vansteenkiste, 2010). Previous studies consistently showed that psychological control was positively linked to aggressive and delinquent behaviors (Albrecht, Galambos, & Jansson, 2007; Barber, Olsen, & Shagle, 1994; Casas et al., 2006; Kincaid, Jones, Cuellar, & Gonzalez, 2011; Nelson, & Crick, 2002; Rathert, Fite, & Gaertner, 2011). Two studies have found that children (ages 3-5) and adolescents (ages 9-12) of psychologically controlling parents often struggle with aggression in peer relationships (Casas et al., 2006; Rathert et al., 2011). Conducting separate analyses by parents' gender, one study (Stevens & Hardy, 2013) showed that both maternal and paternal psychological control were related to adolescents' aggression. A very recent study (Fousiani et al., 2016) has reported that perceived parental psychological control was positively related to cyberbullying among children (ages 10-11).

Self-determination theory provides a plausible theoretical explanation for linking bullying with autonomy support and psychological control parenting (SDT; Deci & Ryan, 2000). According to the SDT, adolescents who perceive satisfaction of universal psychological needs for autonomy, relatedness, and competence have healthy psychological development (Ryan, Deci, Grolnick, & La Guardia, 2015). However, children may become aggressive, defensive, self-centered, and irresponsible if they are thwarted and frustrated by socializing agents such as parents (Vansteenkiste & Ryan, 2013). The combination of high psychological control and low autonomy support from parents may elicit disruptive or aggressive youth behavior (Hauser Kunz & Grych, 2013). In addition to parental autonomy support and psychological control, recent

literatures have suggested that parental warmth is another important dimension of parental practices (Doinita & Maria, 2015; Duriez, Soenens, & Vansteenkiste, 2007; Niemiec et al., 2006).

Parental warmth. Parental warmth is a supportive parental practice and an important factor to form a secure attachment between parents and children (MacDonald, 1992; Rothbaum & Weisz, 1994). Parental warmth reflects an approach through which parents are sensitive to the child's needs and tend to provide positive emotions to their children (Darling & Steinberg, 1993; Davidov & Grusec, 2006; Locke & Prinz, 2002; Zhou et al., 2002). Parental warmth has been shown to be associated with children's aggressive behaviors, including bullying (Barnow, Lucht, & Freyberger, 2005; Hagan & McCarthy, 1998; Thornberry, Freeman-Gallant, Lizotte, Krohn, & Smith, 2003). Low parental warmth and inconsistent parenting were related to antisocial behaviors among adolescents (Barnow et al., 2005; Thornberry et al., 2003). Khaleque and Rohner (2002) conducted a longitudinal study and found that people were more likely to report more aggressive and hostile behaviors when they experienced less parental warmth, support, and love in childhood. Further, another study by Baldry and Farrington (2005) demonstrated the negative relationship between parental warmth and bullying behaviors among the ages from 14 to 19 years.

Attachment theory is helpful in conceptualizing the possible association between parental warmth and children's bullying behaviors. The attachment theory contends that the emotional bonds between children and their caregivers in the early years of life plays an important role in developing interpersonal relationships when children grow up (Berry, Wearden, Barrowclough, & Liversidge, 2006). Securely attached children have been less likely to engage in bullying behaviors (Troy & Sroufe, 1987; Walden & Beran, 2010) whereas insecure children are more

likely to bully others (Eliot & Cornell, 2009). Moreover, Troy and Sroufe (1987) conducted a long-term study and revealed that children who experienced insecure parental attachments at 18 months were more likely to become bully perpetrators when they were four to five years old than those children with secure attachments.

Herein, the present paper considered the important roles of all three parental practices (i.e., parental warmth, parental autonomy support, and parental psychological control) which are relatively paid less empirical attention when studying bullying behaviors.

Empathy and Bullying

Empathy is in general the capacity to understand and experience how another person feels (Davis, 1983). The recent literature has defined empathy as a multidimensional psychological concept with two critical components: cognitive empathy and affective empathy (Ang & Goh, 2010; Dadds et al., 2008; Davis, 1983; Preston & de Waal, 2002; Strayer, 1990).

Cognitive empathy is the capacity of an individual to understand others' emotions (Hogan, 1969). Perspective taking is key, which emphasizes the ability to understand emotions and perspectives of others (Davis, 1996). Affective empathy refers to a person's ability to experience and to share other people's emotions (Cohen & Strayer, 1996; Davis, 1996; Mehrabian & Epstein, 1972). More specifically, affective empathy concerns the ability to feel sympathy and compassion when witnessing someone in distress (Davis et al., 1999).

Research has shown the critical role of empathy as one aspect of social competencies in human interpersonal relationships (Schutte et al., 2001). A systematic review by Miller and Eisenberg (1988) has documented that empathic response was negatively related to aggressive and antisocial behaviors among both children and adolescents. In other words, children who have higher ability to recognize and share the emotional distress state of victims are less likely to

be aggressive. On the other hand, it has been examined that children and adolescents with empathy deficits are more likely to be involved in violent and antisocial behaviors (Bryant, 1982; Kaukiainen et al., 1999). Regarding bullying research specifically, Endresen and Olweus (2001) found a directly negative association between empathy and bullying among adolescents. That is, adolescents with greater levels of empathy are less likely to bully others. Shechtman (2002) claims that distinguishing between affective and cognitive empathy is important when considering children's aggressive behaviors. There were complex and inconsistent findings about the relationship between the two types of empathy and bullying behaviors. Some studies suggest that both cognitive and affective empathy diminish aggressive behaviors (Albiero & Lo Coco, 2001; Kaukiainen et al., 1999). However, other investigators indicate that affective empathy plays a more important role in reducing aggressive behaviors than cognitive empathy (Bryant, 1982; Cohen & Strayer, 1996; López-Pérez, Hanoch, Holt, & Gummerum, 2017; Shechtman, 2002; Stavrinides, Georgiou, & Theofanous, 2010; Van Noorden et al., 2015). In other words, the ability to feel and share others' feelings would be helpful for reducing children's tendency to be involved in bullying. Further, Williford et al. (2016) has indicated that bullying was more strongly associated with lower levels of cognitive empathy. In contrast, some investigators have argued that high levels of cognitive empathy were associated with more bullying behaviors (Jolliffe & Farrington, 2006; Sutton, Smith, & Swettenham, 1999). Since bullies with high cognitive empathy could easily understand others' perspectives, it would actually help the bully to more effectively manipulate other students. Above all, Caravita, Di Blasio, and Salmivalli (2009) have concluded that high cognitive empathy was related to more bullying whereas high affective empathy was related to less bullying.

Empathy and Parenting

An established body of studies has suggested the significant relationship between empathy development and parenting (Mark, IJzendoorn, & Bakermans-Kranenburg, 2002; Kanat-Maymon & Assor, 2010). One longitudinal study in Spain (Martínez, María, & Fernando, 2013) has found that adolescents who perceived parental rejection in childhood showed inadequate empathy in adulthood and the development of violence. Similarly, a poor quality of parent-child relationship in childhood was negatively related to the children's personality traits development and negatively associated with empathy (Stafford, Kuh, Gale, Mishra, & Richards, 2016; Sroufe, England, & Elicker, 2016). One study in students at grades 6-8 (Davidov & Grusec, 2006) has found that parental warmth and responsiveness were positively associated with positive expressiveness from parents and greater levels of children's empathy. Deci and Flaste (1995) have indicated that autonomy support is a center of empathy and perspective development. Moreover, a longitudinal study by Miklikowska et al. (2011) has found that high parental autonomy support in grade 10 led to an increase in empathy development a year later. Warm and supportive parentings help children to understand both their own and others' emotions and needs, as well as helping them to properly regulate their own emotions (Malti, Eisenberg, Kim, & Buchmann, 2013). In terms of psychological control, a longitudinal study has shown that children with greater psychological control from both father and mother reported lower empathy five years later (Yoo, Feng, & Day, 2013).

Gender of parents has been suggested as an important variable to be examined in the relation between parenting factors and children's empathy. Maternal affection, as reflected in ratings of maternal warmth was positively related to students' affective empathy (Barnett, Howard, King, & Dino, 1980). A study among young children by Robinson (1994) also found that maternal warmth was associated with high levels of empathic responding. Soenens and

colleagues have demonstrated that maternal support was associated with empathy in adolescents at ages from 15 to 19 (Soenens et al., 2007). Nevertheless, a number of studies consistently have shown that maternal parenting was more predicative for children's affective empathy development and that paternal parenting was more predicative for children's perspective taking (i.e., cognitive empathy) development (Hastings, Utendale, & Sullivan, 2007; Miklikowska et al., 2011; Spinrad et al., 1999; Zahn-Waxler, 2000). On the contrary, another study by Kanat-Maymon and Assor (2010) has revealed that individuals with greater psychological control by their mother during adolescence presented lower empathy levels in adulthood. Attachment theorists have accumulated the evidence linking parenting to empathy. Derived from the perspective of attachment theory, research has found that children with secure attachment between the ages of one and one and a half have shown higher levels of empathy and prosocial behavior later (Kestenbaum, Farber & Sroufe, 1989).

Parental Practices, Empathy and Bullying

Guided by the literature separately suggesting the association between parental practices and empathy, the link between parental practices and bullying, as well as the link between empathy and bullying, two studies have attempted to examine the relationship among all three variables together (i.e., parental practices, empathy, and bullying). For example, a study conducted in the U. S. (Zhou et al., 2002) found that elementary school students from grades two to grade five with greater parental warmth reported higher empathy scores, which, in turn, was related to fewer externalizing behaviors. Another recent study in Cyprus (Fousiani et al., 2016) has demonstrated that there was the significant association between parental practices (i.e., parental autonomy support and psychological control) and cyberbullying mediated by empathy (only affective empathy) among adolescents at grades from 10 to 11. In other words,

adolescents with greater autonomy support from their parents were more likely to report higher empathy, which, in turn, was related to less likelihood of cyberbullying behaviors. Also adolescents with greater psychological control from their parents were more likely to report lower empathy, which, in turn, was linked to less cyberbullying involvement.

The Current Study

Bullying is a serious problem among adolescents described earlier, affecting their well-being. This study aimed to examine the associations among parental practices (i.e., autonomy support, psychological control, and warmth), empathy, and bullying in a sample of Chinese adolescents.

The majority of studies examining parenting were conducted in Western countries and leaving vast unknown areas in other backgrounds, including China. Given the lack of study beyond the Western countries, the present study was conducted in China. In the Chinese culture, parental control called *guan* illustrates how the parents are responsible and love their children. Therefore, Chinese children might be more adaptable to strict and heighten parental control (Chao, 1994).

To the best of our knowledge, no previous study has studied the relationships among the three parental practices (i.e., warmth, autonomy support and psychological control), the two distinct components of empathy (i.e., cognitive and affective), and adolescents' bullying behaviors in China. The current study aimed at examining how parental practices would be related to Chinese adolescent's bullying behaviors in relation to empathy.

The present study was expected to provide empirical findings to help researchers and practitioners understand parents' and empathy's roles in children's bullying behaviors in order to create more effective bullying prevention and intervention strategies.

Research Questions and Hypotheses

The specific research objectives in the current study were as follows: (Q1) to investigate the prevalence of bullying behaviours across its different forms and gender in China; (Q2) to test whether empathy would be a mediating factor between parenting and bullying behaviors (see Figure 1 for the hypothesized model); and (Q3) to explore if there would be gender differences between parental practices (i.e., maternal vs. paternal) in the hypothesized model. Based on the previous studies reviewed earlier, the hypotheses of the present study were: (H1) boys would be more likely to bully others than girls particularly regarding physical bullying (Baldry, Farrington, & Sorrentino, 2017; Card, Stucky, Sawalani, & Little, 2008; Li, 2007; Wang et al., 2009); (H2) empathy would be a mediator between parental practices and bullying; in particular, parental warmth and autonomy support would be positively related to adolescents' empathy, which, in turn, would be negatively related to bullying behaviors; on the contrary, parental psychological control would be negatively associated with adolescents' empathy, which, in turn, would be positively associated with bullying behaviors (Bryant, 1982; Endresen & Olweus, 2001; Kaukiainen et al., 1999; Miller & Eisenberg, 1988); and (H3) maternal parenting would be a stronger predictor of empathy, especially affective empathy; as compared with paternal parenting (Hastings et al., 2007; Miklikowska et al., 2011; Spinrad et al., 1999; Zahn-Waxler, 2000).

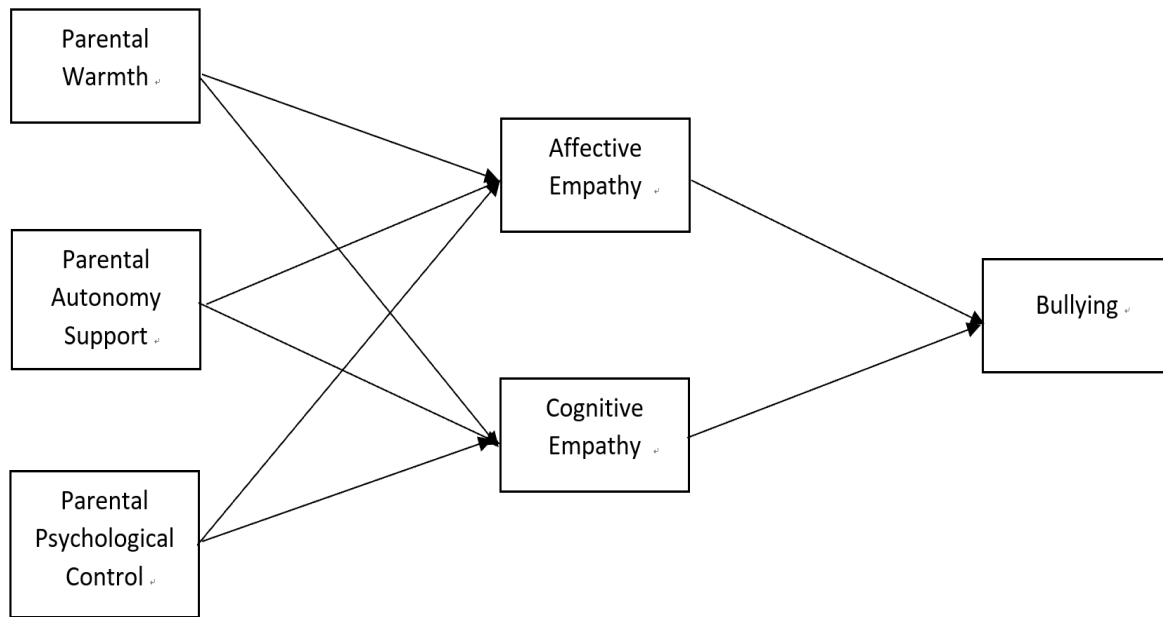


Figure 1. Hypothesized path model of parental practices, empathy and bullying.

Method

Participants

Participants included 277 students in grades 7-12 ($M_{\text{age}} = 15.48$, $SD = 1.65$) from six public middle schools in Tianjin, China. Descriptive statistics of participants' grades and genders are presented in Table 1 and 40.1% of participants were girls. All participants were living with both parents. This study was approved by the research Ethics Board at the McGill University. Consent forms were also obtained from local schools, parents, and students.

Table 1
Description of Participants by Grade Level and Gender

Grade	Girls (n)	Boys (n)
7	11	22
8	21	30
9	16	35
10	35	37
11	16	19
12	12	23

Procedures

Before the day of the study, the researcher gave an introduction to the students and teachers who agreed to participate. After the introduction, students received both assent forms for themselves and consent forms for their parents. With regards to participation in the current research project, children and their parents were told that researchers from a Canadian university were interested in examining the role of parenting in adolescent outcomes (bullying behaviors) at school. Students who received parental permission and who themselves agreed to participate were involved in a single group-testing session (25-30 minutes) during which a self-report survey was administered in each classroom by at least one trained proctor (the author). All students were reminded that their responses were anonymous and confidential, and they could withdraw from this study anytime they wanted, and the study would not influence their academic grades.

Measures

Demographic information. In order to obtain the descriptive information about the sample, participants were asked to fill the demographic survey of their gender, age, and grade.

Parental warmth. Parental warmth was measured by using the subscale of the Children's Report of Parent Behaviour Inventory (see Appendix A; derived from CRPBI-30, Schludermann. E & Schludermann. C., 1988). The parental warmth subscale included 10 items (e.g., "my father/mother is a person who makes me feel better after talking over my worries with him/her"), and students were asked to rate on a 7-point scale (1 = *not like* to 7 = *a lot like*). Total scores of the ten items for maternal warmth and paternal warmth were calculated separately for each participant. A higher score indicated that the student received a higher level of parental warmth. Using the AMOS 23.0 Program, a confirmatory factor analysis (CFA) was performed to determine the factor structure of the parental autonomy support in the current sample. Maximum likelihood-estimation was used to evaluate the covariance-matrix, given the multivariate distributions of variables were reasonably acceptable. A non-significant χ^2 likelihood ratio is widely used to evaluate the model fit (Kline, 2005). However, χ^2 is very sensitive to sample size and may overestimate the lack of model fit (Gerbing & Anderson 1985). Therefore, CFI, GFI, RMSEA, and SRMR are important criteria to evaluate model fit. GFI and CFI values greater than .95 were considered as good model fit while values greater than .80 showed acceptable and adequate model fit (Hu & Bentler, 1999; Byrne, 2013; McDonald & Marsh, 1990). For both RMSEA and SRMR, values less than .06 suggested a good model fit. While values less than 0.08 were considered as adequate fit for SRMR (Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004). With regards to the RMSEA, values between .06 and .10 were considered adequate fit (Hu & Bentler, 1999; Kaplan, 2000). The results revealed support for

the factor structure for maternal warmth, $\chi^2 (35) = 153.13$; CFI = 0.91; GFI = 0.90; RMSEA = 0.11; for paternal warmth $\chi^2 (35) = 142.10$; CFI = 0.92; GFI = 0.90; RMSEA = 0.10.

Cronbach's coefficient alphas for the maternal warmth and paternal warmth in this sample were .90 and .91, respectively. Thus, the use of the CRPBI was considered acceptable for the participants in the current study.

Parental autonomy support. To measure parental autonomy support, the Perceived Parental Autonomy Support Scale (P-PASS; Mageau, Ranger, Joussemet, Koestner, Moreau, & Forest, 2015) was used (see Appendix B), using 12 items (e.g., "My parents gave me many opportunities to make my own decisions about what I was doing"). Students were asked to rate on a 7-point response scale (1 = *not like* to 7 = *a lot like*). A higher total score of the twelve items indicated a higher level of parental autonomy support that the child perceived. A confirmatory factor analysis (CFA) was performed to determine the factor structure of the parental autonomy support in the current sample. The results supported a one-factor structure for maternal autonomy support, $\chi^2 (54) = 178.08$; CFI = .92, GFI = .90; RMSEA = .09 and for paternal autonomy support, $\chi^2 (54) = 219.85$; CFI = .90, GFI = .88; RMSEA = .10. Cronbach's coefficient alphas for autonomy support of mother and father in this sample of children were .91 and .92, respectively. Thus, the use of the P-PASS was considered acceptable for the participants in the current study.

Parental psychological control. To assess parental psychological control, Psychological Control Scale-Youth Self-Report scale (PCS-YSR; Barber, 1996) was used in this study (see Appendix C). This scale included 16 items (e.g., "My parents often interrupt me when I am talking"), and participants were asked to rate how well each statement reflects their parents' child-rearing behaviors on a 7-point Likert scale (1 = *not like* to 7 = *a lot like*). Participants

who gained a higher total score on the measure for maternal psychological control and paternal psychological control indicated that they perceived a higher level of parental psychological control in their daily lives. A CFA was performed to determine the factor structure of the parental psychological control in the current sample. The results supported one-factor structure for maternal psychological control, $\chi^2 (104) = 270.03$; CFI = .89, GFI = .89; RMSEA = .08; and paternal psychological control, $\chi^2 (104) = 317.32$; CFI = .86, GFI = .87; RMSEA = .09. For the scale of parental psychological control, the Cronbach's alpha coefficients were respectively .90, .89. These results suggested that the use of the PCS-YSR was adequate for the current study.

Empathy. Two subscales of Cognitive Empathy (CE) and Affective Empathy (AE) from the Interpersonal reactivity index (see Appendix D; IRI; Davis, 1980) were used to assess students' empathy. The CE subscale (7 items) was used to measure emotional empathy, assessing how an individual shares feelings for people who are less fortunate (e.g., "When I see someone being taken advantage of, I feel kind of protective towards them") and the PT subscale (7 items) was used to measure cognitive empathy, measuring how a person adopted the viewpoint of others (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"). Participants were asked to indicate how well each item described them on a 5-point scale (1 = *not at all* to 5 = *extremely*). A higher total score on the measure for CE and AE indicated a higher level of children's cognitive and affective empathy respectively. In the present study, similar Cronbach's alpha coefficients were found (.76 for AE and .75 for CE). A CFA was then conducted to replicate the factorial structure of the scale for the current sample. The model fit indices suggested that the two-factor model was acceptable, $\chi^2 (76) = 173.72$; CFI = .88; GFI = .92; RMSEA = .07. These test results suggested that the use

of the IRI was acceptable for the current study.

Bullying behaviors. Students' bullying behaviors were assessed using the Bullying Behavior Questionnaire (Konishi, Miyazaki, Hymel, & Waterhouse, 2017; see Appendix E), using 6 items. This questionnaire measures both traditional bullying (i.e. physical, verbal, and social bullying) and cyberbullying (e.g., "How often have you taken part in physically bullying others by hitting, kicking, shoving, etc.?" "How often have you taken part in cyberbullying others using computer or text messages to exclude, threaten or humiliate?"). Students were asked to rate on a 5-point scale (1 = *never* to 5 = *several times a week*). Responses were averaged to create an overall index of bullying involvement. Higher scores indicated greater level of bullying perpetration. A one-factor model observed on the screen plot, and factor loadings ranging from .49 to .81. A CFA was performed to determine the factor structure of the bullying in the current sample. The results supported one-factor structure for bullying, $\chi^2(9) = 18.38$; CFI = .97, GFI = .98; RMSEA = .06. For the scale of bullying, the Cronbach's alpha coefficients were .76. These results suggested that the use of the Bullying Behavior Questionnaire was adequate for the current study.

All scales used in the study were the original English versions and they were double translated into Chinese. An official Chinese interpreter translated these materials into Chinese first and then translated them back into English. Then a native English speaker compared the translated versions with the original versions to ensure they were equivalent.

Results

The data was analyzed via the following steps. First, assumption tests were conducted using the SPSS 24.0 statistical package prior to examination of the primary hypotheses. Assumption test is used to evaluate whether researchers correctly draw conclusions from the

results of analysis. Second, descriptive statistics and correlational analyses were performed. Third, a *t*-test was conducted in order to test gender differences across different forms of bullying behaviors. Finally, structural equation modeling (SEM) in AMOS 23.0 was used to assess the hypothesized model described earlier through the path analysis.

Assumption Tests

Normality. To check the data for normality, histograms as well as indices of skewness and kurtosis were used. Based on the studies by Hair et al. (2010) and Bryne (2010), the acceptable range of skewness is from -2 to 2, and kurtosis is range from -7 to 7, respectively. Based on these recommended values of the skewness and kurtosis, all the variables in this study are within the acceptable range. The absolute values of skewness are from .09 to 1.63, and kurtosis are from .001 to 2.77.

Univariate and multivariate outliers. Data were screened for univariate and multivariate outliers. To test univariate outliers, Z-scores were calculated for each scale. There are four univariate outliers for bullying scale compared to other variables which do not have any outliers. To test multivariate outliers, Mahalanobis distances were used and four multivariate outliers were found. Path analysis was run with and without univariate and multivariate outliers. However, there were no differences between the results contained outliers and those did not contain outliers. As a result, the multivariate outliers were retained in all analyses.

Linearity. The linearity assumption was tested using scatterplots. The scatterplots showed an oval-shape for predictor variables and bullying behaviors, therefore meeting the assumption that there was a linear relationship between the independent and dependent variables.

Multicollinearity. Tests for multicollinearity indicated that a very low level of

multicollinearity (VIF's cutoff is 10) was present (VIF = 3.89 for mother warmth, 4.65 for father warmth, 6.98 for mother autonomy support, 8.48 for father autonomy support, 3.97 for mother psychological control, 4.33 for father psychological control, 1.18 for empathic concern and 1.18 for perspective taking). Examination of the correlations indicated that there were no multicollinearities between the study variables.

Homoscedasticity. This assumption assumes that the variation in the residuals (or amount of error in the model) is similar at each point of the model. The scatterplot examinations showed a random array of dots which indicated that the assumption of homoscedasticity was not violated.

Descriptive Statistics

Descriptive statistics including the means (*M*), standard deviations (*SD*), and correlations among study variables are presented in Table 2. The mean values of maternal practices showed higher than paternal practices variables, ranged from 48.60 to 58.36 at the maternal level, and from 45.14 to 51.94 at the paternal level. Results of the Pearson product-moment correlation coefficient indicated that correlations between parental practices, empathy, and adolescents' bullying were all significant ($p < .01$). Parental warmth, autonomy support, and empathy were negatively related to bullying ranging from -.21 to -.35. In contrast, parental psychological control was positively related to bullying ranging from .28 to .29. The correlation results revealed that high levels of parental warmth, parental autonomy support, and empathy (i.e., CE and AE) were related to low levels of bullying behaviors. However, high levels of parental psychological control were related to high levels of bullying behaviors.

Table 2

Internal correlations Among Study Variables

Variable	M	SD	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9	10	11	12	13
Warm (M)	49.96	13.41	-0.76	0.09	-												
Warm (F)	45.14	15.08	-0.52	-0.41	0.71**	-											
Autonomy Support(M)	58.36	15.70	-0.49	-0.49	0.75**	0.59**	-										
Autonomy Support(F)	51.94	15.87	-0.56	-0.37	0.62**	0.80**	0.80**	-									
Psychology Control(M)	48.60	20.83	0.45	-0.63	-0.55*	-0.40*	-0.59*	-0.47*	-								
Psychology Control (F)	45.92	20.51	0.53	-0.44	-0.44*	-0.56*	-0.45*	-0.63*	0.75**	-							
Total Empathy	50.76	9.11	-0.13	-0.02	0.39**	0.43**	0.41**	0.46**	-0.32*	-0.38*	-						
Empathetic Concern	26.79	5.42	-0.60	0.22	0.28**	0.34**	0.26**	0.34**	-0.17*	-0.25*	0.83**	-					
Perspective Taking	23.97	5.49	-0.09	-0.001	0.36**	0.39**	0.43**	0.42**	-0.37*	-0.39*	0.84**	0.39**	-				
Bullying	8.91	3.21	1.73	3.35	-0.21*	-0.23*	-0.25*	-0.24*	0.28**	0.29**	-0.35*	-0.27*	-0.31*	-			
Parental Warmth	95.09	26.36	-0.62	-0.07	0.92**	0.93**	0.72**	0.77**	-0.51*	-0.54*	0.44**	0.34**	0.40**	-0.24*	-		
Parental ASO	110.30	29.98	-0.47	-0.47	0.72**	0.73**	0.95**	0.95**	-0.56*	-0.57*	0.46**	0.31**	0.45**	-0.26*	0.79**	-	
Parental PC	94.53	38.67	0.41	-0.55	-0.53*	-0.52*	-0.56*	-0.59*	0.94**	0.93**	-0.38*	-0.22*	-0.41*	0.30**	-0.56**	-0.60**	-

Note. ** $p < .01$; M refers to mother, F refers to father.

Tests of Hypotheses

Gender differences in bullying. An independent *t*-test was conducted to examine whether there were gender differences on bullying behaviors (see Table 3). The results of the *t*-test indicated that boys showed greater bullying behaviors for all forms than girls except for social bullying.

Table 3

Results from t-tests Comparing Boys and Girls Bullying Behaviors.

	Boys		Girls		<i>t</i> -test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Overall Bullying	1.66	.89	1.36	.59	***
Physical Bullying	1.61	.88	1.24	.59	***
Verbal Bullying	1.42	.84	1.21	.54	**
Social Bullying	1.65	.93	1.55	.75	ns
Cyberbullying	1.40	.82	1.21	.45	***

Note. ***p* < .01, ****p* < .001; *M* = Mean, *SD* = Standard Deviation. Bullying behaviors from 1 (*Never*) to 5 (*Several times a week*).

The mediation model for maternal parenting. Structural equation modeling (SEM) in AMOS 23.0 was employed to investigate the hypothesized relationships where empathy mediates the link between three parental practices and bullying behaviors (see Figure 1).

First, maternal parental practices were examined in the hypothesized model (see Figure

2). This model included the cognitive empathy factor (CE) and affective empathy factor (AE) as intervening variables between maternal warmth (M-W), maternal autonomy support (M-AS), maternal psychological control factors (M-PC), and bullying.

A result of testing the hypothesized model showed a marginal acceptable fit to the data for maternal behaviors: $\chi^2(3) = 10.13; p < .05$; CFI = .99; TLI = .93; SRMR = .05; RMSEA = .09. The path coefficients showed that AE was predicted by M-W ($\beta = .21, p < .05$), but not by M-AS and M-PC ($\beta = .11, p > .05$; $\beta = .01, p > .05$; see Figure 2). Moreover, CE was significantly predicted by M-AS and M-PC ($\beta = .29, p < .01$; $\beta = -.17, p < .05$), but not by M-W ($\beta = .15, p > .05$). In other words, there was the statistically positive relationship between maternal warmth and empathic concern, and between maternal autonomy support and perspective taking; however, there was a negative relationship between maternal psychological control and perspective taking. In terms of bullying behaviors, AE and CE showed significantly negative effects ($\beta = -.17, p < .01$; $\beta = -.24, p < .001$, respectively). This result showed that both affective and cognitive empathy were negatively associated with bullying behaviors. These findings indicated that the mediation effect of affective empathy in the relationship between maternal warmth and adolescents' bullying behaviors was significant. Moreover, the mediation effect of cognitive empathy in the association between both maternal autonomy support and psychological control, and adolescents' bullying behaviors was significant. However, the mediation effect of cognitive empathy in the relationship between maternal warmth and bullying behaviors was not significant. Further the mediating effects of affective empathy in the link between both maternal autonomy support and psychological control, and adolescents' bullying behaviors was not observed.

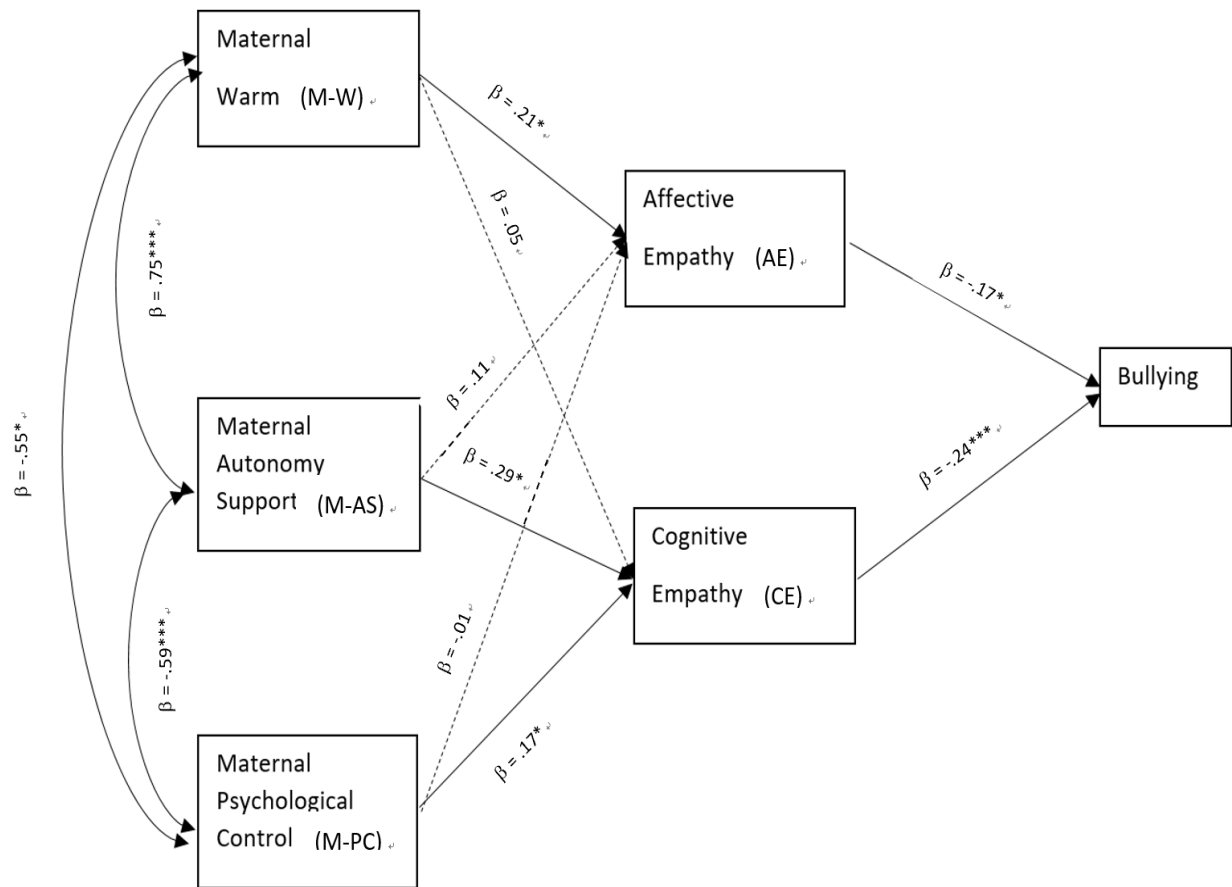


Figure 2. Path model of maternal practices, empathy and bullying.

The mediation model for paternal parenting. This model involves paternal variables (P-W; P-AS; P-PC) through the same path analysis (see Figure 3). Results of SEM showed an acceptable fit to the data for paternal behaviors: $\chi^2(3) = 8.18$; $p < .05$; CFI = .99; TLI = .99; SRMR = .04; RMSEA = .08. The path coefficients in Figure 3 showed that PT was significantly predicted by P-AS and P-PC ($\beta = .21$, $p < 0.05$; $\beta = -.20$, $p < .001$) but not P-W ($\beta = .11$, $p > 0.05$). On the other hand, P-W, P-AS and P-PC ($\beta = .18$, $p > 0.05$; $\beta = .17$, $p > 0.05$; $\beta = -.04$, $p > 0.05$) were not significant predictors of AE. Moreover, AE and CE showed significantly negative effects on adolescents' bullying behaviors respectively ($\beta = -.17$, $p < .01$; $\beta = -.24$, $p < 0.001$). In other words, there was the statistically positive

relationship between paternal autonomy support and cognitive empathy; however, there was a negative relationship between paternal psychological control and cognitive empathy.

Moreover, both affective and cognitive empathy were negatively associated with bullying behaviors. These findings indicated that the association between both paternal autonomy support and psychological control, and bullying behaviors were mediated by cognitive empathy. In contrast, the mediation effect of cognitive empathy in the relationship between paternal warmth and bullying behaviors was not significant. In addition, the mediating effects of affective empathy in the relationship between both paternal autonomy support and psychological control, and adolescents' bullying behaviors were not significant.

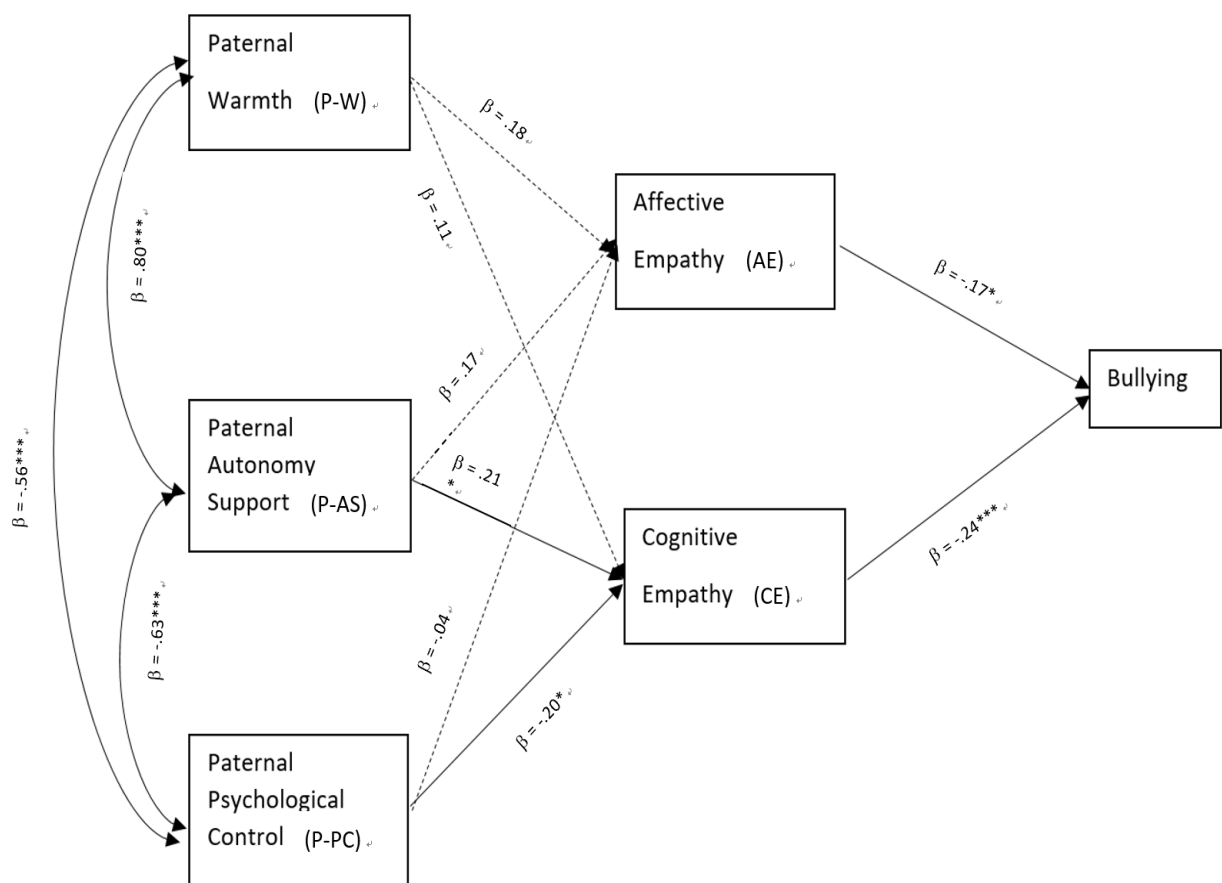


Figure 3. Path model of paternal practices, empathy and bullying.

Discussion

To our knowledge, this is the first study to examine the associations among parental practices (i.e., autonomy support, psychological control, and warmth), empathy, and bullying behavior all together. Of primary interest was to investigate the mediating effects of empathy on the parenting-bullying link.

Our first question was to investigate the prevalence and gender differences in the forms of bullying behavior in China. Following previous studies (Card et al., 2008; Hoover & Olsen, 2001; Olweus, 1993; Pellegrini & Bartini, 2000; Sapouna, 2008), it was expected that boys would be more likely to bullying others than girls, particularly regarding physical bullying. The results from the present study were consistent with previous research (e.g., Card et al., 2008), indicating greater prevalence for all forms of bullying for boys than girls except for social bullying in China. There were no significant gender differences for social bullying in the present study. An explanation of why boys were more involved in *physical* bullying than girls would be that, compared with girls, boys are keen to show their masculinity (Young & Sweeting, 2004). In addition, self-affirmation and social dominance are core for masculine, therefore, boys may bully their peers in order to achieve dominance within their peer groups (Crick & Grotpeter, 1995; Gini & Pozzoli, 2006; Pellegrini, Bartini, & Brooks, 1999). Regarding the higher rates of verbal bullying among boys than girls, the social norm of the Chinese culture may be associated with this particular result. In China, girls are in general encouraged to be modest and reserved, whereas boys are encouraged to be outflow and dominant (Chen et al., 2018). In addition, the Chinese social norms are more tolerant of aggressive verbalization for boys than girls (Yu, 2017). Therefore, the rates

verbal bullying may be higher among boys than girls in China. In terms of the greater rates of cyberbullying among boys than girls found in the present study may be explained by recent research suggesting that boys have shown higher levels of risky internet use than girls which may lead to more likelihood of engaging in cyberbullying (Li, 2006; Wolak, Ybarra, Mitchell, & Finkelhor, 2007). Indeed, very recent literature on cyberbullying has been demonstrating higher rates of bullying perpetration for boys than girls, however higher rates of bullying victimization for girls than boys (Heiman & Olenik-Shemesh, 2015; Låftman, Modin, & Östberg, 2013; Navarro & Jasinski, 2013).

With regard to social bullying, no gender differences were observed in the present study. To explain this result, understanding of cultural differences might be helpful. The Chinese culture advocates interpersonal harmony which is called *guanxi* (Zhang, Chen, & Chen, 2016). This value has been promoted for all citizens, regardless of gender differences (Zhang et al., 2016). As a result, the highly valued harmonious relationships may contribute to the non-significant finding between boys and girls on social bullying behaviors in the current study.

In terms of the second research question (i.e., testing the mediation model), we aimed to test if empathy mediated the link between parental practices and bullying behaviors. Through the SEM, the present findings showed that both maternal and paternal practices were associated with empathy which, in turn, was related to bullying behaviors. Specifically, our results showed that adolescents with greater levels of warmth only from mothers (not from fathers) reported higher levels of affective empathy, which, in turn, elevated bullying behaviors. The significant contribution of the maternal warmth is consistent with

theoretically derived arguments from parental socialization theory that parents, especially mothers, who are warmth and responsiveness provide affective environments for children to meet their children's needs and it helps the children to develop their empathic skills by modeling their parents (Eisenberg, Spinrad, Sadovsky., 2006). Additionally, this critical role of parental warmth could be explained by attachment theory. Attachment theorists (Ainsworth, Blehar, Waters & Wall, 2015) indicated that parental warmth was known to be a critical component for the secure attachment development. Previous findings based on predominantly mothers have shown that attachment security is related to children's positive affect and empathy (Bowlby, 1980; Hoffman, 2001; Kestenbaum et al., 1989; Sroufe & Fleeson, 1986; Mark et al., 2002).

Moreover, this result could also be interpreted by Gender Role Orientations Theory which suggested that compared to males, females have the tendency to display compassion, concern, and emotional affection than males (Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Bem, 1993; Cohn, 1991; Olweus & Endersen, 1998). Therefore, mothers might socialize with children by emphasizing on emotional components of empathy, which may further impact on children's affective empathy growth.

In terms of other parental practices (i.e. autonomy support and psychological control), the present study found that both maternal and paternal autonomy support significantly contributed to higher levels of adolescents' cognitive empathy, which, in turn, was related to lower bullying behavior. On the contrary, greater levels of both paternal and maternal psychological control was significantly related to lower levels of adolescents' cognitive empathy, which, in turn, was associated with lower bullying. In other words, cognitive

empathy, but not affective empathy mediated the link between maternal and paternal autonomy support, and psychological control to bullying. Self-determination theory has proposed that autonomy was one of the fundamental needs for individuals' lives (Deci & Ryan, 1985; Ryan & Deci, 2000). Additionally, Barber, Bean and Erickson (2002) indicated that autonomy support and psychological control represent opposite ends of a continuum. A few previous studies have shown that the parental autonomy support was related to children's empathic skills (Deci & Flaste, 1995; Miklikowska et al., 2011), and in particular, maternal parenting was a stronger predictor of children's empathy development (Kanat-Maymon & Assor, 2010; Soenens et al., 2007). However, no previous study examined how both maternal and paternal autonomy support, and psychological control were linked to different components of empathy (i.e. cognitive empathy and affective empathy).

Higher autonomy support and lower psychological control were only associated with higher cognitive empathy but not with affective empathy, which, in turn, was negatively related to bullying behavior. These results might be interpreted in the following respects. First, Ryan and Deci (2000) and Lim and Wang (2009) have highlighted that parents who demonstrate autonomy support display a comprehension of children's perspectives and situations. These other-concern behaviors in parent-child interactions provides an environment that facilitates children's cognitive empathy development. Moreover, children who are satisfied with autonomy need and free opinion expression may increase their positive feelings and sense of well-being. As a result, they may be more open to respond to others' needs and attempt to understand others' psychological points of view, which may promotes their empathic development (Gagné, 2003; Ryan & Deci, 2000). Second, attachment theory

underlines that sensitive and supportive caregiving is important for children's socio-emotional skills development (Sroufe, 2005). Based on the attachment theory, supportive parents provide a secure and free environment that cultivates children's self-representation. Thus, children's interpersonal and empathic skills might be developed in such a positive family environment (e.g. Bowlby, 1980; Hoffman, 2001). On the other hand, when autonomy was threatened, such as being raised under psychological control parenting, children were more likely to experience anxious feelings and negative emotions. Therefore, they may be preoccupied with their own difficulties, which could lead to failure in developing other-concerned socialization (Assor, Kaplan, & Roth, 2002; Deci & Ryan, 2000).

Strengths, Limitations, and Future Research

This study contributed to the extant literature on parenting and bullying in several areas. First, the present study investigated the relationship between parental practices, adolescents' empathy, and their bullying behaviors all together by using SEM statistical analysis technique. Specifically, compared with previous studies which mainly focused on parental *styles*, the present study has investigated the parental *practices* in three main components: parental warmth, parental autonomy support and parental psychological control. All three parental practices were supported to be significantly related to adolescents' bullying behaviors through their empathic skills. Second, to examine the different roles of mother and father in children's social emotional development, we examined separated models for paternal and maternal. The results showed that maternal and paternal parentings were associated differently to empathy, which, in turn, was related to bullying. Third, to study the mediation effect of empathy in the relationship between

parental practices and adolescent's bullying behavior, we distinguished the empathy into two critical components: cognitive empathy and affective empathy. Findings suggested that different parental practices were linked to different forms of empathy. In turn, both forms of empathy were positively associated with bullying. Finally, we studied Chinese adolescents into account to fill the gap of culture differences.

There are several limitations in this study. First, this study was solely based on single-informant approach, *self-reports*. Using only self-reports may inflate social desirability bias which may overestimate responders' empathic skills and underestimate their bullying behaviors in integrity manner that will be viewed favorably by others. Therefore, future research might want to include more than one informant, (e.g., parents, peers, or teachers). Especially regarding the measure(s) of bullying behaviors, adding peer-nominations may be helpful to optimize the accuracy of detecting the incidents.

Second, due to a single-time-point study, we cannot claim causal implications. Even though the results exhibited by SEM allow the researcher to determine the path direction of the three factors, the cross-sectional design constrains us from reaching a conclusion about a cause and effect relationships between parental practices, empathy, and adolescent bullying. Future research could conduct longitudinal studies to further explore if there is a causal effect relationship among parental practices, empathy, and bullying.

Third, although this study has separated father and mother to examine the hypothesized model, the social expectation of gender role may be associated with parenting practices and how children perceived the parenting (e.g. Anderson & Hamilton, 2005; Bond, Thompson, Galinsky, & Protas, 2003). For example, many studies have been concentrated on mother's

role in nurturing children, indicating the expected social role for mother. It will be interested in investigating how the social expectation of gender role, especially regarding a cultural factor (in this case, Chinese culture) could be related to parenting practices and children's emotional development in future studies.

Finally, we have only addressed parental variables and empathic skills to explain school bullying phenomenon, which may lack of comprehensive explanation for bullying development. A future study might want to add relative variables from schools or community settings such as roles of peers and teachers in school bullying. Furthermore, personal characteristics such as self-esteem or personality traits may be interesting to be pursued to see how they may be related with bullying behaviors.

Implications

In the present study, we have demonstrated the mediational role of empathy in the relationship between parental practices and bullying behaviors. Results of the present study offer important implications for reductions of bullying. Specifically given that parents play important roles in children's social emotional development, such as empathy, which, in turn, was related to less adolescents' bullying behaviors; it is necessary to create an effective school-family partnership to promote children's empathy skills, which, in turn, help to reduce bullying behaviors. In order to promote their children's well-being and prevent their children from bullying behaviors, parents need relevant skills and knowledge to help them. Social emotional learning (SEL) programs have been found to efficiently decrease bullying perpetration through coordinating with family, school, and community (Farmer, Lane, Lee, Hamm, & Lambert, 2012; Rose & Monda-Amaya, 2012) through providing valid skills,

attitude and behaviors to children and youth. For example, SEL programs help children understand and manage their emotions, feel and display empathy to others, and develop positive interpersonal relationships (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). As a result, sharing SEL strategies and activities with parents would be a proficient/practical approach to develop children's empathy skills, and prevent bullying behavior. Educators and administrators could send an information letter or email newsletters to parents, and post resources on school website. Furthermore, parents could be helpful in preventing and intervening with children's bullying behaviors through improving their parental behaviors, such as increasing family cohesion, reducing parent-child conflicts, developing affectionate caregiving, establishing good communication, as well as facilitating autonomy and avoid psychological control. In turn, children may benefit from parents' positive parenting by improving their feelings towards others, developing their empathic skills, and engaging more in prosocial behaviors (Krevans & Gibbs, 1996).

Regarding the important role of empathy found from the present study, both cognitive empathy and affective empathy are important elements to reduce bullying. Children should be trained to identify others' emotions, and experience others' feelings through problem-solving games, experience sharing, group discussion, role-playing and bullying prevention programs, such as Promoting Alternative Thinking Strategies (PATHS; Conduct Problems Prevention Workgroup, 1999), collaborating with parents. The school policy on preventing students from bullying may need to involve parents to create a safe and caring learning environment together.

Conclusion

Bullying at school is recognized as a global phenomenon and has serious impacts on students' well-being. This study contributed to the extant literature by investigating the relationship between parenting practices, empathy, and bullying in the Chinese culture, which provided researchers with a broader perspective of understanding children's bullying behaviors. In addition, this study highlighted the important role of parenting in adolescence and how the parenting was related to adolescents' bullying behavior mediated by adolescents' empathic skills. Even though adolescents often pursue independence and autonomy, the parent-child relationship remains very important. Parents still play significant roles in children's social-emotional development such as empathy. We have considered gender differences in parental practices (i.e., maternal vs. paternal) in relation to bullying behaviors. In addition, we took two different components (i.e., cognitive and affective) of empathy into account to assess the association between parenting and bullying. Understanding how parental practices are linked to adolescents' bullying behaviors could be helpful to empower parents to take part in prevention and intervention programs which could protect their children from bullying involvement.

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Appendix A: Child Report of Parent Behavior Inventory (CRPBI)

Instructions: Please answer the following questions about your mother and father while you were growing up. If you did not have any contact with one of your parents (for example, your father), but another parent of the same sex lived with you (for example, your stepfather), please answer the questions about this other adult.

If you did not have any contact with one of your parents, and no other adult of the same sex lived with you, please leave the questions about this parent blank.

Using the scale bellow, please indicate the extent to which you agree with each of the statements regarding your mother and father's behaviors.

Not like him/her 1	2	3	Somewhat like him/her 4	5	6	A lot like him/her 7
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WHEN I WAS GROWING UP ...

1. My parents make me feel better after talking over my worries with her.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
2. My parents often smiles at me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
3. My parents can make me feel better when I am upset.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
4. My parents like doing things together with me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
5. My parents cheer me up when I am sad.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
6. My parents give me a lot of care and attention.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
7. My parents make me feel like the most important in her/his life.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
8. My parents believe in showing her/his love me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
9. My parents often praise me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
10. My parents are easy to talk to.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7

Appendix B: Perceived Parental Autonomy Support Scale (P-PASS)

Please answer the following questions about your mother and father while you were growing up. If you did not have any contact with one of your parents (for example, your father), but another parent of the same sex lived with you (for example, your stepfather), please answer the questions about this other adult.

If you did not have any contact with one of your parents, and no other adult of the same sex lived with you, please leave the questions about this parent blank.

Using the scale bellow, please indicate the extent to which you agree with each of the statements regarding your mother and father's behaviors.

Do not agree at all 1	Hardly agree 2	Slightly agree 3	Somewhat agree 4	agree 5	Strongly agree 6	Very strongly agree 7
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WHEN I WAS GROWING UP ...

1. My parents gave me many opportunities to make my own decisions about what I was doing.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
2. When my parents asked me to do something, they explained why they wanted me to do it.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7
3. My point of view was very important to my parents when they made important decisions concerning me.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7
4. My parents encouraged me to be myself.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
5. Within certain limits, my parents allowed me the freedom to choose my own activities.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7
6. When I was not allowed to do something, I usually knew why.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
7. My parents were able to put themselves in my shoes and understand my feelings.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
8. My parents hoped that I would make choices that corresponded to my interests and preferences regardless of what theirs were.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7
9. My parents were open to my thoughts and feelings even when they were different from theirs.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7
10. My parents made sure that I understood why they forbid certain things.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
11. When I asked why I had to do, or not do, something, my parents gave me good reasons.	Mother	1	2	3	4	5	6	7	Father*	1	2	3	4	5	6	7
12. My parents listened to my opinion and point of view when I disagreed with them.	Father*	1	2	3	4	5	6	7	Mother	1	2	3	4	5	6	7

Appendix C: Psychological Control Scale-Youth Self-Report (PCS-YSR)

Instructions: Please answer the following questions about your mother and father while you were growing up. If you did not have any contact with one of your parents (for example, your father), but another parent of the same sex lived with you (for example, your stepfather), please answer the questions about this other adult.

If you did not have any contact with one of your parents, and no other adult of the same sex lived with you, please leave the questions about this parent blank.

Using the scale bellow, please indicate the extent to which you agree with each of the statements regarding your mother and father's behaviors.

Not like him/her			Somewhat like him/her			A lot like him/her	
1	2	3	4	5	6	7	

WHEN I WAS GROWING UP ...

1. My parents change the subject, whenever I have something to say.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
2. My parents finish my sentences whenever I talk.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
3. My parents often interrupt me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
4. My parents act like she (he) knows what I'm thinking or feeling.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
5. My parents would like to be able to tell me how to feel or think about things all the time.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
6. My parents are always trying to change how I feel or think about things.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
7. My parents blame me for other family members' problems	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
8. My parents bring up my past mistakes when she (he) criticizes me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
9. My parents tell me that I am not a loyal or good member of the family.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
10. My parents tell me of all the things she (he) had done for me.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
11. My parents say, if I really cared for her (him), I would not do things that cause her (him) to worry	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7

12. My parents are less friendly with me, if I do not see things in her (his) way.	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
13. My parents will avoid looking at me when I have disappointed her (him).	Mother	1	2	3	4	5	6	7
	Father*	1	2	3	4	5	6	7
14. If I have hurt her (his) feelings, he/she stops talking to me until I please her (him) again.	Mother	1	2	3	4	5	6	7
	Father*		1	2	3	4	5	67
15. My parents often change his (her) moods when with me.	Mother	1	2	3	4	5	6	7
	Father*		1	2	3	4	5	67
16. My parents go back and forth between being warm and critical toward me.	Mother	1	2	3	4	5	6	7
	Father*		1	2	3	4	5	67

Appendix D: Interpersonal Reactivity Index

Introduction: The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

Does not describe me well A	B	C	D	Describes me very well E
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1. I often have tender, concerned feelings for people less fortunate than me.	A	B	C	D	E
2. I sometimes find it difficult to see things from the "other guy's" point of view.	A	B	C	D	E
3. Sometimes I don't feel very sorry for other people when they are having problems.	A	B	C	D	E
4. I try to look at everybody's side of a disagreement before I make a decision.	A	B	C	D	E
5. When I see someone being taken advantage of, I feel kind of protective towards them.	A	B	C	D	E
6. I sometimes try to understand my friends better by imagining how things look from their perspective.	A	B	C	D	E
7. Other people's misfortunes do not usually disturb me a great deal.	A	B	C	D	E
8. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.	A	B	C	D	E
9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.	A	B	C	D	E
10. I am often quite touched by things that I see happen.	A	B	C	D	E
11. I believe that there are two sides to every question and try to look at them both.	A	B	C	D	E
12. I would describe myself as a pretty soft-hearted person.	A	B	C	D	E
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.	A	B	C	D	E
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.	A	B	C	D	E

Appendix E: Bullying Behaviors Questionnaire

Instructions: We want to know about bullying in your school, and we want to know what you think. The questions below ask about your experience with bullying at school. This is a chance for students to give us some honest feedback about what things are like at school. Remember that your answers are confidential.

There are lots of different ways to define bullying, but in general, a bully **wants** to hurt the other person (it's not an accident), and does so unfairly (the bully has some advantage over the victim).

Most people think of bullying when someone hits, pushes, shoves, kicks, spits or beats up on others. You can also bully by damaging or stealing other people's property. Bullying can be verbal, including such things as name-calling, mocking others, hurtful teasing, humiliating someone, threatening someone, making people do things they don't want to do and things like that. Some people bully by excluding others from the group, by gossiping about them, setting them up to look foolish, spreading rumors about them, or making sure that others don't associate with the person. When you are answering the questions, remember that bullying can take many different forms.

Please indicate your answer **by circling the number of the answer that suits you best.**

		Not at all	Only a few times this year	Every month	Every week	Many times a week
1. How often have you taken part in bullying or harassing another student?		1	2	3	4	5
a	How often have you taken part in physically bullying others by hitting, kicking, shoving, etc.?	1	2	3	4	5
b	How often have you taken part in verbally bullying others by insults, put downs, or threats?	1	2	3	4	5
c	How often have you taken part in bullying others by exclusion, rumors, or making someone look bad?	1	2	3	4	5
d	How often have you taken part in cyberbullying others at school (using computer or text messages to exclude, threaten or humiliate)?	1	2	3	4	5
e	How often have you taken part in cyberbullying others outside school (using computer or text messages to exclude, threaten or humiliate)?	1	2	3	4	5