

The Role of Peer Preference and Friendship in the Development of Bullying and Peer
Victimization in Children

by

Rui Mary Jia

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in

The Faculty of Graduate and Postdoctoral Studies
(Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA
(Vancouver)

August 2014

© Rui Mary Jia, 2014

Abstract

Past literature shows that having behavioural problems, being disliked by peers (low peer preference), and being without friends (friendlessness) are all factors that place children at high risk for peer victimization and bullying. However, few studies have examined the unique contributions of peer preference and friendship to bullying and peer victimization as well as how bullying behaviours develop in children with behavioural problems. Thus, the specific roles of high peer preference and friendship in protecting against being victimized by peers and bullying peers, especially in children with behavioural problems, remain largely unknown. The present study investigated the relationship between behavioural problems and various peer problems in school-aged children, specifically how internalizing and externalizing behaviours lead to and interact with low peer preference and friendlessness to increase risk for bullying and peer victimization. The sample consisted of 24 children with Attention-Deficit Hyperactivity Disorder and 113 typically developing children who were previously unacquainted and attending a 2-week summer camp program. Behavioural problems, low peer preference and friendship, and bullying and peer victimization were measured before the summer program, at the end of the first week of camp, and at the end of the second week of camp, respectively. Results indicated that: (a) peer preference is an important mediator in the relationship between behavioural problems and bullying; (b) both peer preference and friendship can protect against bullying and peer victimization in children with behavioural problems; and (c) significant gender differences exist such that friendship and high peer preference were predominantly found to be protective factors in boys, but not girls.

Preface

This thesis is submitted in partial fulfillment of the requirements for University of British Columbia's Master of Arts Degree in Psychology. It contains work done from September, 2012 to August, 2014. My supervisor on the project has been Amori Mikami, the Peer Relationships in Childhood Laboratory. The identification and design of the research program as well as the writing of this thesis has been made solely by the author. Some of the text is based on the research of others, and I have done my best to provide references to these sources. The data used in the analysis for this study was collected as part of a larger treatment study which was approved by the Institutional Review Board for Social and Behavioural Sciences of the University of Virginia (protocol number: 2010-0066-00). This study was approved by the Behavioural Research Ethics Board of the University of British Columbia (approval certificate number: H14-00363).

Table of Contents

Abstract	ii
Preface	iii
Table of Contents	iv
List of Tables	v
List of Figures	vi
Acknowledgements	vii
Introduction	1
Types of Peer Problems.....	1
Low peer preference.	2
Friendlessness.....	2
Peer victimization.....	2
Bullying.	3
Assessment of peer problems in classrooms.	3
Relationships between Peer Problems.....	4
Low peer preference and peer victimization.	4
Low peer preference and bullying.	5
Low peer preference and friendlessness.....	5
Friendlessness and peer victimization.	6
Peer Problems and Psychopathology	7
Externalizing behaviour and peer problems.	7
Internalizing behaviour and peer problems.	9
Specificity of pathways.	12
Attention-Deficit/Hyperactivity Disorder	13
The Present Study.....	14
Primary Hypotheses	16
Hypothesis 1.	16
Hypothesis 2.	16
Hypothesis 3.	17
Hypothesis 4.	17
Secondary Hypotheses	17
Secondary Hypothesis 1	17
Secondary Hypothesis 2	17
Exploratory Hypotheses	18
Method	19

Participants.....	19
Procedure.....	19
Measures.....	22
Externalizing behaviour (predictor).....	22
Internalizing behaviour (predictor).....	22
Peer preference (moderator/mediator).....	23
Reciprocated friendship (moderator).....	23
Bullying (outcome).....	24
Peer victimization (outcome).....	24
Data Analytic Plan	24
Selection of covariates.....	24
Hypothesis 1.....	26
Hypothesis 2.....	27
Hypothesis 3.....	27
Hypothesis 4.....	27
Secondary Hypothesis 1.....	28
Secondary Hypothesis 2.....	28
Exploratory Analyses.....	28
Results	31
Descriptive Statistics.....	31
Covariates.....	31
Hypothesis 1.....	32
Hypothesis 2.....	32
Hypothesis 3.....	33
Main effects.....	33
Part (a).....	33
Part (b).....	33
Hypothesis 4.....	34
Main effects.....	34
Part (a).....	34
Part (b).....	34
Secondary Hypothesis 1.....	35
Main effects.....	35
Part (a).....	35

Part (b).....	35
Secondary Hypothesis 2.....	36
Main effects.....	36
Part (a).....	37
Part (b).....	37
Exploratory Analysis: Alternate Pathways.....	37
Externalizing behaviour and peer victimization.....	37
Internalizing behaviour and bullying.....	38
Behavioural risk and bullying.....	38
Behavioural risk and peer victimization.....	39
ADHD status and bullying.....	39
ADHD status and peer victimization.....	39
Discussion.....	41
Hypothesis 1.....	41
Hypothesis 2.....	42
Hypothesis 3.....	43
Part (a).....	43
Part (b).....	44
Hypothesis 4.....	45
Part (a).....	45
Part (b).....	45
Secondary Hypotheses.....	46
Externalizing behaviour, best friend’s peer preference, and bullying.....	46
Behaviour problems, qualities of best friends, and bullying/peer victimization.....	47
Specificity of Pathways.....	48
Sex Differences.....	49
Peer preference and bullying.....	49
Friendship and victimization.....	50
Best friend’s preference and bullying.....	51
Friendship and Peer Preference: Differing Roles.....	51
Strengths and Limitations.....	53
Clinical Implications and Future Directions.....	54
Conclusions.....	56
References.....	76

List of Tables

Table 1	Descriptive statistics	57
Table 2	Correlations between variables	58
Table 3	Interactions between predictors/moderators and sex	59
Table 4	Peer preference as mediator (bullying)	60
Table 5	Peer preference as mediator (victimization)	61
Table 6	Friendship as moderator (bullying).....	62
Table 7	Peer preference as moderator (bullying).....	64
Table 8	Probing 3-way interactions (bullying)	65
Table 9	Friendship as moderator (victimization).....	67
Table 10	Probing 3-way interactions (victimization)	68
Table 11	Peer preference as moderator (victimization)	71
Table 12	Qualities of best friend as moderator (bullying)	73
Table 13	Qualities of best friend as moderator (victimization)	75

List of Figures

Figure 1 Behavioural problems, friendship, and bullying	63
Figure 2 Behavioural problems, peer preference, and bullying.....	66
Figure 3 Behavioural problems, friendship, and victimization.....	69
Figure 4 Behavioural problems, peer preference, and victimization	72
Figure 5 Behavioural problems, best friend's peer preference, and bullying.....	74

Acknowledgements

I offer my enduring gratitude to the faculty, staff, and my fellow students at the UBC Psychology Department, who have inspired me to continue my work in this field. I owe particular thanks to Dr. Amori Mikami, whose guidance and penetrating questions taught me to think more deeply. This study was also made possible by funding from the Social Sciences and Humanities Research Council.

Introduction

The establishment of good peer relationships in childhood is important for a host of developmental outcomes, such as encouraging children's prosocial behaviour, social cognitive skills, academic achievement, and healthy emotional adjustment (Hartup, 1989; Fleming, Cook, & Stone, 2002; Deater-Deckard, 2001). Peer relationships offer children unique opportunities to acquire social skills and learn about social norms as well as provide contexts for children to fine-tune their capacities for emotional regulation and self-control (Boivin, Tremblay, Barr, & Peter, 2005). With age, children begin to spend more time with peers and the construction of the self becomes increasingly tied to peer experiences (Rubin, Bukowski, & Parker, 2007). Therefore, it is useful to examine the process through which peer relationships are established and reasons why some children are not successful in developing good relationships with their peers.

The goal of the present study is to investigate the mechanisms through and conditions under which children's internalizing and externalizing behaviours develop into different types of peer problems. In this Introduction I will first define and distinguish between different, but related peer problems. Second, I will summarize existing knowledge about the relationships between these peer problems. Third, I will review the complex interactions between children's behavioural problems, and bullying and victimization. Fourth, I will outline current gaps in knowledge on the specificity of pathways from psychopathology to peer problems. Lastly, I will explore the utility of studying these topics within a sample of children with ADHD.

Types of Peer Problems

Four common types of peer problems in school-aged children are low peer preference, friendlessness, bullying, and peer victimization (Deater-Deckard, 2001).

Low peer preference. Low peer preference is defined as being affectively liked by few peers and disliked by many peers. Low peer preference is commonly measured via sociometric peer nominations (Coie, Dodge, & Coppotelli, 1982) whereby children in a classroom are asked to nominate classroom peers whom they “like the most” (positive nominations) and whom they “like the least” (negative nominations). Sociometric peer preference scores are typically calculated by subtracting the number of negative nominations received from the number of positive nominations received, divided by the number of peers providing nominations. Using this method, approximately 11% of children have low peer preference (negative peer preference score; Sandstrom & Coie, 1999). Some researchers classify children one standard deviation below the mean in peer preference as peer rejected (Coie et al., 1982).

Friendlessness. A friendship is characterized by reciprocated attraction between two individuals and involves parity in the exchanges between them (Hartup & Stevens, 1997). Children who are friendless have few or no friendships. The most common way of assessing friendlessness is through a peer nomination method whereby children are asked to nominate their best friends in their classroom (Hymel & Asher, 1977). A reciprocated friendship is identified when the peer that a child nominated as a best friend also nominated the child in return. Using this method, approximately 22% of elementary school children have no reciprocated friendships in their classroom (Parker & Asher, 1993).

Peer victimization. Peer victimization among children is defined as “the experience of being a target of the intentional aggressive behaviour of other children, who are not siblings and not necessarily age-mates” (Hawker & Boulton, 2000). Studies, involving multiple methods, have shown that a substantial number of children are victimized by peers (Olweus, 1991; Boulton & Smith, 2011; Kumpulainen et al., 1998). Approximate prevalence rates of frequent

peer victimization, when measured via self-report, peer nomination methods, and teacher-report, are 9% (Olweus, 1991; Boulton & Underwood, 1992), 17% (Boulton & Smith, 2011), and 3.5% (Kumpulainen et al., 1998), respectively, with higher rates found in younger children (11.6%) than older children (5.4%) (Olweus, 1991).

Bullying. Bullying is defined as the repeated aggression that one or more persons inflict upon another with the goal of causing harm physically, verbally, or psychologically (Boulton & Underwood, 1992; Olweus, 1993). Bullying is marked by intentionality of the aggressor, the repetitive nature of aggressive acts towards a specific individual, and a difference in power between the aggressor and the victim, thus differentiating it from aggression in general (Dodge & Coie, 1987). However, because concepts such as intentionality and power differentials are difficult to operationalize, most studies of bullying have defined it as “aggression towards peers” (Hawker & Boulton, 2000). This same definition will be used in the present study. Bullying is a significant problem in elementary schools worldwide, with approximate prevalence rates of 15% to 25% (Wolke, Woods, Stanford, & Schulz, 2001; Nansel, Craig, Overpeck, Saluja, & Ruan, 2004), 13% (Boulton & Smith, 2011), and 3.5% (Kumpulainen et al., 1998) when measured via self-report, peer nomination methods, and teacher-report, respectively.

Assessment of peer problems in classrooms. Among elementary school aged children, peer problems are most commonly assessed in the classroom context (e.g. Ladd, Konchenderfer, & Coleman, 1997). Researchers recognize that this approach may fail to capture peer relationships that occur outside of the classroom (e.g. a child may have a best friend who goes to the same church, or a child may be victimized by peers on her soccer team). Nonetheless, the classroom is considered to be a highly important context in which to assess peer relationships because children spend a large amount of time in the classroom and interact with a consistent

peer group each day (Gifford-Smith & Brownell, 2003; Ladd, 1990). I will also take this approach to assessing peer relationships in the classroom context in the current study.

Relationships between Peer Problems

The intercorrelations between these four types of peer problems are commonly .30 to .70 with highest correlations found between low peer preference and peer victimization ($r = .70$) and lowest correlations found between low peer preference and friendlessness ($r = .30$) (Hodges & Perry, 1999; van Lier & Koot, 2012; Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999). Nonetheless, each peer problem is distinct and shows independent and additive contributions to children's subsequent maladjustment (Lopez & Dubois, 2005; Miller-Johnson, Coie, Maumary-Gremaud, Lochman, and Terry, 1999; Ladd, 2006; Bierman & Wargo, 1995). Thus, it is not only important to distinguish between different peer problems, but also to investigate the interrelationships among them.

Low peer preference and peer victimization. In general, low peer preference and peer victimization have been found to influence each other in a reciprocal fashion with peer victimization predicting low peer preference (after controlling for initial rates of peer preference) (Hodges, Boivin, Vitaro, & Bukowski, 1999; Hodges & Perry, 1999), and vice versa (after controlling for initial rates of peer victimization) (Ladd & Troop-Gordon, 2003). Indeed, children who are victimized are more likely to avoid school, appear withdrawn and shy, and have low self-esteem, all factors which can lead them to be further disliked by their peers (Olweus, 1992; Kochenderfer & Ladd, 1996). Low peer preference can then place these children at even higher risk for victimization (Ladd & Troop-Gordon, 2003; Buhs & Ladd, 2001; Buhs et al., 2006) because others are unlikely to come to their aid or to hold bullies responsible for their actions against disliked children (Terasahjo & Salmivalli, 2003).

Low peer preference and bullying. The relationship between low peer preference and bullying appear to also be reciprocal, with bullying predicting low peer preference (after controlling for initial rates of bullying) (Dodge et al., 2003), and vice versa (after controlling for initial rates of peer preference) (Warden & McKinnon, 2003; Salmivalli et al., 1996; Boulton & Smith, 2011). Indeed, children tend to dislike those who are aggressive towards peers, which can then further exacerbate bullying behaviour. Interestingly, one study found that the association between low peer preference and bullying strengthened over time and that this relationship was mediated by changes in social information processing, such as increased hypervigilance to cues of hostility and the tendency to generate aggressive response to peer problems (Dodge et al., 2003). Thus, children who are aggressive towards peers tend to be less competent at interpreting social cues and regulating emotion (Eisenberg et al., 1997; Jones et al., 1998) which may contribute to the vicious cycle between bullying behaviour and low peer preference.

Low peer preference and friendlessness. Few studies have examined the relationship between low peer preference and friendlessness (Bishop & Inderbitzen, 1995). In general, children who are low in peer preference tend to experience more difficulty making friends (Pedersen et al., 2007); this may be because peers may avoid rejected children due to their negative reputation. Nevertheless, approximately 45% of children who are low in peer preference maintain at least one reciprocated friendship (Parker & Asher 1993). However, even so, friends of children with low peer preference tend to rate these friendships to be lower in quality and these dyads tend to disagree more on friendship quality ratings (e.g. closeness and fun), indicating perhaps less mutuality in their thoughts and emotions about the friendship (Brendgen, Little, & Kappmann, 2000). Overall, it appears that children who are disliked by their classmates

are at risk to experience significant problems within friendships and, to a lesser extent, with making friends in the first place.

Friendlessness and peer victimization. Several studies have shown that friendship can be protective against peer victimization (Hodges et al., 1997; Bollmer et al., 1997; Boulton, Trueman, Chau, Whitehand, & Amatya, 1999). Indeed, friends can stand up for the individual who is being picked on, give advice regarding how to deal with future victimization, and make victims less salient targets by decreasing their time spent alone. In boys, responding to victimization by “having a friend help” versus “fighting back” has been associated with decreased victimization and stable levels of victimization, respectively (Konchenderfer and Ladd, 1996). Similarly, children without a single best friend at the beginning of the school year appear to show the greatest increases in victimization by the end of school year (Boulton et al., 1999). Thus, simply having friends could be protective against peer victimization.

However, recent research suggests that the quality of friendships and the qualities of the best friend may be more protective against victimization than the sheer quantity of friends (Hodges et al., 1997). For example, friendships that are low in “conflict” and “betrayal” can predict decreases in victimization throughout the school year (Boulton et al., 1999). Also, both internalizing and externalizing behaviours are more strongly related to victimization in children who are low on peer preference, have only a few friends, or have friends who are incapable of protecting them (e.g. physically weak) compared to those who are well-liked by peers, have many friends, or have friends who are capable of defending them (Hodges et al., 1997). Therefore, while simply having friends can protect against peer victimization (Boulton et al., 1999), having high quality friendships and friends with specific characteristics may be especially important in this regard (Hodges et al., 1997).

Peer Problems and Psychopathology

The link between problems in peer relationships and psychopathology has now been strongly established (Deater-Deckard, 2001; van Lier & Koot, 2010). In general, peer problems and psychological and behavioural maladjustment (both internalizing and externalizing behaviours) have reciprocal influences on each other, with peer problems predicting maladjustment, and vice versa (Schwartz et al., 1999; Deater-Deckard, 2001; Ladd, 2006; Ladd & Troop-Gordon, 2003).

Externalizing behaviour and peer problems. Externalizing behaviour can broadly be defined as emotional difficulties manifested outwards that “are overt, disruptive, and often involve a violation of societal norms, the destruction of property, and harm towards others” (Keil & Price, 2005). Externalizing behaviour includes problematic behaviours such as hyperactivity, inattention, impulsivity, and aggression (Achenbach & Edelbrock, 1978).

Externalizing behaviours have been found to not only increase risk for bullying behaviour (Olweus, 1993; Bollmer, Milich, Harris, & Maras, 2005), but have also been strongly linked to other peer problems (van Lier & Koot, 2010; Ladd & Troop-Gordon, 2003; Pedersen et al., 2007). The relationship between externalizing behaviours and low peer preference is especially strong (e.g. found within previously unacquainted play groups; Coie & Kupersmidt, 1983; Dodge, 1985; Leadbeater & Hoglund, 2009) and appears to operate transactionally, with baseline externalizing behaviour predicting low peer preference which then independently predicts increases in externalizing behaviour (after accounting for baseline externalizing behaviour; Ladd, 2006; Ladd & Troop-Gordon, 2003). In general, bullying behaviour (Olweus, 1993) and low peer preference (Leadbeater & Hoglund, 2009) show the strongest associations to externalizing behaviour.

No study (to my knowledge) has directly investigated low peer preference as a mediator of the relationship between externalizing behaviour and bullying. However, because externalizing behaviour has been shown to predict bullying (Olweus, 1993) as well as low peer preference (Leadbeater & Hoglund, 2009) and low peer preference has been shown to predict bullying (Dodge et al., 2003), there is indirect evidence to suggest that low peer preference may serve as a mediator. Indeed, several investigators have also suggested the existence of this pathway by pointing out that low peer preference can antagonize already disruptive and aggressive children who often have difficulty gaining acceptance from peers; these factors, compounded by deficits in social information processing (as previously described; Dodge et al., 2003), can then motivate children with externalizing behaviour to retaliate through bullying (Dodge, 1986; Deater-Deckard, 2001).

Interestingly, there is some evidence to suggest that low peer preference can moderate the relationship between externalizing behaviour and bullying. A 5-year longitudinal study found that children who were aggressive and had low peer preference in Grade 1 were more likely to bully peers in Grade 5 than children who were aggressive and had high peer preference in Grade 1 (Dodge et al., 2003), demonstrating that acceptance from peers can protect against later bullying in children displaying high amounts of early externalizing behaviour.

There has been scant research on the role of friendship in the relationship between externalizing behaviour and bullying. However, interestingly, a study of 99 children aged 10 to 13 found that children with high externalizing behaviour and a high quality best friendship were less likely to bully others compared to those with high externalizing behaviour and a low quality best friendship (Bollmer et al., 2005). It was suggested that having a warm, caring relationship may encourage children who are at high risk to bully others to solve problems more prosocially

and to develop more negative attitudes about aggression. This finding appears to contradict the research on “deviancy training” which shows that children with high externalizing behaviour tend to befriend peers with similar behavioural profiles and social status and these friendships can then exacerbate and intensify previous conduct problems (Dishion et al., 1999; Synder et al., 2008). However, because externalizing behaviours and peer preference of the best friend were not measured in this study, it is unknown whether the results were dependent on how aggressive, oppositional, and disliked by peers the best friends were themselves. Additional measures of the characteristics of best friends are needed to clarify this relationship.

All in all, it appears that externalizing behaviour is a predictor of both low peer preference (Coie & Kupersmidt, 1983; Dodge, 1985) and bullying behaviour (Olweus, 1993). Low peer preference has been shown to precede and predict aggression towards peers (Dodge et al. 2003). There is indirect evidence to suggest that low peer preference may mediate the relationship between externalizing behaviour and bullying (Deater-Deckard, 2001). There is also some direct evidence to suggest that the relationship between externalizing behaviour and bullying can be moderated by low peer preference (Dodge et al., 2003), friendship, and quality of friendship (Bollmer et al., 2005). Therefore, the relationship between externalizing behaviour and bullying may be both mediated by low peer preference and moderated by peer preference, friendship, and the qualities of existing friendships.

Internalizing behaviour and peer problems. Internalizing behaviour can broadly be defined as emotional difficulties manifested inwards and “represent an overcontrolled and inner-directed pattern of behaviour” (Gresham & Kern, 2004; Achenbach & Edelbrock, 1978). Some examples of internalizing behaviour are social withdrawal, sadness, and anxiety. As opposed to

externalizing behaviour, which can be thought of as “disturbing” to others, internalizing behaviour is “disturbing” to the self (Algozzine, 1977).

Internalizing behaviours have not only been shown to increase risk for peer victimization (Olweus, 1993; Bollmer et al., 2005), but has also been strongly associated with low peer preference (Ladd & Troop-Gordon, 2003; Haselager et al., 2002). Internalizing behaviour and low peer preference also appear to influence each other reciprocally, with internalizing behaviour predicting subsequent low peer preference (Boivin et al., 2001; Gazelle & Ladd, 2003) which then independently predicts more internalizing behaviour (Ladd & Troop-Gordon, 2003). In general, low peer preference (Boivin, Hymel, & Hodges, 2001) and peer victimization (Olweus, 1993) appear to have the strongest associations with internalizing behaviour.

Interestingly, low peer preference has been implicated as a mediator in the relationship between internalizing behaviour and peer victimization (Hanish & Guerra, 2000). Indeed, low peer preference has been found to mediate the relationship between self-reported reticent social behaviour and peer victimization in Grade 5 children (Boivin, Hymel, & Bukowski, 1995; Boivin & Hymel, 1997) as well as the relationship between teacher-reported withdrawal and peer victimization in Grade 4 children (Hanish & Guerra, 2000). Taken together, it appears that withdrawal and reticence to make contact with others can lead children to be disliked by peers and this subsequently places them at risk for peer victimization.

Low peer preference can also act as a moderator in the relationship between internalizing behaviour and peer victimization (Hodges et al, 1997; Hodges & Perry, 1999). For example, in a sample of 173 elementary school children, low peer preference moderated the relationship between internalizing behaviour and peer victimization such that only those who were low in peer preference and high on internalizing behaviours were at an elevated risk for victimization

(Hodges & Perry, 1999). However, this study relied upon the same informants for both internalizing behaviour and low peer preference and may therefore suffer from the weakness of shared method variance. Overall, peer preference appears to be protective against peer victimization in children with high internalizing behaviour (Pelligrini, Bartini, & Brooks, 1999).

The protective function of friendship against peer victimization appears especially strong for children with internalizing behaviour (Hodges et al., 1999; Hodges et al., 1997; Boulton et al., 1999). In considering what makes friends likely to protect children with internalizing behaviour, internalizing behaviour of friends themselves may be an important factor. Given that children who are withdrawn, anxious, and reticent to make contact with others are more likely to be victimized (Hanish & Guerra, 2000), best friends who are high on internalizing behaviour may also be more likely to be picked on themselves and therefore less able to protect their friends from bullies. Interestingly, having a friend who is not socially anxious has been found to decrease risk of academic failure in children with internalizing behaviour (Tu, Erath, & Flanagan, 2012). However, no study (to my knowledge) has investigated the possible contribution of internalizing behaviour of the best friend to the relationship between internalizing behaviour and peer victimization.

Another potentially important quality of best friends in this consideration may be their own peer preference. In a study by Fox and Boulton (2006) of 449 children age 9 to 11 years, both the number of best friends and the social preference of the best friends moderated the relationship between internalizing behaviour and peer victimization such that a weaker relationship between internalizing behaviours and victimization was found for children with many, well-liked best friends. These moderators did not independently predict peer victimization, but only did so along with internalizing behaviour. Indeed, it appears that the peer

preference of the best friends is also an important contributor to the protective function of friendship. This may be because children who are well-liked by their classmates also tend to be more helpful, cooperative, and emotionally well-adjusted (Ostberg, 2003; Cillessen & Rose, 2005), making them more able to protect their friends against bullies. Taken together, it appears that the number of friends, quality of friendship, and the qualities of the best friend may serve as important moderators in the relationship between internalizing behaviour and peer victimization.

All in all, internalizing behaviour is a predictor of both low peer preference (Boivin et al., 2001) and peer victimization (Olweus, 1993). Low peer preference has been shown to not only precede and predict victimization from peers (Ladd & Troop-Grodon, 2003; Buhs & Ladd, 2001; Buhs et al., 2006), but also to mediate and moderate the relationship between internalizing behaviour and peer victimization (Hanish & Guerra, 2000; Hodges & Perry, 1999). There is some evidence to suggest that the relationship between internalizing behaviour and peer victimization can be moderated by friendship (Hodges et al., 1997), quality of friendship (Hodges et al., 1999), and qualities of the best friend (Fox & Boulton, 2006). Therefore, the relationship between internalizing behaviour and peer victimization may be mediated by low peer preference and moderated by peer preference, friendship, and the qualities of friendships.

Specificity of pathways. The predominant view in the current literature is that there are separate and specific pathways from externalizing behaviour to bullying, and from internalizing behaviour to victimization (Deater-Deckard, 2001, Bollmer et al., 2005; Olweus, 1993). However, externalizing and internalizing behaviour have been found to be highly correlated in both community (Rose, Rose, & Feldman, 1989) and clinical samples (Kazdin, Esveldt-Dawson, Unis, & Rancurello, 1983), with correlations ranging from .5 to .72 found across methods of

inquiry (Coie & Carpentieri, 1990) and at both broadband and narrowband levels of psychopathology (Weiss & Catron, 1994; Gould, Bird, and Jaramillo, 1993).

The high association between externalizing and internalizing behaviours pinpoints the need to consider the specificity of pathways from behaviour problems to bullying and victimization. Indeed, some studies have shown that externalizing behaviour predicts bullying and internalizing behaviour predicts peer victimization even when statistically controlling for internalizing behaviour and externalizing behaviour, respectively (Deater-Deckard, 2001, Bollmer et al., 2005). However, there is also evidence that externalizing behaviour predicts peer victimization (Schwartz et al., 1999). No study to my knowledge has examined whether internalizing behaviour can predict bullying. Therefore, although there is support for the existence of unique pathways from externalizing behaviour to bullying, and from internalizing behaviour to victimization, research is lacking on the specificity of these proposed pathways.

Attention-Deficit/Hyperactivity Disorder (ADHD)

ADHD, a developmental disorder with a world-wide prevalence of 5.3% in school-aged children, is characterized by pervasive and impairing symptoms of inattention, hyperactivity, and impulsivity (Polanczyk, Silva de Lima, Horta, Biederman, & Rohde, 2007). There are several reasons why the ADHD population is useful for examining the associations between psychopathology and peer problems. First, internalizing and externalizing behaviours are highly comorbid with ADHD, with rates of 40% to 54% between ADHD and other externalizing disorders (e.g. conduct disorder, oppositional defiant disorder) and 17% to 24% between ADHD and other internalizing disorders (e.g. depression, anxiety disorders) (Anderson, Williams, McGee, & Silva, 1987; Bird et al., 1988; Szatmari, Offord, & Boyle, 1989). Second, children with ADHD often experience difficulty effectively functioning with peers (Bagwell, Molina,

Pelham, & Hoza, 2001; Murray-Close et al., 2010), with large proportions being rejected by peers (82% scoring one standard deviation below mean on peer preference; Pelham & Bender, 1984) and friendless (56% have no reciprocated friendships; MTA Cooperative Group, 1999). Lastly, correlates of bullying behaviour (e.g. low self-control, conduct problems) and peer victimization (e.g. impaired social skills, low peer preference) are common in children with ADHD (Barkley, 1997; Hinshaw, 2002), placing them at high risk for both outcomes (Unnever & Cornell, 2003; Wiener & Mak, 2008). Thus, internalizing and externalizing behaviours (August et al., 1996), low peer preference and friendlessness (Hoza et al., 1995), and bullying and peer victimization (Holmberg & Hjern, 2007) are all maladjustments commonly found within ADHD samples, making this population ideal for studying the pathways between behavioural problems and peer problems.

The Present Study

The goal of the present study was to explore friendship as a moderator and low peer preference as both a mediator and moderator in the relationship between behavioural problems and bullying and peer victimization. The current study advances the literature on peer problems in several ways.

First, this study investigated the distinct, temporal contributions of low peer preference and friendship to bullying and peer victimization. This is important because previous research have shown that friendship and peer preference are distinct constructs that make unique contributions to the prediction of social and academic maladjustments (Ladd et al., 1997; Schwartz et al., 1999). Only one study (to my knowledge) has controlled for peer preference when investigating the temporal relationship between friendship and peer victimization

(Schwartz et al., 1999). Therefore, it remains largely unknown whether peer preference can predict later bullying and victimization while controlling for friendship, and vice versa.

Second, the current study investigated how the interplay between different peer problems and externalizing behaviour influenced bullying behaviour. The development of bullying behaviour has been less studied and is less conceptually clear than that of peer victimization. Bullying behaviour is generally thought to originate from the additive effects of individual characteristics (e.g. impulsivity, inattention, conduct problems) and social competences (e.g. low peer preference) (Deater-Deckard, 2001). However, there has been little empirical research on how these variables interact to lead to bullying behaviour. Understanding the development of bullying is important because bullies themselves are at high risk for later maladjustment (e.g. school failure) (Deater-Deckard, 2001).

Third, the present study investigated alternate and less studied pathways from behavioural problems to peer problems to examine the specificity of these relationships. Previous studies have conceptualized and investigated two main pathways, one from externalizing behaviour to bullying, and another from internalizing behaviour to peer victimization (Bollmer et al., 2005; Olweus, 1993). However, given the high correlation between externalizing and internalizing behaviour (Kazdin et al., 1983) and evidence suggesting that externalizing behaviour can also predict peer victimization (Schwartz et al., 1999), it may prove worthwhile to investigate whether behavioural problems in general are contributing to the concurrent development of different types of peer problems (e.g. both bullying and peer victimization).

Lastly, the present study adds to the growing literature on the importance of the characteristics of the best friend as protective factors against peer problems by investigating the internalizing and externalizing behaviours and peer preference of the best friend as moderators in

the relationship between behavioural problems and peer problems. This is especially important in clarifying the relationship between friendship and externalizing behaviour as having friends can not only encourage children with externalizing behaviour to act more prosocially (Bollmer et al, 2005), but also conversely exacerbate conduct problems through affiliation with deviant peers (Dishion et al., 1999). Further investigations into the characteristics of friends may help reconcile these contradictory findings.

Primary Hypotheses

The aim of the present study was to investigate the predictive relationship between individual characteristics (internalizing and externalizing behaviour) and the development of peer problems (friendlessness, low peer preference, bullying behaviour, and peer victimization) within a controlled environment. This study took place in the context of a 2-week summer camp, in which children were grouped into classrooms with previously unacquainted peers. This allowed for investigation into the temporal relationships between psychopathology (measured before camp) and the development of different peer problems (measured in the middle, and at the end, of camp). My first and primary goal was to investigate friendship as a moderator and peer preference as both a mediator and moderator within two pathways from behavioural problems to bullying and peer victimization. There were four primary hypotheses.

Hypothesis 1. Externalizing behaviour would predict bullying behaviour and this relationship would be mediated by low peer preference such that externalizing behaviour would predict less peer preference which would in turn predict more bullying behaviour.

Hypothesis 2. Internalizing behaviour would predict peer victimization and that this relationship would be mediated by low peer preference such that internalizing behaviour would predict less peer preference which would in turn predict more peer victimization.

Hypothesis 3. The relationship between externalizing behaviour and bullying would be moderated by peer preference and reciprocated friendship such that positive association between children's externalizing behaviour and bullying of others would be stronger among children who had (a) fewer friends or (b) low peer preference compared to children with high externalizing behaviour and who had more friends or high peer preference.

Hypothesis 4. The relationship between internalizing behaviour and peer victimization would be moderated by peer preference and reciprocated friendship such that positive association between children's internalizing behaviour and peer victimization would be stronger among children who had (a) fewer friends or (b) low peer preference compared to children with high internalizing behaviour and who had more friends or high peer preference.

Secondary Hypotheses

My second goal was to investigate qualities of best friends as moderators within these two pathways. There were two secondary hypotheses.

Secondary Hypothesis 1. The relationship between externalizing behaviour and bullying would be moderated by the externalizing behaviour and peer preference of the best friend such that positive association between children's externalizing behaviour and bullying would be stronger among children who had a best friend with (a) high externalizing behaviour or (b) low peer preference compared to children with high externalizing behaviour and who had a best friend with low externalizing behaviour or high peer preference.

Secondary Hypothesis 2. The relationship between internalizing behaviour and peer victimization would be moderated by the internalizing behaviour and peer preference of the best friend such that positive association between children's internalizing behaviour and peer victimization would be stronger among children who had a best friend with (a) high internalizing

behaviour or (b) low peer preference compared to children with high internalizing behaviour and who had a best friend with low internalizing behaviour or high peer preference.

Exploratory Hypotheses

My third goal was to investigate the specificity of the relationship from externalizing behaviour to bullying and internalizing behaviour to peer victimization by conducting exploratory analyses on other possible pathways (internalizing behaviour to bullying, externalizing behaviour to victimization) and by investigating ADHD status and behavioural risk (created from an average between internalizing behaviour and externalizing behaviour) as potential proxies for internalizing behaviour and externalizing behaviour within these pathways.

Method

Participants

Participants were 24 children with ADHD (13 boys, 11 girls) and 113 TD children (53 boys, 60 girls). All participants were 6.8–9.8 years old and had completed the Grade 1, 2, or 3. Children were 81% White, 6% Asian American, 3% African American, 2% Latino, and 8% were more than one ethnicity. TD children and children with ADHD did not differ in demographics (age, sex, ethnicity, family income; see Mikami et al., 2013).

Procedure

For full details about participant selection and study procedures, see Mikami et al. (2013). Children were recruited through advertisements, family events, and schools; children with ADHD were also recruited through clinical sources. Parents and teachers of children provided consent to study procedures, which were approved by the institutional review board.

To be eligible for the study, children with ADHD needed to have significant symptoms of inattention or hyperactivity/impulsivity (Child Symptom Inventory; CSI; Gadow & Sprafkin, 1994) and high peer impairment (Teacher-Peer Social Skills Questionnaire; TPRS; Dishion & Kavanagh, 2003) as reported by parents and teachers, as well as to meet diagnostic criteria for ADHD on a semi-structured interview administered to the parents (Kiddie Schedule for Affective Disorders and Schizophrenia; KSADS; Kaufman et al, 1997). Psychotropic medication use and the presence of comorbid conditions of Oppositional Defiant Disorder, Conduct Disorder, depressive disorders and anxiety disorders were not exclusionary criteria for children with ADHD. TD children needed to have few symptoms of inattention or hyperactivity/impulsivity (CSI) and low peer impairment (TPRS) as reported by parents and teachers, as well as to not meet diagnostic criteria for any disorder on the parent interview

(KSADS). Both ADHD and TD children needed to have a Full Scale IQ of at least 80 on the Wechsler Abbreviated Scale of Intelligence (Wechsler, 1999).

For children who met study inclusion criteria, parents also completed the Child Behaviour Checklist (CBCL; Achenbach & Rescorla, 2001) which includes several scales about their child's internalizing and externalizing behaviour. Children's regular school teachers were mailed the Teacher's Report Form to obtain teacher ratings of many of the same problems rated on the CBCL, which they completed and returned by mail.

Participating children were then enrolled in a summer program where they were grouped into 16 classrooms. Classrooms had an average of 3.0 children with ADHD ($SD = 0.52$) mixed with 7.1 TD children ($SD = 1.00$), to yield 10.1 total children ($SD = 0.93$). Within each classroom, all children were the same sex, within a 1 year age span, and attended different regular schools so as to minimize previous interactions. Each classroom was led by two summer program teachers ($n = 32$ in total). All were teacher education students; twenty were pursuing a credential in elementary education, six in special education, five in secondary education, and one in speech pathology. The summer program was conducted on weekdays from 9 a.m. to 3 p.m. Children remained with their classroom peers during the entire program and engaged in class, art, music/drama, physical education periods, and recess/lunch breaks.. Children did not interact with peers from other classrooms.

The summer program consisted of two back-to-back sessions of 2 weeks each. The sample of 24 children with ADHD attended both Session 1 and Session 2 and therefore was in the study for 4 consecutive weeks in total. However, even though the children with ADHD attended both sessions, they switched classrooms in between Session 1 and Session 2 so that they were with all new, previously-unacquainted peers and teachers in each session. TD children

attended either one session or the other (but not both), and therefore participated during either the first 2 weeks (Session 1) or the second 2 weeks (Session 2) of the study. Of the sample of 113 TD children, 61 attended Session 1 and 52 attended Session 2, with no overlap between TD children in each session.

Peer preference, reciprocated friendship, bullying, and peer victimization were measured throughout camp on an identical schedule in Session 1 and in Session 2. Specifically, a peer sociometric procedure (Coie et al., 1982) was administered to children at the end of the first day, at the end of the first week, and at the end of the second week of each session. Research assistants conducted individual interviews with each child whereby children made unlimited nominations of peers whom they liked, disliked, were friends with, bullied others, and were victimized by peers. We note that for friendship nominations, children were asked to rank them based on preference (beginning with the peer whom they considered to be the very best friend, then the peer whom they considered to be the second best friend, and so on until they had ranked all of the peers whom they nominated as friends). To aid recall during the sociometric procedure, children were provided with the pictures and names of classmates.

Of note, the analyses in the current study took place in the context of a larger investigation testing the efficacy of classroom interventions in improving behavioural problems and peer relationships in children with ADHD. Summer program classrooms were randomly assigned to one of two behavioural interventions: Contingency Management Training (COMET) and Making Socially Accepting Inclusive Classrooms (MOSAIC). As well, participants were administered other measures pertaining to evaluation of intervention efficacy. These interventions are described in Mikami et al. (2013).

Measures

Externalizing behaviour (predictor). Scores from the “Attention Problems” and “Rule-Breaking Behaviour” subscales of both the Teacher Report Form (TRF) and Child Behaviour Checklist (CBCL) (Achenbach & Rescorla, 2001), measured before camp, were averaged to create teacher-reported and parent-reported externalizing behaviour scores, respectively. The “Aggressive Behaviour” subscale (which is part of the Externalizing Scale on the CBCL and TRF) was not included because it contains questions about aggression towards peers which are conceptually similar to bullying behaviour. The “Rule-Breaking Behaviour” subscale was included because it contains questions about oppositionality and aggression towards adults which does not overlap with the definition of bullying. Although the “Attention Problems” subscale is not included in the Externalizing Broadband Scale on the CBCL/TRF (Achenbach & Edelbrock, 1978), it was used in the present study because problems in attention have been conceptualized as a major component of externalizing behaviour in many other studies (e.g. Liu, 2004; Campbell, 1995). Due to the high correlation between teacher-reported and parent-reported externalizing behaviour scores ($r(132) = .73, p < .001$), they were averaged to create a single externalizing behaviour score for each child.

Internalizing behaviour (predictor). Scores from the “Anxious/Depressed” and “Withdrawn/Depressed” subscales of both the TRF and CBCL (Achenbach & Rescorla, 2001), measured before camp, were averaged to create teacher-reported and parent-reported internalizing behaviour scores, respectively. Although the “Somatic Complaints” subscale is included in the Internalizing Broadband Scale on the CBCL/TRF (Achenbach & Edelbrock, 1978), it was not included because the focus of the present study was on the impact of internalizing behaviours on peer interactions and arguably somatic complaints would not be as

noticeable by peers compared to anxious or withdrawn behaviours. Also, previous studies have shown that amongst internalizing behaviours, anxious and withdrawn behaviours are the most highly associated to peer victimization (Gazelle & Ladd, 2003). Due to the high correlation between teacher-reported and parent-reported internalizing behaviour scores ($r(132)=.51$, $p<.001$), they were averaged to create a single internalizing behaviour score for each child.

Peer preference (moderator/mediator). Peer preference proportion scores were calculated for each child by subtracting the number of disliked nominations from the number of liked nominations received and then dividing that number by the number of classroom peers providing nominations. Only end of week 1 peer preference proportion scores were used in this study because low peer preference was hypothesized to be a mediator and should therefore be measured in between measurement of the independent variables (behavioural problems) and dependent variables (bullying and victimization).

Reciprocated friendship (moderator). Peers whom the child nominated as a friend were investigated to determine if they nominated that child as a friend in return. For example, if two children nominated each other as a friend, then each would be counted to have one reciprocated friendship. A proportion score for each child was calculated by dividing the number of reciprocated friendships by the number of classroom peers. Only end of week 1 reciprocated friendship proportion scores were used in this study. While it is recommended for moderators to be measured before measurement of the independent variable (Aiken & West, 1991), it was not possible in the present study because behavioural problems were measured before camp (when children have not yet met each other). Friendship was not measured earlier in camp because time was needed for children to make friends with the previously unacquainted classroom peers.

Bullying (outcome). A proportion score for each child was calculated by dividing the number of bully nominations received by the number of classroom peers. Only end of week 2 bullying proportion scores were used in this study to help establish temporal precedence between the independent variables (behavioural problems), the mediator (peer preference), and dependent variables (bullying and peer victimization)

Peer victimization (outcome). A proportion score for each child was calculated by dividing the number of victim nominations received by the number of classroom peers. Only end of week 2 victimization proportion scores were used in this study.

Data Analytic Plan

The final dataset consisted of the data from all 113 TD children (regardless of whether they had participated in Session 1 or Session 2) and the Session 1 data from the 24 children with ADHD. Recall that all measures were administered on an identical schedule in Session 1 and Session 2 and regardless of session, all children were grouped into classrooms with previously unacquainted peers and did not interact with children and teachers in other classrooms. TD children attended either one session or the other (but not both), while the children with ADHD attended both sessions. I chose to create the final dataset in this way to maximize the number of participants and therefore the statistical power. However, I elected to use Session 1 data for the children with ADHD as opposed to the Session 2 data or an average of the data from both sessions so that the data from the children with ADHD could be better comparable to that of the TD children (all of whom were experiencing the summer program for the first time).

Selection of covariates. All primary hypotheses were tested using hierarchical multiple regressions. I first undertook steps to consider whether treatment condition and/or sex should be incorporated as covariates into models. I considered the covariate of treatment condition because

classrooms had been assigned to one of two different intervention conditions. As well, I considered the covariate of sex because boys and girls develop peer relationships differently (Deater-Deckard, 2001), differences that may be intensified given that summer program classrooms were single-sex. I was interested in determining whether behavioural problems could predict bullying and peer victimization above and beyond contributions of treatment or sex, as well as whether the relationships between predictors (behavioural problems, peer preference, friendship) and outcomes (bullying, peer victimization) might differ depending on children's sex or treatment condition.

I first investigated the main effects of treatment condition and sex on bullying and peer victimization by conducting regression analyses in which treatment condition and sex were entered together at Step 1. Then, to investigate the possibility of moderated mediation (e.g., that peer preference may mediate the relationship between behaviour problems and bullying/victimization differently depending on treatment condition or sex) and the possibility that the moderation hypotheses would differ based on treatment condition or sex, I looked at the significance of the main effects for treatment condition/sex and the interaction effects between predictors/moderators and treatment condition (externalizing behaviour and treatment condition; internalizing behaviour and treatment condition; friendship and treatment condition; peer preference and treatment condition) as well as between predictors/moderators and sex (externalizing behaviour and sex; internalizing behaviour and sex; friendship and sex; peer preference and sex) (Edwards & Lamberts, 2007). If a covariate had significant main effects on the outcome variables and if there was a consistent pattern of interactions between the covariate and predictors/moderators, then all mediation analyses described below would be conducted separately for children in MOSAIC and COMET and/or for boys and girls (Hypotheses 1 & 2)

and all moderation analyses described below would include the covariate and all interactions between the covariate and predictors/moderators (Hypotheses 3 & 4).

For Hypothesis 1, 2, 3(b), and 4(b), I also entered the covariate of reciprocated friendship and for Hypothesis 3(a) and 4(a), I also entered the covariate of peer preference. This is because I was interested in whether friendlessness and low peer preference could predict unique variance in bullying and peer victimization after accounting for each other. Indeed, previous studies of peer problems have also controlled for friendship while investigating the effects of peer preference (and vice versa), on social and academic maladjustments (Schwartz et al., 1999; Ladd et al., 1997). As found previously, reciprocated friendship and peer preference in the current study appear to be related, but distinct constructs as they were only moderately correlated ($r(132)=.29, p<.001$). Due to the empirical and conceptual differences between peer preference and friendship, they remained in the models as predictors regardless of statistical significance.

Hypothesis 1. Hypothesis 1 was first tested according to methods outlined by Baron and Kenny (1982). To test Hypothesis 1 that externalizing behaviour predicts bullying and that this relationship is mediated by low peer preference, hierarchical regression analyses were conducted. After statistical control of reciprocated friendship at Step 1, I first tested the significance of externalizing behaviour at Step 2 as a predictor of peer preference (path a). Next, I tested the significance of peer preference at Step 3 as a predictor of bullying after controlling for externalizing behaviour at Step 2 (path b). Finally, I compared the significance of externalizing behaviour in predicting bullying after controlling for friendship (path c) to the significance of externalizing behaviour in predicting bullying after controlling for friendship and peer preference (path c'). If paths a, b, and c were significant, and path c' appeared reduced in

magnitude relative to path c, then I further tested the significance of the indirect effect using bootstrapping with 5000 resamples (Preacher & Hayes, 2008).

Hypothesis 2. To test Hypothesis 2 that internalizing behaviour predicts peer victimization and that this relationship is mediated by low peer preference, procedures identical to that of Hypothesis 1 were used except internalizing behaviour replaced externalizing behaviour and peer victimization replaced bullying.

Hypothesis 3. To test Hypotheses 3(a) that the relationship between externalizing behaviour and bullying is moderated by reciprocated friendship, all predictor variables were first centered (see recommendations by Aiken and West, 1991). After statistical control of peer preference at Step 1, reciprocated friendship and externalizing behaviour were entered at Step 2 as independent variables. The cross-product between reciprocated friendship and externalizing behaviour was entered at Step 3 as an independent variable. Statistically significant interactions were probed via simple slope analyses as outlined by Aiken and West (1991).

To test Hypothesis 3(b) that the relationship between externalizing behaviour and bullying is moderated by peer preference, procedures identical to that of Hypothesis 3(a) were used except peer preference replaced reciprocated friendship and the covariate of reciprocated friendship was entered at Step 1 as a predictor.

Hypothesis 4. To test Hypothesis 4 that the relationship between internalizing behaviour and peer victimization is moderated by (a) reciprocated friendship, and (b) peer preference, procedures identical to that of Hypothesis 3(a) and 3(b) were used, respectively, except internalizing behaviour replaced externalizing behaviour and peer victimization replaced bullying.

Secondary Hypothesis 1. To test Secondary Hypothesis 1 that the relationship between externalizing behaviour and bullying is moderated by (a) the externalizing behaviour and (b) peer preference of the best friend, two sets of hierarchical regressions were conducted with procedures identical to that of Hypothesis 3(a) except the participant's reciprocated friendship was replaced by externalizing behaviour of the best friend in the first set of analyses and by peer preference of the best friend in the second set of analyses. Also, the participant's peer preference was no longer included as a covariate. The best friend was considered to be the peer whom the participant ranked highest in his or her friendship nominations, who also reciprocated the friendship nomination of the participant, regardless of how highly the peer ranked the participant as a friend in return.

Secondary Hypothesis 2. To test Secondary Hypothesis 2 that the relationship between internalizing behaviour and peer victimization is moderated by (a) the internalizing behaviour and (b) peer preference of the best friend, two sets of hierarchical regressions were conducted with procedures identical to that of Hypothesis 4(a) except that the participant's reciprocated friendship was replaced by internalizing behaviour of the best friend in the first set of analyses and by peer preference of the best friend in the second set of analyses. Again, the participant's peer preference was no longer included as a covariate.

Exploratory Analyses.

Alternate pathways. To investigate if internalizing behaviour predicts bullying and if externalizing behaviour predicts peer victimization, regression analyses were conducted. If internalizing behaviour was found to be a statistically significant predictor of bullying, mediation by peer preference was tested with procedures identical to that of Hypothesis 1 except internalizing behaviour replaced externalizing behaviour. If externalizing behaviour was found to

be a statistically significant predictor of peer victimization, mediation by peer preference was tested with procedures identical to that of Hypothesis 2 except externalizing behaviour replaced internalizing behaviour.

Regardless of statistical significance of the main effect of internalizing behaviour on bullying, the relationship between internalizing behaviour and bullying was tested for moderation by reciprocated friendship and then peer preference. Two sets of hierarchical regressions were conducted with procedures identical to that of Hypothesis 3(a) and 3(b), respectively, except internalizing behaviour replaced externalizing behaviour in both sets of analyses. Similarly, the relationship between externalizing behaviour and peer victimization was tested for moderation by reciprocated friendship and then peer preference with procedures identical to that of Hypothesis 4(a) and 4(b), respectively, except externalizing behaviour replaced internalizing behaviour in both sets of analyses.

Behavioural risk and ADHD. Because internalizing behaviour scores and externalizing behaviour scores were highly correlated with each other in the present sample ($r(135) = .77; p < .001$), they were averaged to create behavioural risk scores. This predictor was used in exploratory analyses to further explore the specificity of the two proposed pathways. To investigate whether behavioural risk and ADHD status could serve as representative proxies of internalizing behaviour and externalizing behaviour, bullying and peer victimization were regressed on behavioural risk and then ADHD status. All statistically significant regressions were tested for mediation by peer preference with procedures identical to that of Hypothesis 1 and 2 except both externalizing behaviour and internalizing behaviour were replaced by behavioural risk and then ADHD status.

All regressions were tested for moderation by friendship and peer preference using procedures identical to that of Hypothesis 3(a), 3(b), 4(a), and 4(b) except both externalizing behaviour and internalizing behaviour were replaced by behavioural risk and then ADHD status.

Results

Descriptive Statistics

Table 1 presents descriptive statistics on the study variables. Correlations between predictors, moderators, and outcome variables can be found in Table 2.

Covariates

Both sex ($p = .510$) and treatment condition ($p = .813$) were not significant predictors of bullying. Sex ($\beta = -.32$, $t(134) = -4.00$, $p < .001$), but not treatment condition ($p = .523$), was a significant predictor of peer victimization. This pattern of results did not change after the addition of either peer preference or friendship into the block of predictors at Step 1.

To investigate whether there were significant interactions between predictors/moderators and treatment condition as well as between predictors/moderators and sex, treatment condition and sex were each tested for interactions with externalizing behaviour, internalizing behaviour, peer preference, and friendship in predicting bullying and then peer victimization.

Only one significant interaction (out of eight tested) was found involving treatment condition: The cross-product between treatment condition and peer preference was a significant predictor of bullying ($\beta = -.70$, $t(134) = -2.88$, $p = .005$). Simple slope analysis showed that there was a more negative relationship between peer preference and bullying in MOSAIC ($\beta = -.60$, $t(134) = -5.07$, $p < .001$) compared to COMET ($\beta = .32$, $t(134) = 1.30$, $p = .196$). Because there was no significant main effect of treatment on bullying or peer victimization and only one significant interaction between treatment condition and predictors/moderators, treatment condition was dropped from all final models.

By contrast, four significant interactions (out of eight tested) were found involving sex (Table 3). Given also the significant main effect for sex on peer victimization, all models

involving mediation were performed separately for boys and girls. For all moderation analyses, sex and the predictor (behaviour problem) were entered at Step 1. The covariate (friendship or peer preference) and the moderator were entered at Step 2. Three two-way interactions (between predictor and moderator, sex and predictor, sex and moderator) were entered at Step 3. The three-way interaction between the predictor, moderator, and sex was entered at Step 4.

Hypothesis 1

Table 4 displays findings regarding peer preference as a mediator in the relationship between externalizing behaviour and bullying. For boys, conditions for mediation were met according to Baron and Kenny steps. However, bootstrapping did not confirm these results, yielding a regression coefficient for the indirect effect of peer preference and a 95% confidence interval (CI) around the coefficient that did include zero (considered to be non-significant at the $p < .05$ level) for bullying ($\beta = 0.18$; CI = -0.05 to 0.59). For girls, conditions for mediation were not met according to Baron and Kenny steps in that path c (externalizing behaviour predicting bullying) was not significant. However, mediation can still occur in the absence of a direct X-Y effect (Zhao, Lynch, & Chen, 2010; MacKinnon, Krull, & Lockwood, 2000). Therefore, bootstrapping of the indirect effect was performed and showed that peer preference had a significant indirect effect on bullying, yielding a regression coefficient and a 95% CI around the coefficient that did not include zero (significant at the $p < .05$ level) ($\beta = 0.07$; CI = 0.01 to 0.22).

Hypothesis 2

Table 5 displays findings regarding peer preference as a mediator in the relationship between internalizing behaviour and peer victimization. Conditions for mediation were not met according to Baron and Kenny steps in that path b (peer preference predicting peer victimization controlling for internalizing behaviour) was not significant, for either boys or girls.

Hypothesis 3

Main effects. Higher externalizing behaviour and lower peer preference predicted more bullying of peers as main effects. There was no significant main effect of friendship or sex on bullying (Table 6).

Part (a). Table 6 displays results for friendship as a moderator in the relationship between externalizing behaviour and bullying. The two-way interaction between externalizing behaviour and friendship was significant such that there was a more positive relationship between externalizing behaviour and bullying at one standard deviation above the mean on friendship ($\beta = .80, t(130) = 3.21, p = .002$) compared to one standard deviation below the mean on friendship ($\beta = .40, t(130) = 3.24, p = .001$) (Figure 1). The two-way interaction between externalizing behaviour and sex was significant such that the relationship between externalizing behaviour and bullying was more positive in boys ($\beta = .60, t(130) = 3.64, p < .001$) compared to girls ($\beta = .19, t(130) = 1.19, p = .237$). Neither the two-way interaction between externalizing behaviour and friendship, nor the three-way interaction between externalizing behaviour, friendship, and sex, was significant.

Part (b). Table 7 displays results for peer preference as a moderator in the relationship between externalizing behaviour and bullying. The interactions between externalizing behaviour and peer preference, externalizing behaviour and sex, and peer preference and sex were not significant. The three-way interaction between externalizing behaviour, peer preference, and sex was significant. Therefore, the two-way interaction between externalizing behaviour and peer preference was examined separately for boys and girls (Table 8). In boys, there was a significant interaction between externalizing behaviour and peer preference such that the relationship between externalizing behaviour and bullying was more positive at one standard deviation below

the mean on peer preference ($\beta = .33$, $t(60) = 2.62$, $p = .011$) compared to one standard deviation above the mean on peer preference ($\beta = -.12$, $t(60) = -0.51$, $p = .609$) (Figure 2). In girls, the interaction between externalizing behaviour and peer preference was not significant.

Hypothesis 4

Main effects. Higher internalizing behaviour, as well as sex (male) predicted more peer victimization as main effects. There was no significant main effect of peer preference or friendship on peer victimization (Table 9).

Part (a). Table 9 displays results for friendship as a moderator in the relationship between internalizing behaviour and peer victimization. The two-way interactions between internalizing behaviour and friendship as well as between friendship and sex were not significant. The two-way interaction between internalizing behaviour and sex was significant such that the relationship between internalizing behaviour and peer victimization was more positive in boys ($\beta = .42$, $t(129) = 3.33$, $p = .001$) compared to girls ($\beta = -.00$, $t(129) = -0.01$, $p = .988$). The three-way interaction between internalizing behaviour, friendship, and sex was significant. Therefore, the two-way interaction between internalizing behaviour and friendship was examined separately for boys and girls (Table 10). In boys, the interaction between internalizing behaviour and friendship showed a trend to significance; probing indicated that the relationship between internalizing behaviour and peer victimization was more positive at one standard deviation below the mean on friendship ($\beta = .39$, $t(60) = 3.19$, $p = .002$) compared to one standard deviation above the mean on friendship ($\beta = -.21$, $t(60) = 0.55$, $p = .582$) (Figure 3). In girls, the interaction between internalizing behaviour and friendship was not significant.

Part (b). Table 11 displays results for peer preference as a moderator in the relationship between internalizing behaviour and peer victimization. The two-way interaction between

internalizing behaviour and peer preference was significant such that the relationship between internalizing behaviour and peer victimization was more positive at one standard deviation below the mean on peer preference ($\beta = .56, t(129) = 2.06, p = .041$) compared to one standard deviation above the mean on peer preference ($\beta = .32, t(129) = 5.17, p < .001$) (Figure 4). The two-way interaction between internalizing behaviour and sex was significant such that the relationship between internalizing behaviour and peer victimization was more positive in boys ($\beta = .44, t(129) = 3.93, p < .001$) compared to girls ($\beta = -.01, t(129) = -0.05, p = .964$). Neither the two-way interaction between peer preference and sex, nor the three-way interaction between internalizing behaviour, peer preference, and sex was significant.

Secondary Hypothesis 1

Main effects. Participants' higher externalizing behaviour predicted more bullying of peers as a main effect. There were no significant main effects of externalizing behaviour of the best friend, peer preference of the best friend, or sex on bullying (Table 12).

Part (a). Table 12 displays results for externalizing behaviour of the best friend as a moderator in the relationship between participants' externalizing behaviour and bullying. The two-way interactions between participants' externalizing behaviour and externalizing behaviour of the best friend as well as between sex and the externalizing behaviour of the best friend were not significant. As was found in Hypothesis 3(a), the two-way interaction between participants' externalizing behaviour and sex was significant. The three-way interaction between participants' externalizing behaviour, externalizing behaviour of the best friend, and sex was not significant.

Part (b). Table 12 displays results for peer preference of the best friend as a moderator in the relationship between externalizing behaviour and bullying. The two-way interaction between participants' externalizing behaviour and peer preference of the best friend was significant such

that the relationship between participants' externalizing behaviour and bullying was more positive at one standard deviation above the mean on peer preference of the best friend ($\beta = .98$, $t(99) = 5.26$, $p < .001$) compared to one standard deviation below the mean on peer preference of the best friend ($\beta = .51$, $t(99) = 3.99$, $p < .001$). As was found in Hypothesis 3(a), the two-way interaction between participants' externalizing behaviour and sex was significant. The two-way interaction between peer preference of the best friend and sex was also significant such that the relationship between peer preference of the best friend and the participant's bullying behaviour was more positive in boys ($\beta = .16$, $t(99) = 1.38$, $p = .171$) compared to in girls ($\beta = -.36$, $t(99) = -2.64$, $p = .010$). The three-way interaction between participants' externalizing behaviour, peer preference of the best friend, and sex was a significant predictor of bullying. Therefore, the two-way interaction between participants' externalizing behaviour and peer preference of the best friend was examined separately in boys and girls (Table 8). In boys, there was a significant interaction between participants' externalizing behaviour and peer preference of the best friend such that the relationship between participants' externalizing behaviour and bullying was more positive at one standard deviation above the mean on peer preference of the best friend ($\beta = .90$, $t(41) = 4.66$, $p < .001$) compared to one standard deviation below the mean on peer preference of the best friend ($\beta = .40$, $t(41) = 3.09$, $p = .004$) (Figure 5). In girls, the interaction between participants' externalizing behaviour and peer preference of the best friend was not significant.

Secondary Hypothesis 2

Main effects. The participant's higher internalizing behaviour as well as gender (male) predicted more peer victimization as main effects. There was no significant main effect of internalizing behaviour of the best friend or peer preference of the best friend on peer victimization (Table 13).

Part (a). Table 13 displays results for internalizing behaviour of the best friend as a moderator in the relationship between internalizing behaviour and peer victimization. The two-way interactions between participants' internalizing behaviour and internalizing behaviour of the best friend as well as between internalizing behaviour of the best friend and sex were not significant. As was found in Hypothesis 4(a), the two-way interaction between participants' internalizing behaviour and sex was significant. The three-way interaction between participants' internalizing behaviour, internalizing behaviour of the best friend, and sex was not significant.

Part (b). Table 13 displays results for peer preference of the best friend as a moderator in the relationship between internalizing behaviour and peer victimization. The two-way interactions between participants' internalizing behaviour and peer preference of the best friend as well as between peer preference of the best friend and sex were not significant. As was found in Hypothesis 4(a), the two-way interaction between participants' internalizing behaviour and sex was significant. The three-way interaction between participants' internalizing behaviour, peer preference of the best friend, and sex was not significant.

Exploratory Analysis: Alternate Pathways

Overall, results consistent with the primary hypotheses were found within alternative pathways. Identical patterns of results were found between pathways involving internalizing behaviour and behavioural risk. Similar patterns of results were found between pathways involving externalizing behaviour and ADHD status, with minor differences in analyses investigating peer preference as a moderator.

Externalizing behaviour and peer victimization. The pattern of results found for peer preference as a mediator (Table 5) and moderator (Table 11) (Figure 4) in the pathway between externalizing behaviour and peer victimization was identical to that of internalizing behaviour

and peer victimization (Hypothesis 2; Hypothesis 4 (b)). The results found for friendship as a moderator (Table 9) (Figure 3) in the pathway between externalizing behaviour and peer victimization were similar to that of internalizing behaviour and peer victimization (Hypothesis 4(a)), with the exception that, in girls (Table 10), unlike results finding no significant interaction between internalizing behaviour and friendship on peer victimization, the relationship between externalizing behaviour and peer victimization was more positive at one standard deviation above the mean on friendship ($\beta = .96$, $t(67) = 3.11$, $p = .003$) compared to one standard deviation below the mean on friendship ($\beta = .31$, $t(67) = 2.56$, $p = .013$) (Figure 3).

Internalizing behaviour and bullying. The pattern of results found for peer preference as a mediator (Table 4) and moderator (Table 7) (Figure 2) in the pathway between internalizing behaviour and bullying were identical to that of externalizing behaviour and bullying (Hypothesis 1; Hypothesis 3(b)). The results found for friendship as a moderator (Table 6) (Figure 1) in the pathway between internalizing behaviour and bullying were different from that of externalizing behaviour and bullying (Hypothesis 3(a)). Unlike results of a significant interaction between externalizing behaviour and friendship on bullying, the relationship between internalizing behaviour and bullying was not moderated by friendship (Table 6).

Behavioural risk and bullying. The pattern of results found for peer preference as a mediator (Table 4) and moderator (Table 7) (Figure 2) in the pathway between behavioural risk and bullying were identical to that of externalizing behaviour and bullying (Hypothesis 1; Hypothesis 3(b)) and of internalizing behaviour and bullying. Results found for friendship as a moderator (Table 6) (Figure 1) in the pathway between behavioural risk and bullying were identical to that of internalizing behaviour and bullying, but not of externalizing behaviour and bullying (Hypothesis 3(a)).

Behavioural risk and peer victimization. The pattern of results found for peer preference as a mediator (Table 5) and moderator (Table 11) (Figure 4) in the pathway between behavioural risk and peer victimization were identical to that of internalizing behaviour and peer victimization (Hypothesis 2; Hypothesis 4 (b)) and of externalizing behaviour and peer victimization. The results found for friendship as a moderator (Table 9) (Figure 3) in the pathway between behavioural risk and peer victimization were identical to that of internalizing behaviour and peer victimization (Hypothesis 4(a)), but not externalizing behaviour and peer victimization.

ADHD status and bullying. Results found for peer preference as mediator (Table 4) in the pathway between ADHD status and bullying were identical to that of externalizing behaviour and bullying (Hypothesis 1). Results found for peer preference as a moderator (Table 7) (Figure 2) in the pathway between ADHD status and bullying were different from that of any other pathway involving bullying in that peer preference did not moderate the pathway between ADHD status and bullying for boys (Table 8). Results found for friendship as a moderator (Table 6) (Figure 1) in the pathway between ADHD status and bullying were identical to that of externalizing behaviour and bullying (Hypothesis 3(a)), but not internalizing behaviour and bullying.

ADHD status and peer victimization. Results found for peer preference as mediator (Table 5) in the pathway between ADHD status and peer victimization were identical to that of internalizing behaviour and peer victimization (Hypothesis 2). Results found for peer preference as a moderator (Table 11) (Figure 4) in the pathway between ADHD status and peer victimization were different from that of any other pathways involving peer victimization in that peer preference did not moderate the pathway between ADHD status and peer victimization for girls (Table 10). Results found for friendship as a moderator (Table 9) (Figure 3) in the pathway

between ADHD status and peer victimization were identical to that of externalizing behaviour and peer victimization, but not internalizing behaviour and peer victimization (Hypothesis 4(a)).

Discussion

The results of the present study showed that externalizing and internalizing behaviour, measured before camp, predicted bullying of peers and peer victimization at the end of camp, respectively. For girls (but not boys), lower peer preference was found to mediate the relationship between increased externalizing behaviour and bullying; however, peer preference did not mediate the relationship between internalizing behaviour and victimization for either sex. Moderators of these relationships also existed. The positive association between externalizing behaviour and bullying was stronger for children with more friends (contrary to hypotheses), whereas the positive relationship between internalizing behaviour and victimization was stronger for children with lower peer preference (consistent with hypotheses). Other moderators existed only for boys but not girls. Specifically, the positive association between externalizing behaviour and bullying was accentuated for boys (but not girls) with lower peer preference and also for boys with a best friend with higher peer preference. As well, the positive association between internalizing behaviour and victimization was attenuated for boys (but not girls) with more friends. Exploratory analyses suggested that pathways may not be specific between externalizing behaviour and bullying or internalizing behaviour and victimization.

Peer Preference as a Mediator of the Relationship between Externalizing Behaviour and Bullying (Hypothesis 1)

Consistent with hypothesis, data supported the pathway that among girls, externalizing behaviour predicted lower peer preference, which in turn predicted more bullying of peers. There are several possible mechanisms via which this pathway may have occurred. First, although not measured in the current study, social information processing may play a role in this cycle. Aggressive children have been well-documented to possess social information processing

deficits (specifically, a tendency to make hostile attributions for peers' behaviour in ambiguous situations, and to generate aggressive responses to interpersonal problems; Dodge et al., 2003). These social information processing biases likely fuel peers' rejection; in turn, peer rejection may operate in a vicious cycle to exacerbate social information processing deficits because the child's negative expectations about peers are reaffirmed and the child is deprived of opportunities to learn social skills (Lansford, Malone, Dodge, Pettit, & Bates, 2010). Indeed, the expectation that others will be unfriendly has been found to increase risk for bullying behaviour (Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004; Nesdale & Lambert, 2007).

Another possible process may involve the negative attributional and memory biases that peers tend to display when interpreting the behaviours of rejected children, such as making internal, global, and stable attributions for their poor behaviours, attributing hostile intent to ambiguous behaviours, selectively remembering only their most unskilled performances, and in general, perceiving rejected children more negatively regardless of their actual behaviour (Hymel, Wagner, Butler, Asher, & Coie, 1990; Nangle, Erdley, & Gold, 1996). These negative biases can then lead to unfriendly and provocative behaviours (sometimes even bullying) from peers to the rejected child, which can then increase bullying from the rejected child in response. Also, given that bullying in the present study was measured via peer nominations, it may be that peers were simply more likely to interpret ambiguous actions of rejected children as bullying.

Peer Preference as a Mediator of the Relationship between Internalizing Behaviour and Peer Victimization (Hypothesis 2)

Contrary to hypothesis, data did not support the pathway that internalizing behaviour predicts lower peer preference which in turn predicts more peer victimization. The failure to replicate previous findings may be due to different samples and methods between studies.

Among the two existing studies that found evidence for peer preference as a mediator between internalizing behaviour and peer victimization (Hanish & Guerra, 2000; Boivin & Hymel, 1997), one examined this pathway within a sample drawn from neighborhoods with high rates of violent crime (Hanish & Guerra, 2000). The nature of the sample may have accentuated peers' negative views of internalizing behaviours as these behaviours may signal weakness or cowardice within highly violent communities; as well, children with low peer preference may incur higher costs to personal safety in such neighborhoods. In the second study which examined this pathway, children were acquainted for 8 months prior to the study which may have allowed them more time to notice their peers' internalizing behaviours relative to the children in the current study; there is evidence that internalizing problems may take peers more time to notice than externalizing problems (Boivin and Hymel, 1997). As well, although peer preference has been known to form quickly (in a matter of hours; Erhardt & Hinshaw, 1994), the longer period of time may have allowed children to have more stable sociometric impressions of one another.

Peer Preference and Friendship as Moderators of the Relationship between Externalizing Behaviour and Bullying (Hypothesis 3)

Part (a). Contrary to hypothesis, among children with high externalizing behaviour, having more friends predicted *more* bullying of peers. Although this result was unexpected, one potential explanation draws from findings that some friends reinforce children's bullying behaviour though active (e.g. laughing with bully at the victim) and passive (e.g. by not intervening) means (Salmivalli, 2010). Friends' encouragement of bullying may be particularly relevant for children with high externalizing behaviour. Indeed, research has documented the existence of deviancy training, a process in which aggressive youths form small, peripheral groups in which further aggressive behaviour (such as bullying) is reinforced (Farmer et al.,

2002). Although in the present sample, externalizing behaviour of the participant and best friend were not significantly correlated, the friends of children with externalizing behaviour may be likely to have positive attitudes towards aggression (e.g., thinking aggression is “cool” (Rodkin, Farmer, & Pearl, 2006) and provide positive reactions to (and ultimately, reinforcement of) children’s bullying behaviour. A further possibility is that friends may actively model the bullying behaviours of children (O’Connell, Pepler, & Craig, 1999), which may increase group cohesion (Salmivalli, 2010), but ultimately increase in-group biases (e.g. attribution of more blame and punishment to out-group; Gini, 2006) and exacerbate bullying behaviour toward outgroup members. A final methodological possibility is simply that having more friends may suggest that more people are present to observe the bullying event which can make it easier for peers to identify the perpetrator during bullying nominations.

Part (b). Consistent with hypothesis, among boys with high externalizing behaviour, lower peer preference predicted more bullying of peers. Children with high externalizing behaviour who also have low peer preference may bully others in attempt to gain perceived popularity, an indicator of social status associated with dominance, prestige, and influence (Parkhurst & Hopmeyer, 1998). Indeed, bullying is sometimes associated with increased perceived popularity (Gest, Graham-Bermann, & Hartup, 2001), especially when performed by those with low peer preference (Bruyn, Cillessen, & Wissink, 2010; Parkhurst & Hopmeyer, 1998). Alternatively, high peer preference may protect against bullying behaviour through increased emotion knowledge. Well-liked children with externalizing behaviour may have more opportunities to build positive relationships with peers which may then increase their emotion knowledge (accuracy in perceiving emotion cues in provocative situations, correct recognition and labeling of emotions, and the ability to identify causes and logical response to emotions;

Mostow, Izard, Fine, & Trentacosta, 2002) and empathy. Indeed, children who are well-liked and have high empathy are less likely to bully and more likely to defend victims than those who are disliked by peers and have low empathy (Caravita, Di Blasio, & Salmivalli, 2009).

Peer Preference and Friendship as Moderators of the Relationship between Internalizing Behaviour and Peer Victimization (Hypothesis 4)

Part (a). Consistent with hypothesis, among boys with high internalizing behaviour, having more friends predicted less peer victimization. As previously discussed, having friends may protect against victimization in children with internalizing behaviour as friends can stand up for the individual who is being picked on, give advice as to how to deal with future victimization, and help children become less salient targets by decreasing time spent alone. Another way that friendship may protect against victimization is by decreasing social information processing deficits associated with internalizing behaviour (Burgess, Wojslawowicz, Rubin, Rose-Krasnor, & Booth-LaForce, 2006), specifically self-blame attributions (Prinstein, Cheah, & Guyer, 2005). Indeed, children with high internalizing behaviour tend to display more self-blame than those with low internalizing behaviour (Prinstein et al., 2005) and self-blame (especially when displayed by those with internalizing behaviour) is associated with increased risk for peer rejection and victimization, perhaps by increasing the display of submissive behaviours (Burgess et al., 2006). Interestingly, children with internalizing behaviour are less likely to display self-blame in situations involving friends than in those with neutral peers (Burgess et al., 2006). Thus, friends may protect against peer victimization by encouraging children with internalizing behaviour to engage in healthier attributions during peer conflicts.

Part (b). Consistent with hypothesis, among children with high internalizing behaviour, lower peer preference predicted more peer victimization. This suggests that peers are less likely

to bully children with internalizing behaviour whom they like. Indeed, children with high peer preference tend to have more positive self-perceptions (Boivin & Begin, 1989), to display less self-blame and more appropriate emotional responding in peer conflicts (Prinstein et al., 2005; Kochenderfer-Ladd, 2004), and to spend more time playing with peers (Spinrad et al., 2004) than children with low peer preference, factors which can help them appear more attractive, form better impressions with peers, and practice important social skills. Also, children with high peer preference are more likely to display approach, rather than, avoidant coping strategies to deal with victimization, which is associated with less victimization in the future (Bagwell, Newcomb, & Bukowski, 1998; Sharp, 1996; Rose & Asher, 1999). Lastly, peers tend to hold positive biases about well-liked children, giving the “benefit of the doubt” for their neutral or ambiguous behaviours and sometimes interpreting even their aggressive behaviours as having positive outcomes (Peets et al., 2008). Thus, among children with internalizing behaviour, those with high peer preference may possess better social skills and higher self-esteem which can encourage peers to pay less attention and react less aversively to their behaviour problems.

Secondary Hypotheses

Contrary to hypothesis, in boys with high externalizing behaviour, having a best friend with high peer preference predicted *more* bullying of peers. The externalizing behaviour of the friend, however, was unrelated to the likelihood of bullying among children with externalizing behaviour. Neither the peer preference nor the internalizing behaviour of the friend moderated the association between the child’s internalizing behaviour and peer victimization.

Externalizing behaviour, best friend’s peer preference, and bullying. For children with externalizing behaviour, having best friends with high peer preference may decrease the negative consequences of them aggressing against, or bullying, peers. Peers may be reluctant to

fight back against bullies who have the support of well-liked friends. Also, classroom peers who observe positive relationships between children whom they like and those with high externalizing behaviour may develop less negative views of bullying as such behaviours may appear to be “sanctioned” by children with high sociometric status.

Behaviour problems, qualities of best friends, and bullying/peer victimization.

Contrary to hypotheses, internalizing behaviour and peer preference of the best friend did not influence the relationship between children’s internalizing behaviour and peer victimization. This may be because positive friendship quality is more protective against peer victimization in children with internalizing behaviour than are qualities of the best friend. For example, although well-liked children with low internalizing behaviour may be more assertive and outgoing and therefore may seem more likely and able to protect their friends from victimization, negative relationship quality factors such as lack of intimacy may instead prevent defending behaviours. Similarly, friendship quality may be more influential than the best friend’s externalizing behaviour on bullying in children with externalizing behaviour. For example, although children with low externalizing behaviour may be less impulsive and oppositional and therefore may serve as better models of appropriate conduct with peers, frequent conflicts between friends may instead decrease the quality of the relationships and increase aggressive behaviour towards peers. Indeed, even amongst children with externalizing behaviour who have aggressive friends, high friendship quality predicts decreased use of aggressive coping strategies (Bowker, Rubin, Rose-Krasnor, & Booth-LaForce, 2007).

All together, none of the four original secondary hypotheses regarding ways in which qualities of the best friend could influence the relationships between children’s behaviour problems and bullying/victimization were supported; three were nonsignificant and the fourth

operated in the direction contrary to hypotheses. One reason for this may be that friendships in the present study were somewhat atypical. Indeed, unlike findings from previous studies investigating friendship (e.g. Hodges et al., 1997; Rubin, Wojslawowicz, Rose-Krasnor, Booth-LaForce, & Burgess, 2006), friends were dissimilar in their level of behaviour problems and peer preference, limiting the number of dyads who share similar levels of risk for bullying and peer victimization. As well, best friendships were determined differently in the present study from previous studies that have found effects for qualities of friends on bullying/peer victimization (Fox & Boulton, 2006; Hodges et al., 1997) in that best friendships may not have been fully reciprocated because they were determined based on the participant's ranking of the most preferred friend and while it was required for the friend to also nominate the participant as a friend, it was not required for the friend to rank the participant as the very best friend. Finally, only 16 out of the 24 children with ADHD in the current study had at least one reciprocated friendship, excluding many children with high behaviour problems from the analyses.

Specificity of Pathways

Overall, consistent results were found for all pathways regardless of whether the predictor was externalizing behaviour, internalizing behaviour, behavioural risk, or ADHD status (dichotomous), supporting the idea that behavioural problems, in general, increase risk for both bullying and peer victimization. Consistent results were found between externalizing behaviour and ADHD status and between internalizing behaviour and behavioural risk. This may be because while ADHD status captured more of the variance of externalizing behaviour (ADHD being characterized by externalizing symptoms), behavioural risk (created by averaging externalizing and internalizing behaviour) captured equal amounts of variance from both externalizing and internalizing behaviour. The role of peer preference as a moderator differed

between pathways involving externalizing behaviour and ADHD status. Indeed, peer preference did not moderate the relationship between ADHD status and bullying as well as between ADHD status and peer victimization in boys and girls, respectively. This may be because there were only 24 children with ADHD in the sample which limited the power of the analyses.

Sex Differences

Results suggested somewhat different paths between behaviour problems and bullying/victimization for boys versus girls.

Peer preference and bullying. In the pathway between behaviour problems and bullying, peer preference acted as a mediator for girls, but as a moderator for boys. This may be because girls, in the present sample, were more likely to be both bullied and victimized and bully/victim status is a stronger predictor of low peer preference than bully or victim status alone (Veenstra, Lindenberg, Munniksmma, & Dijkstra, 2005; Toblin, Schwartz, Hopmeyer, & Abou-ezzeddine, 2005). Also, as suggested by Hanish and Guerra (2000), peers' perceptions of how deviant behaviour problems are can determine whether peer preference functions as a mediator or moderator. Behaviour problems are often viewed as more deviant in girls than boys (Fagot, 1984; Crick, 1997). This may lead more directly to dislike by peers which can then increase peer provocation and elicit bullying behaviours in return. On the other hand, in boys, behaviour problems may be judged as more normative and may not directly lead to low peer preference and thus boys would have to display both high behaviour problems and be disliked to be at risk to bully others. Lastly, unlike in boys, behaviour problems in girls did not directly predict bullying behaviour (Table 4). This may be because girls tend to be more worried about abandonment, hurting others, and loss of relationships as a result of expressing anger than boys (Blatt, Hart, Quinlan, Leadbeater, & Auerbach, 1993; Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001;

Kuperminc, Blatt, & Leadbeater, 1997) and thus may be more likely to only aggress against peers after intense provocation. Boys, on the other hand, tend to have status-oriented goals focusing on dominance (Jarvinen & Nicholls, 1997; Chung & Asher, 1996), hostility (Slaby & Guerra, 1988), and sometimes revenge (Rose & Asher, 1999) which, when compounded by behaviour problems, may lead to bullying behaviour in more direct ways.

Friendship and victimization. While friendship appeared protective for victimization in boys with behaviour problems, friendship exacerbated victimization in girls with externalizing behaviour. Because friendship predicted both bullying and peer victimization in girls with externalizing behaviour, one potential explanation for this is that interactions between girls and their friends were characterized by bullying and peer victimization within the dyad. In support of this, peer preference between the best friend and participant were significantly correlated in girls, but not boys (Table 2), demonstrating that girls with externalizing behaviour were not only likely to be disliked by peers themselves, but also to have best friends with low peer preference. As a result of being disliked, both girls with externalizing behaviour and their best friends were at higher risk for bullying behaviour. It may be that they then directed these aggressive behaviours towards each other. Meanwhile, for boys, peer preference between the child and participant were not significantly correlated, indicating that for boys who were disliked in the classroom, they likely did not have best friends with low peer preference and were perhaps not as at risk for being bullied by their friends. Indeed, in girls, but not boys, the best friend's low peer preference was correlated with both increased bullying and peer victimization in the participant.

Relative to boys, girls also tend to be more aggressive towards friends than neutral peers (Peets et al., 2008; Grotperter & Crick, 1996), to experience more distress in relational conflicts with friends (Crick, 1995; Rose & Rudolph, 2006), and to have more conflictual, fragile (e.g.

shorter in duration), and intimate friendships (Benenson & Christakos, 2003; Maccoby, 1990), all factors which can increase risk for bullying between friends (Rose, Swenson, & Waller, 2004; Murray-Close, Ostrov, & Crick, 2007). Indeed, friendships between relationally aggressive children (more likely in girls) are often characterized by high levels of relational aggression within friend dyads whereas friendships between overtly aggressive children (more likely in boys) involve more overt aggression directed outside of the dyad (Grotzinger & Crick, 1996).

Finally, as in previous studies (Bruyn, Cillessen, & Wissink, 2010; Espelage & Holt, 2001; Rose & Rudolph, 2006), very few girls were nominated as victims by peers (4.2%) which may have limited the power of the analyses.

Best friend's preference and bullying. In boys with externalizing behaviour, having a best friend with high peer preference predicted increased bullying of peers. However, in girls, regardless of behaviour problems, having a best friend with low peer preference predicted increased bullying. This may be because girls and boys tend to focus on different things when attempting to inflict interpersonal harm; while girls focus more on the manipulation of dyadic relationships, boys focus more on harm to status within the larger peer group (Rudolph, 2002). Therefore, for girls, it may be easier to bully best friends with low peer preference because such friends are likely to have low self-esteem (Boivin & Begin, 1989); whereas, for boys, having best friends with high peer preference may grant them more power to challenge other peer groups.

Friendship and Peer Preference: Differing Roles

In general, friendship appeared to have more complicated and inconsistent relationships with behaviour problems and bullying/victimization than peer preference. In children with behaviour problems, while peer preference was found to protect against both bullying and

victimization, friendship was found to encourage bullying behaviour and to protect against, but sometimes increase victimization. There are several possible explanations for these differences.

First, positive and negative features of friendships have distinct relationships with behavioural problems (Berndt & Keefe, 1990). For example, externalizing behaviours are positively related to the negative features of friendship (e.g. conflict), but unrelated to the positive features of friendship (e.g. warmth and closeness; Gillmore, Hawkins, Day, & Catalano, 1992; Blachman & Hinshaw, 2002). Therefore, positive features of friendship such as closeness, which is associated with better emotional adjustment (Ciairano, Rabaglietti, Roggero, Bonino, & Beyers, 2007), may protect against peer victimization in children with behavioural problems, while negative features of friendship such as conflict, which is associated with increased disruptive behaviour (Dishion, Spracklen, Andrews, & Patterson, 1996), may instead increase victimization. Thus, without taking into account quality of friendship, the number of friends may appear to share inconsistent relationships with bullying and victimization.

Second, the impact of friendship on bullying/victimization may differ more between boys and girls than that of peer preference, leading to inconsistent results. For example, while intimacy between girls can increase relational aggression between friends (Murray-Close et al., 2007), intimacy between boys may not be as likely to encourage aggression between friends because of boys' tendency to focus on dominance within the social group as a whole (Rudolph, 2002); instead, intimacy may increase the sense of cohesion and support between friends which can then not only encourage defending behaviour, but also aggression directed at other peer groups. Thus, similar friendship qualities may exert different influences on bullying and peer victimization depending on sex, which can further complicate the consistency of findings involving quantity of friends as a predictor.

Lastly, peer preference may have more consistently positive impacts on bullying/peer victimization than friendship because it allows for positive socialization with a diverse number of peers. In order for children to have high peer preference, they must be liked by many and disliked by few in the classroom. This implies that they were able to adapt, fit in, and build positive relationships with many different peers, indicating potentially good social skills that encouraged acceptance from the peer group at large. The quantity of friends, however, arguably provides less information on children's general social functioning. Indeed, how many friends a child has does not convey information on who these friends are (e.g. whether they reinforce and endorse aggressive behaviour) or the quality of the relationships (e.g. whether friends like and support each other). Although children with behavioural problems who have generally negative relationships with peers can often still make a few friends, such relationships may only help them foster skills that allow for positive interactions with these specific individuals. For example, a study of 300 children with ADHD found that while peer preference predicted maladjustment (e.g. delinquency, internalizing behaviours, general impairment) two years later, the quantity of reciprocated friendships was not predictive of any outcomes (Mrug et al., 2012).

Strengths and Limitations

The present study had several strengths. First, the longitudinal nature of the study allowed for a temporal investigation into how behavioural problems relate to peer preference/friendship and bullying/victimization. Second, all children in the study were previously unacquainted which provides valuable insight into how behavioural problems impact the formation of peer preference and friendship as well as the development of bullying and peer victimization. Third, this study investigated bullying behaviour from the perspective of the aggressor which provides important clues on how to prevent bullying behaviours in its

development (e.g. improving peer preference). Lastly, the specificity of relationships between different behavioural problems and bullying/victimization was investigated, showing that behavioural problems in general place children at risk for both bullying and peer victimization.

However, no study is without limitations. First, children were placed in small classrooms (approximately 10 children per class) and were heavily supervised at all times which may have decreased the occurrence of bullying and peer victimization. Second, the different inclusion and exclusion criteria for children with ADHD and TD children contributed to the creation of two distinct groups such that most children with behavioural problems displayed both internalizing and externalizing behaviour and had ADHD. Third, although the study was longitudinal, there was no random assignment of peer preference or behavioural problems which prevents inferences on the causal influences between variables. Lastly, this study was conducted using an ethnically homogenous (mostly white) and upper middle class sample. Therefore, it is unknown whether results would generalize to more diverse populations.

Clinical Implications and Future Directions

The results of the present study highlight several important clinical implications and future directions. First, it may be important for interventions targeting bullying/victimization to focus on the improvement of peer preference. However, peer preference has been challenging to improve, especially for the population of children with ADHD. Indeed, interventions focused on improving the social skills and problems behaviours of children with ADHD have shown limited success (Asher & Hymel, 1986; Moote, Smyth, Wodarski, 1999; Hoza et al., 2005).

Interventions that target social-contextual contributors to peer rejection through adult modeling of good behaviours and interpersonal skills (McDowell & Parke, 2009; Mikami, Jack, Emeh, & Stephens, 2010), improvement of parent-child (Mikami, Lerner, Griggs, McGrath, & Calhoun,

2010) and teacher-child relationships (Mikami et al., 2013), and the formation of classroom norms favouring cooperation (Mikami, Boucher, & Humphreys, 2005) have achieved more success in increasing the peer preference of disliked children in the classroom. However, whether the increased peer preference as a result of these interventions would lead to decreases in bullying/peer victimization is currently unknown and is in need of further study.

Second, more research is required on the relationship between behaviour problems, bullying/victimization, and different qualities of friendship. Further study on pathways between positive and negative features of friendship and behavioural problems (Gillmore et al., 1992) may elucidate whether it is more important to reduce negative friendship qualities (e.g. decrease conflict) or increase positive friendship qualities (e.g. foster intimacy) to decrease bullying/peer victimization. Also, it may be fruitful to investigate the generalizability of prosocial exchanges in friendships to other peer relationships. Although being well-liked may exert a wider impact on other peer relationships, friendship offers unique opportunities for interventions on bullying/victimization because even those who are rejected by peers can make friends and benefit from its protective qualities. Such investigations can be especially relevant to studies on deviancy training because it can inform how positive and negative features of relationships amongst aggressive children propagate to other peer relationships. In addition, more studies are needed that compare the relative importance of friendship quality to qualities of friends in protecting against bullying/victimization which can help identify better targets (e.g. build positive relationships or improve problem behaviours within dyad) for friendship interventions.

Lastly, further study into constructs such as perceived popularity and relational aggression may help elucidate sex differences on bullying/victimization. More research on how bullying and victimization impact other indicators of social status and whether these

relationships differ between boys and girls can help clarify the social gains of bullying behaviour. Also, social-contextual factors such as classroom context and teacher's attitudes towards popularity may serve as important moderators within these relationships. Finally, investigation of bullying within friendships, especially relational bullying in girls' friendships, may help explain gender differences on the protective function of friendship.

Conclusions

In sum, the present study showed that peer preference can be protective against both bullying behaviour and peer victimization in children with behavioural problems. However, the relationship between behavioural problems, friendship, and bullying/peer victimization may be more complicated both in terms of specificity and may differ based on sex.

Table 1*Descriptive Statistics of Study Variables*

		Mean ± Standard Deviation (minimum to maximum)		
		Full Sample (<i>N</i> = 137)	Boys (<i>N</i> = 65)	Girls (<i>N</i> = 72)
Predictors	Externalizing	54.07±5.89 (50.00 – 73.25)	53.85±5.79 (50.00 – 73.25)	54.28±6.02 (50.00 – 72.25)
	Score above clinical threshold, % ¹	10.0	10.6	13.9
	Internalizing	53.71±4.62 (50.00 – 70.50)	53.98±5.11 (50.00 – 70.50)	53.46±4.14 (50.00 – 65.00)
	Score above clinical threshold, %	6.7	9.1	5.6
	Behavioural Risk	53.89±4.95 (50.00 – 71.50)	53.92±5.11 (50.00 – 71.50)	53.87±4.84 (50.00 – 67.75)
Mediator / Moderators	Reciprocated Friendship	.17±.17 (.00 – .90)	.13±.13 (.00 – .50)	.22±.19 (.00 – .90)
	Without any friendships, %	20.0	31.8	16.7
	Peer Preference	.40±.31 (-.60 – .90)	.38±.31 (-.60 – .89)	.42±.32 (-.40 – .90)
	Negative preference score, %	11.4	9.1	11.1
	Friend's Externalizing²	53.04±4.35 (50.00 – 71.00)	52.88±4.63 (50.00 – 71.00)	53.15±4.17 (50.00 – 64.00)
	Score above clinical threshold, %	8.6	6.8	9.8
	Friend's Internalizing²	52.81±3.61 (50.00 – 67.00)	53.48±4.68 (50.00 – 67.00)	52.32±2.50 (50.00 – 60.00)
	Score above clinical threshold, %	2.9	6.8	0.0
	Friend's Preference²	.51±.28 (-.60 – .90)	.46±.32 (-.60 – .88)	.55±.24 (-.30 – .90)
	Negative preference score, %	3.8	6.7	1.6
Outcome Variables	Bullying	.04±.09 (.00 – .70)	.04±.11 (.00 – .70)	.03±.07 (.00 – .30)
	Nominated at least by one peer, %	23.9	21.2	23.6
	Victimization	.02±.06 (.00 – .30)	.04±.07 (.00 – .30)	.00±.02 (.00 – .10)
	Nominated at least by one peer, %	19.6	27.3	4.2

¹ scores of 64 or higher are considered above clinical threshold

² full sample (*N* = 105); boys (*n* = 44); girls (*n* = 61)

Table 2*Correlations between Predictors, Moderators/Mediator, and Outcome Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Externalizing	1	.73**	.87**	.96**	-.43**	-.06	.12	-.03	-.14	.28**	.26**
Boys		.76**	.88**	.95**	-.48**	.07	.07	-.10	-.12	.42**	.34**
Girls		.81**	.87**	.97**	-.39**	-.16	.16	.06	-.16	.10	.31**
2. Internalizing		1	.75**	.93**	-.41**	-.05	.08	.02	-.15	.26**	.36**
Boys			.72**	.93**	-.34**	.07	.08	-.02	-.09	.34**	.44**
Girls			.78**	.93**	-.48**	-.11	.11	.03	-.20	.09	.21
3. ADHD Status			1	.87**	-.46**	-.16	.11	.00	-.12	.29**	.26**
Boys				.86**	-.46**	-.09	.08	-.08	-.11	.46**	.31*
Girls				.87**	-.45**	-.20	.13	.10	-.12	-.02	.28*
4. Behavioural Risk				1	-.45**	-.06	-.14	.02	.23	.28**	.32**
Boys					.44**	.07	.08	-.06	-.11	.41**	.41**
Girls					-.45**	-.15	.15	.05	-.19	.10	.28*
5. Preference					1	.29**	-.14	-.05	.08	-.34**	-.17*
Boys						.18	-.07	.10	.12	-.43**	-.18
Girls						.36**	-.20	-.06	.33**	-.24*	-.19
6. Friendship						1	-.14	-.05	.08	-.03	-.03
Boys							-.19	.01	.04	-.03	.11
Girls							-.14	-.05	.05	-.01	.01
7. Friend's Externalizing							1	.66**	-.36**	-.11	.03
Boys								.65**	-.59**	-.08	.03
Girls								.76**	-.14	-.16	.05
8. Friend's Internalizing								1	-.42**	-.01	.17
Boys									-.46**	.03	.13
Girls									-.31*	-.12	.15
9. Friend's Preference									1	-.07	.00
Boys										.11	.15
Girls										-.36**	-.26*
10. Bullying										1	.12
Boys											.05
Girls											.42**
11. Victimization											1

* $p < .05$. ** $p < .01$.

Table 3*Interactions between predictors/moderators and sex*

	Cross-product (<i>N</i> = 137)			Simple Slopes					
	β	<i>t</i>	<i>p</i>	Boy (<i>n</i> = 65)			Girls (<i>n</i> = 72)		
β				<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>	
Bullying									
Externalizing Behaviour	-.34	-2.83	.005	.53	4.43	<.001	.07	0.64	.525
Peer Preference	.26	2.18	.031	-.53	-4.51	<.001	-.18	-1.64	.104
Peer Victimization									
Externalizing Behaviour	-.25	-2.21	.029	.45	3.99	<.001	.11	1.07	.288
Internalizing Behaviour	-.29	-2.96	.004	.53	5.44	<.001	.08	0.73	.468

Table 5*Peer preference as a mediator between behavioural problems and peer victimization*

	Outcome	Step	Variable Entered	Boys (n = 65)			Girls (n = 72)			Full Sample (N = 137)			
				β	t	p	β	t	p	β	t	p	
Externalizing Behaviour	Victimization	1	Friendship	.11	0.91	.367	.01	0.11	.911	.06	0.74	.464	
			Sex	-	-	-	-	-	-	-.34	-4.03	<.001	
		path c	2	Externalizing	.33	2.80	.007	.32	2.80	.007	.27	3.50	.001
	Preference	3	Preference	-.05	-0.37	.712	-.12	-0.90	.371	-.07	-0.78	.438	
		path c'			.31	2.23	.030	.28	2.28	.026	.25	2.82	.006
		1	Friendship	(see Table 4)						.00	-.01	.994	
path a	2	Externalizing	-.49	-4.55	<.001	-.35	-3.25	.002	-.41	-5.51	<.001		
Internalizing Behaviour	Victimization	1	Friendship										
			Sex	-	-	-	-	-	-				
		path c	2	Internalizing	.44	3.87	<.001	.21	1.76	.082	.34	4.52	<.001
	Preference	3	Preference	-.05	-0.43	.671	-.16	-1.09	.278	-.04	-0.43	.670	
		path c'			.42	3.43	.001	.14	1.03	.307	.33	3.92	<.001
		1	Friendship	(see Table 4)									
path a	2	Internalizing	-.36	-3.08	.003	-.45	-4.52	<.001	-.40	-5.29	<.001		
Behavioural Risk	Victimization	1	Friendship										
			Sex	-	-	-	-	-	-				
		path c	2	Risk	.41	3.55	.001	.29	2.49	.015	.32	4.21	<.001
	Preference	3	Preference	-.02	-0.15	.884	-.12	-0.85	.400	-.04	-0.40	.688	
		path c'			.40	3.05	.003	.24	1.88	.065	.31	3.57	.001
		1	Friendship	(see Table 4)									
path a	2	Risk	-.46	-4.14	<.001	-.41	-3.97	<.001	-.43	-5.82	<.001		
ADHD Status	Victimization	1	Friendship										
			Sex	-	-	-	-	-	-				
		path c	2	ADHD	.32	2.68	.009	.29	2.50	.015	.27	3.36	.001
	Preference	3	Preference	-.07	-0.54	.589	-.12	-0.88	.382	-.07	-0.82	.416	
		path c'			.29	2.12	.038	.25	1.91	.061	.24	2.66	.009
		1	Friendship	(see Table 4)									
path a	2	ADHD	-.45	-4.07	<.001	-.40	-3.80	<.001	-.42	-5.62	<.001		

Table 6

Friendship as a moderator in the relationship between behavioural problems and bullying of peers

Behaviour Problem	Step	Variable Entered	N = 137		
			β	t	p
Externalizing Behaviour	1	Sex	-.07	-0.81	.421
		Externalizing	.28	3.39	.001
	2	Preference	-.30	-3.18	.002
		Friendship	.08	0.92	.360
	3	Externalizing*Friendship	.27	2.00	.047
		Externalizing*Sex	-.32	-2.61	.010
		Friendship*Sex	.07	0.52	.602
	4	Externalizing *Friendship*Sex	-.03	-0.11	.915
Internalizing Behaviour	1	Sex	-.04	-0.51	.614
		Internalizing	.25	3.04	.003
	2	Preference	-.31	-3.34	.001
		Friendship	.08	-0.88	.382
	3	Internalizing*Friendship	.15	1.36	.175
		Internalizing*Sex	-.26	-2.48	.014
		Friendship*Sex	.05	0.29	.771
	4	Internalizing*Friendship*Sex	-.23	-1.15	.254
Behavioural Risk	1	Sex	-.06	-0.67	.505
		Risk	.28	3.45	.001
	2	Preference	-.29	-3.11	.002
		Friendship	-.08	0.88	.381
	3	Risk*Friendship	.20	1.64	.103
		Risk*Sex	-.30	-2.66	.009
		Friendship*Sex	.06	0.39	.695
	4	Risk*Friendship*Sex	-.15	-0.69	.491
ADHD Status	1	Sex	-.05	-0.55	.584
		ADHD	.29	3.47	.001
	2	Preference	-.29	-3.12	.002
		Friendship	.09	1.07	.286
	3	ADHD*Friendship	.51	3.25	.001
		ADHD*Sex	-.44	-3.93	<.001
		Friendship*Sex	.02	0.13	.901
	4	ADHD*Friendship*Sex	-.33	-1.40	.163

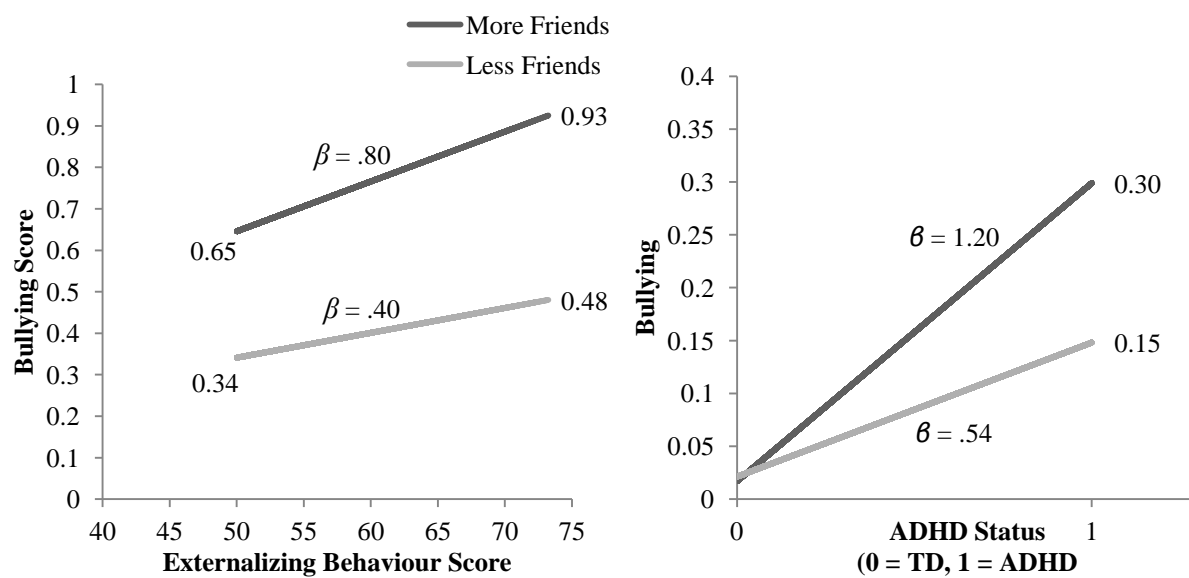


Figure 1. Effects of different behavioural problems and friendship on bullying of peers

Table 7

Peer preference as a moderator in the relationship between behavioural problems and bullying of peers

Behaviour Problem	Step	Variable Entered	<i>N</i> = 137		
			β	<i>t</i>	<i>p</i>
Externalizing Behaviour	1	Sex	See Table 6		
		Externalizing			
	2	Friendship Preference			
	3	Externalizing*Preference	-.07	-0.68	.501
		Externalizing*Sex	-.25	-1.88	.063
		Preference*Sex	.13	0.98	.331
	4	Externalizing*Preference*Sex	.37	2.60	.011
Internalizing Behaviour	1	Sex	See Table 6		
		Internalizing			
	2	Friendship Preference			
	3	Internalizing*Preference	-.26	-2.84	.005
		Internalizing*Sex	-.17	-1.49	.139
		Preference*Sex	.12	0.95	.344
	4	Internalizing*Preference*Sex	.45	4.11	<.001
Behavioural Risk	1	Sex	See Table 6		
		Risk			
	2	Friendship Preference			
	3	Risk*Preference	-.15	-1.59	.114
		Risk*Sex	-.22	-1.77	.079
		Preference*Sex	.12	0.94	.351
	4	Risk*Preference*Sex	.45	3.54	.001
ADHD Status	1	Sex	See Table 6		
		ADHD			
	2	Friendship Preference			
	3	ADHD*Preference	-.06	-0.48	.635
		ADHD*Sex	-.36	-2.81	.006
		Preference*Sex	.07	0.50	.617
	4	ADHD*Preference*Sex	.36	2.28	.024

Table 8*Probing significant three-way interactions in the prediction of bullying of peers*

	Moderator	Step	Variable Entered	Boys (<i>n</i> = 65)			Girls (<i>n</i> = 72)		
				β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Externalizing Behaviour	Preference	1	Externalizing	.42	3.73	<.001	.10	0.81	.422
		2	Friendship Preference	.00	0.02	.984	.09	0.71	.482
			Preference	-.29	-2.25	.028	-.28	-2.04	.045
	3	Externalizing* Preference	-.31	-2.09	.041	.18	1.34	.184	
	Best Friend's Preference ¹	1	Externalizing	.48	3.55	.001	.05	0.36	.721
		2	Friend's Preference	.16	1.22	.231	-.36	-2.93	.005
3		Externalizing* Friend's Preference	.38	2.75	.009	.00	-0.00	.999	
Internalizing Behaviour	Preference	1	Internalizing	.34	2.94	.005	.09	0.76	.447
		2	Friendship Preference	.02	0.16	.870	.09	0.73	.469
			Preference	-.35	-2.90	.005	-.30	-2.09	.041
		3	Internalizing* Preference	-.53	-4.36	<.001	.19	1.49	.142
Behavioural Risk	Preference	1	Risk	.41	3.62	.001	.10	0.83	.410
		2	Friendship Preference	.01	0.04	.968	.09	0.71	.481
			Preference	-.30	-2.40	.019	-.28	-2.04	.045
		3	Risk* Preference	-.45	-3.22	.002	.19	1.45	.152
ADHD Status	Preference	1	ADHD	.46	4.19	<.001	.02	0.15	.884
		2	Friendship Preference	.05	0.44	.659	.08	0.67	.506
			Preference	-.28	-2.25	.028	-.33	-2.37	.021
		2	ADHD* Preference	-.27	-1.61	.113	.28	1.66	.101

¹ Boys: *n* = 44; Girls: *n* = 61

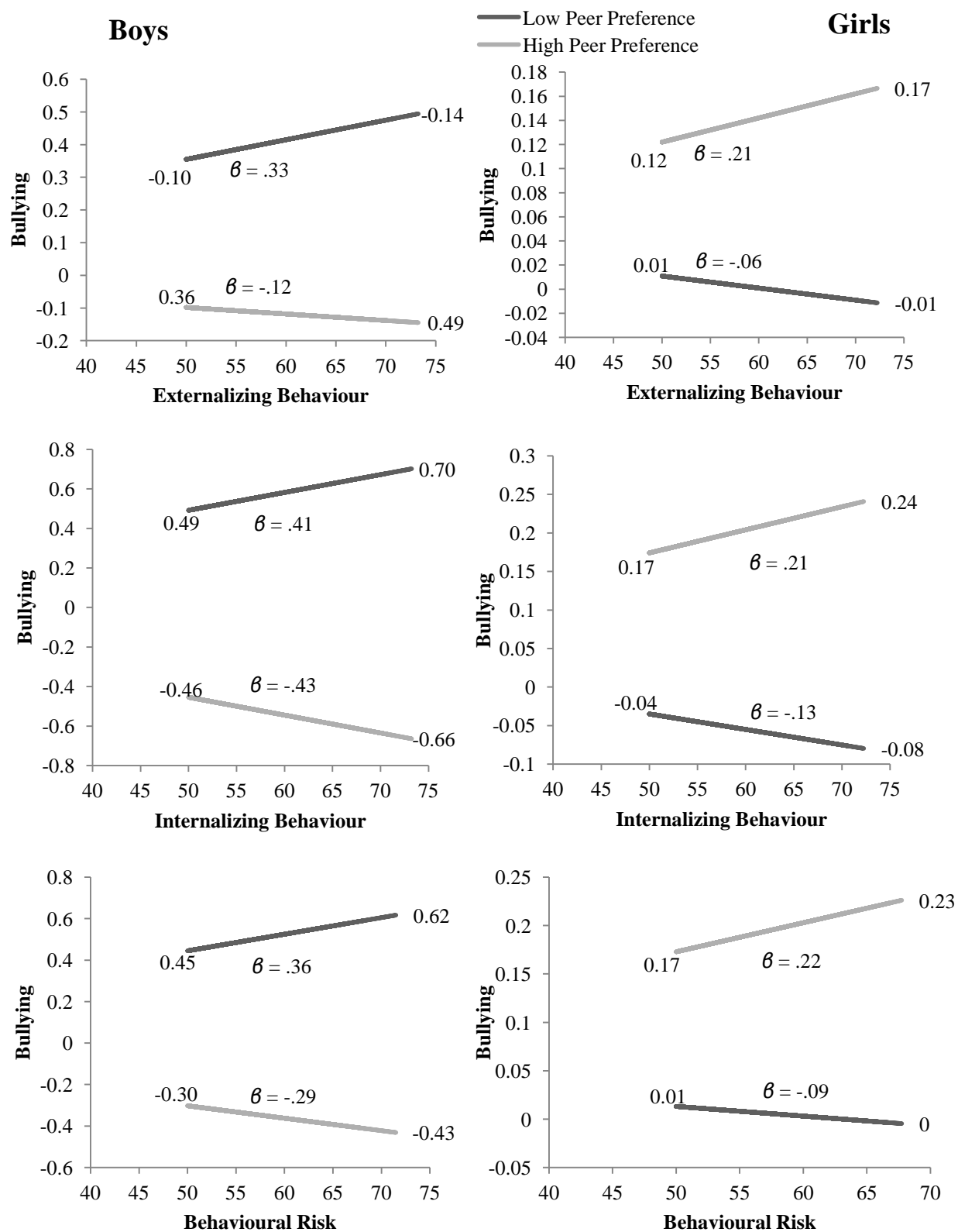


Figure 2. Effects of different behavioural problems and peer preference on bullying of peers in boys and girls

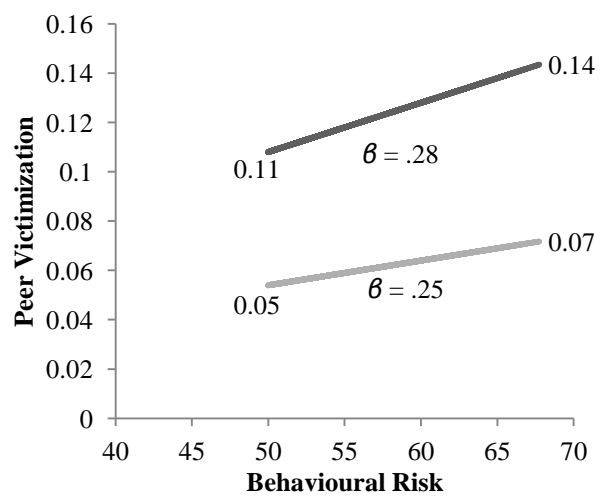
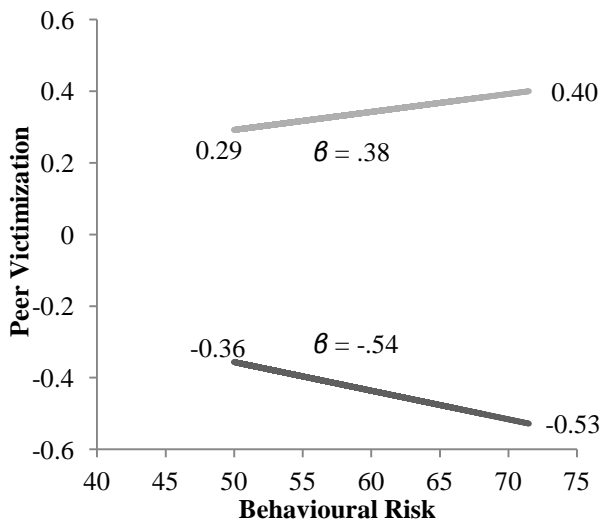
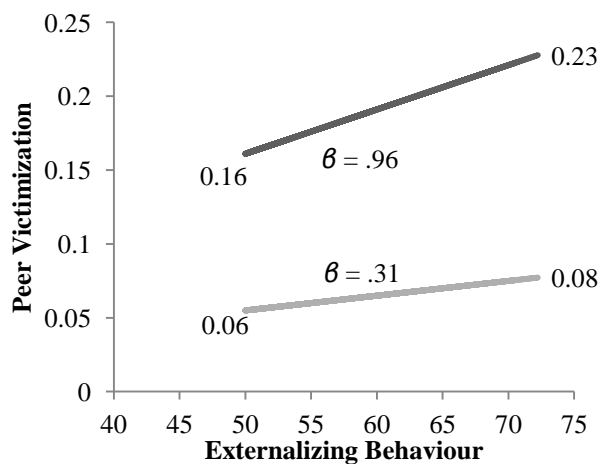
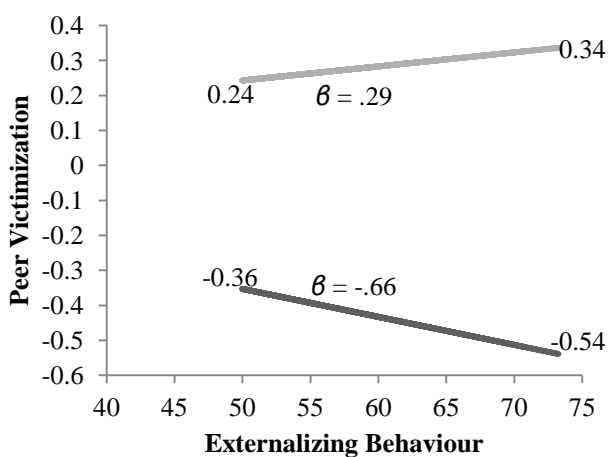
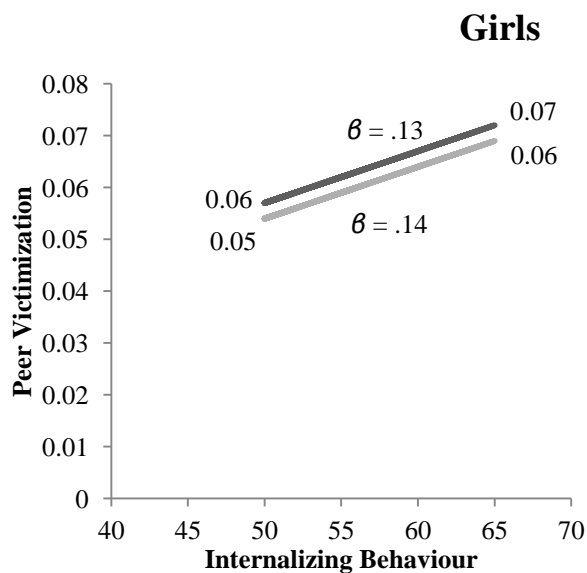
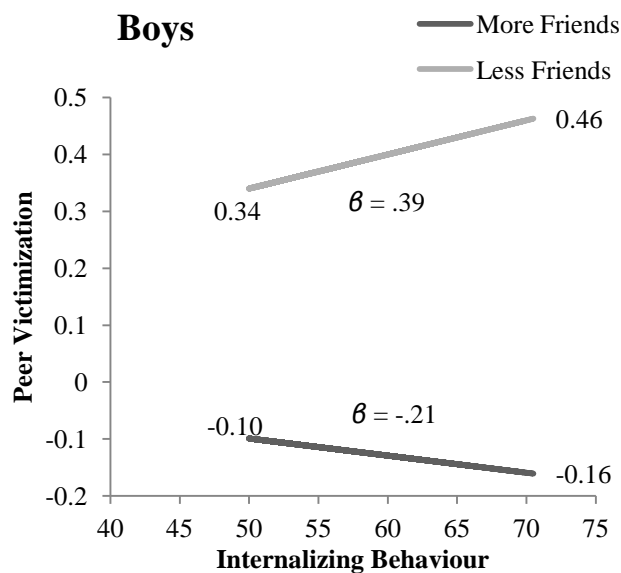
Table 9

Friendship as a moderator in the relationship between behavioural problems and peer victimization

Behaviour Problem	Step	Variable Entered	N = 137		
			β	t	p
Externalizing Behaviour	1	Sex	-.33	-4.26	<.001
		Externalizing	.27	3.44	.001
	2	Preference	-.07	-0.78	.438
		Friendship	.10	1.19	.236
	3	Externalizing*Friendship	-.18	-1.26	.211
		Externalizing *Sex	-.24	-2.10	.038
		Friendship*Sex	-.11	-0.73	.470
	4	Externalizing *Friendship*Sex	.76	3.49	.001
Internalizing Behaviour	1	Sex	-.30	-4.00	<.001
		Internalizing	.34	4.50	<.001
	2	Preference	-.04	-0.43	.670
		Friendship	.08	1.01	.312
	3	Internalizing*Friendship	-.11	-1.06	.291
		Internalizing*Sex	-.27	-2.74	.007
		Friendship*Sex	-.09	-0.60	.546
	4	Internalizing*Friendship*Sex	.40	2.12	.036
Behavioural Risk	1	Sex	-.32	-4.20	<.001
		Risk	.32	4.15	<.001
	2	Preference	-.04	-0.40	.688
		Friendship	.09	1.09	.278
	3	Risk*Friendship	-.16	-1.32	.189
		Risk*Sex	-.29	-2.70	.008
		Friendship*Sex	-.09	-0.60	.551
	4	Risk*Friendship*Sex	.66	3.28	.001
ADHD Status	1	Sex	-.31	-4.00	<.001
		ADHD	.25	3.20	.002
	2	Preference	-.07	-0.82	.416
		Friendship	.12	1.42	.159
	3	ADHD*Friendship	-.09	-0.52	.606
		ADHD*Sex	-.21	-1.78	.078
		Friendship*Sex	-.19	-1.20	.233
	4	ADHD*Friendship*Sex	.78	3.31	.001

Table 10*Probing significant three-way interactions in the prediction of peer victimization*

	Moderator	Step	Variable Entered	Boys (<i>n</i> = 65)			Girls (<i>n</i> = 72)		
				β	<i>t</i>	<i>p</i>	β	<i>t</i>	<i>p</i>
Externalizing Behaviour	Friendship	1	Externalizing	.34	2.87	.006	.31	2.76	.007
		2	Preference	-.05	-0.37	.712	-.12	-0.90	.371
			Friendship	.10	0.82	.417	.10	0.82	.413
		3	Externalizing* Friendship	-.61	-2.60	.012	.45	2.38	.020
Internalizing Behaviour	Friendship	1	Internalizing	.44	3.94	<.001	.21	1.75	.084
		2	Preference	-.05	-0.43	.671	-.16	-1.09	.278
			Friendship	.10	.816	.418	.09	0.67	.505
		3	Internalizing* Friendship	-.39	-1.72	.091	-.01	-0.04	.965
Behavioral Risk	Friendship	1	Risk	.41	3.62	.001	.28	2.46	.016
		2	Preference	-.02	-0.15	.884	-.12	-0.85	.400
			Friendship	.09	0.74	.465	.09	0.73	.467
		3	Risk* Friendship	-.60	-2.56	.013	.18	1.10	.275
ADHD Status	Friendship	1	ADHD	.31	2.58	.012	.28	2.44	.017
		2	Preference	-.07	-0.54	.589	-.12	-0.88	.382
			Friendship	.15	1.24	.220	.11	0.85	.397
		3	ADHD* Friendship	-.62	-2.12	.038	.80	4.18	<.001
	Peer Preference	1	ADHD	See Above					
		2	Friendship Preference						
		3	ADHD* Preference	-.47	-2.59	.012	-.05	-0.31	.757



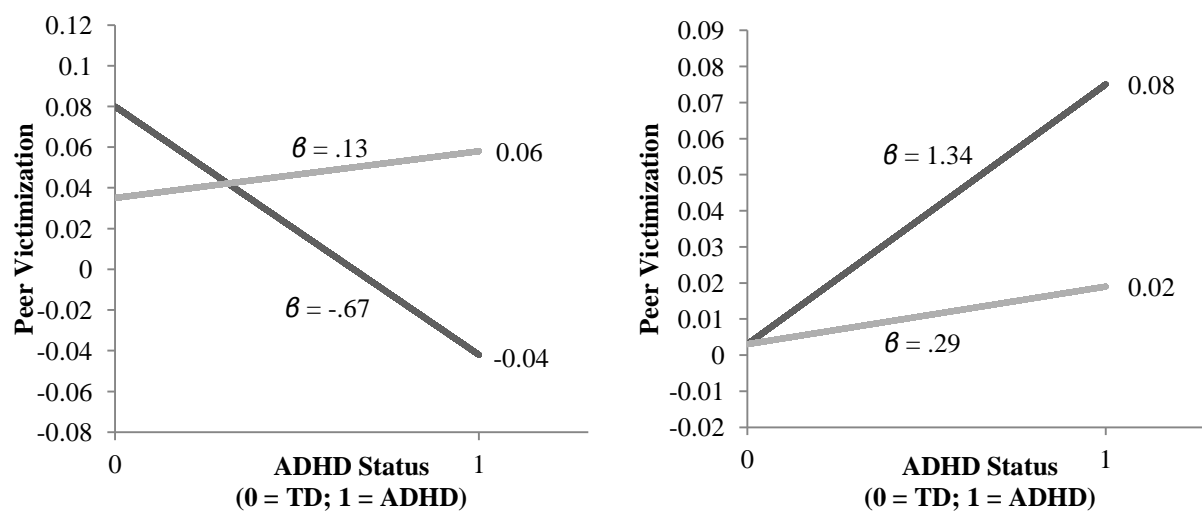


Figure 3. Effects of different behavioural problems and friendship on peer victimization

Table 11

Peer preference as a moderator in the relationship between behavioural problems and peer victimization

Behaviour Problem	Step	Variable Entered	N = 137		
			β	t	p
Externalizing Behaviour	1	Sex	See Table 9		
		Externalizing			
	2	Friendship Preference			
	3	Externalizing*Preference	-.22	-2.33	.022
		Externalizing*Sex	-.20	-1.61	.110
		Preference*Sex	-.01	-0.11	.914
	4	Externalizing *Preference*Sex	.25	1.81	.073
Internalizing Behaviour	1	Sex	See Table 9		
		Internalizing			
	2	Friendship Preference			
	3	Internalizing*Preference	-.21	-2.20	.029
		Internalizing*Sex	-.25	-2.50	.010
		Preference*Sex	-.03	-0.33	.740
	4	Internalizing*Preference*Sex	.11	0.98	.327
Behavioural Risk	1	Sex	See Table 9		
		Risk			
	2	Friendship Preference			
	3	Risk*Preference	-.18	-2.00	.047
		Risk*Sex	-.25	-2.34	.021
		Preference*Sex	-.04	-0.38	.682
	4	Risk*Preference*Sex	.17	1.29	.200
ADHD Status	1	Sex	See Table 9		
		ADHD			
	2	Friendship Preference			
	3	ADHD*Preference	-.32	-2.75	.007
		ADHD*Sex	-.21	-1.66	.100
		Preference*Sex	-.23	-1.57	.118
	4	ADHD*Preference*Sex	.37	2.38	.019

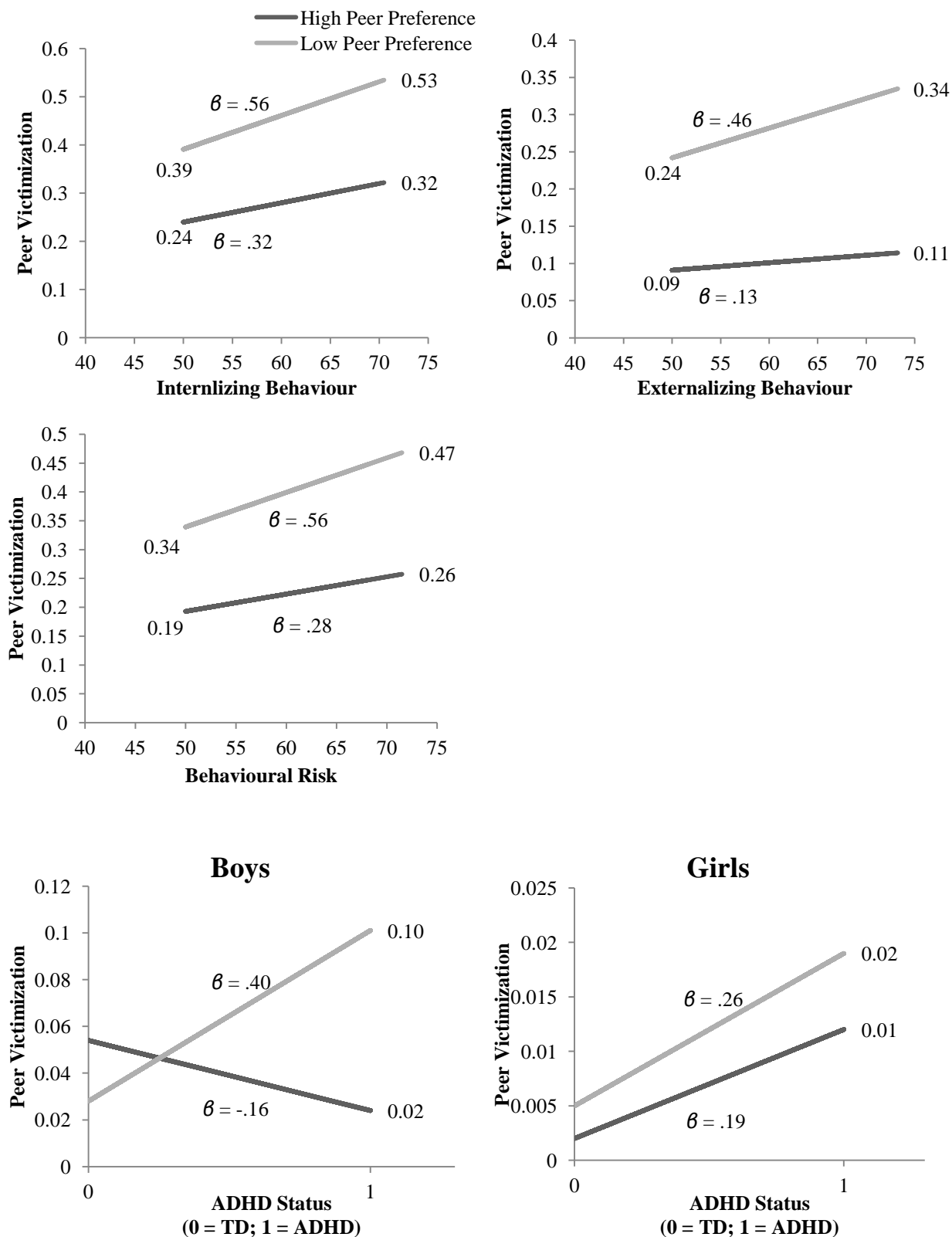


Figure 4. Effects of different behavioural problems and peer preference on peer victimization

Table 12

Qualities of the best friend as moderators in the relationship between externalizing behaviour and bullying of peers

Moderator	Step	Variable Entered	N = 105		
			β	t	p
Externalizing Behaviour of Best Friend	1	Sex	-.05	-0.50	.618
		Externalizing	.31	3.23	.002
		Friend's Externalizing	-.15	-1.53	.128
	2	Externalizing*	-.18	-1.83	.070
		Friend's Externalizing			
		Externalizing *Sex	-.36	-2.69	.008
	3	Friend's Externalizing*Sex	-.03	-0.25	.806
		Externalizing *	.18	1.34	.184
		Friend's Externalizing*Sex			
Peer Preference of Best Friend	1	Sex	-.05	-0.53	.600
		Externalizing	.29	3.03	.003
		Friend's Preference	-.02	-0.25	.803
	2	Externalizing*	.25	2.90	.005
		Friend's Preference			
		Externalizing*Sex	-.53	-4.23	<.001
	3	Friend's Preference*Sex	-.34	-2.94	.003
		Externalizing*	-.17	-1.68	.048
		Friend's preference*Sex			

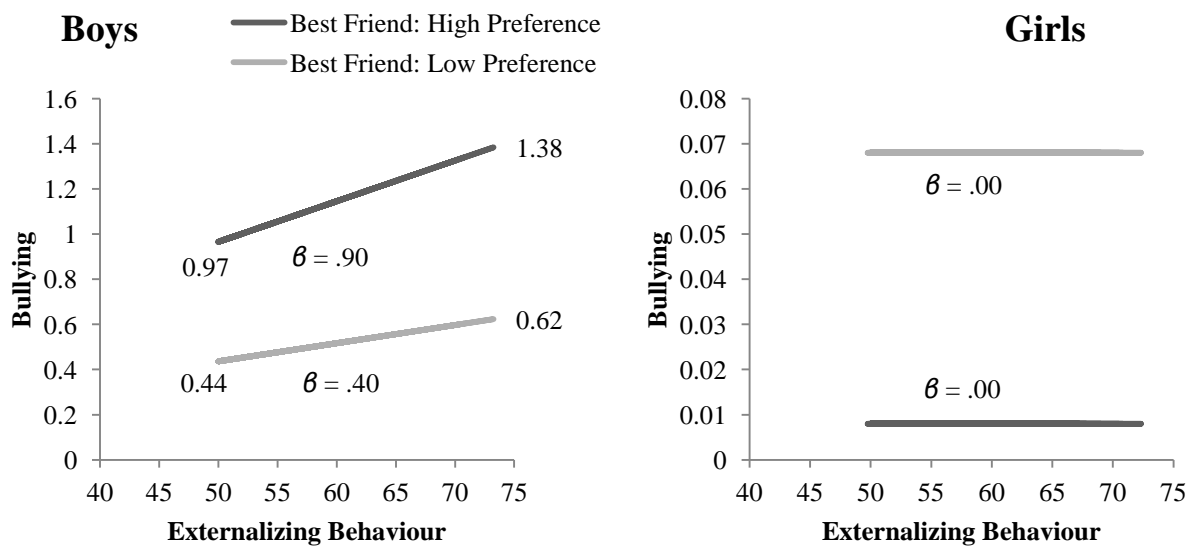


Figure 5. Effects of externalizing behaviour and best friend's peer preference on bullying of peers in boys and girls

Table 13

Qualities of the best friend as moderators in the relationship between internalizing behaviour and peer victimization

Moderator	Step	Variable Entered	N = 105		
			β	t	p
Internalizing Behaviour of Best Friend	1	Sex	-.28	-3.28	.001
		Internalizing	.37	4.37	<.001
		Friend's Internalizing	.12	1.42	.157
	2	Internalizing*	.08	0.94	.349
		Friend's Internalizing			
		Internalizing*Sex	-.24	-2.30	.024
		Friend's Internalizing*Sex	-.04	-0.44	.662
	3	Internalizing *	-.06	-0.50	.616
		Friend's Internalizing*Sex			
Peer Preference of Best Friend	1	Sex	-.31	-3.58	.001
		Internalizing	.38	4.43	<.001
		Friend's Preference	.11	1.24	.216
	2	Internalizing*	.01	0.06	.955
		Friend's Preference			
		Internalizing*Sex	-.25	-2.32	.021
		Friend's Preference*Sex	-.20	-1.75	.084
	3	Internalizing*	-.03	-0.36	.722
		Friend's preference*Sex			

References

- Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin*, *85*(6), 1275–1301. doi:10.1037/0033-2909.85.6.1275
- Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and Interpreting Interactions*. SAGE.
- Algozzine, B. (1977). The emotionally disturbed child: Disturbed or disturbing. *Journal of Abnormal Child Psychology*, *5*(2), 205–211. doi:10.1007/BF00913096
- Anderson, J. C., Williams, S., McGee, R., & Silva, P. A. (1987). DSM-III disorders in preadolescent children. Prevalence in a large sample from the general population. *Archives of general psychiatry*, *44*(1), 69–76.
- Asher, S. R., & Coie, J. D. (1990). *Peer Rejection in Childhood*. CUP Archive.
- Asher, S. R., & Hymel, S. (1986). Coaching in social skills for children who lack friends in school. *Children & Schools*, *8*(4), 205–218. doi:10.1093/cs/8.4.205
- August, G. J., Realmuto, G. M., MacDonald, A. W., 3rd, Nugent, S. M., & Crosby, R. (1996). Prevalence of ADHD and comorbid disorders among elementary school children screened for disruptive behavior. *Journal of abnormal child psychology*, *24*(5), 571–595.
- Bagwell, C. L., Molina, B. S. G., Pelham, W. E., & Hoza, B. (2001). Attention-Deficit Hyperactivity Disorder and Problems in Peer Relations: Predictions From Childhood to

- Adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(11), 1285–1292. doi:10.1097/00004583-200111000-00008
- Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development*, 69(1), 140–153.
- Barker, R. G., & Wright, H. F. (1954). *Midwest and its children: the psychological ecology of an American town*. Row, Peterson.
- Barkley, R. A. (1997). *Attention-deficit Hyperactivity Disorder and the Nature of Self-control*. Guilford Press.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173–1182.
- Benenson, J. F., & Christakos, A. (2003). The greater fragility of females' versus males' closest same-sex friendships. *Child development*, 74(4), 1123–1129.
- Berndt, T. J., & Keefe, K. (1995). Friends' influence on adolescents' adjustment to school. *Child Development*, 66(5), 1312–1329. doi:10.2307/1131649
- Biederman, J., Newcorn, J., & Sprich, S. (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. *American Journal of Psychiatry*, 148(5), 564–577.
- Bierman, K. L., & Wargo, J. B. (1995). Predicting the longitudinal course associated with aggressive-rejected, aggressive (nonrejected), and rejected (nonaggressive) status. *Development and Psychopathology*, 7(04), 669–682. doi:10.1017/S0954579400006775
- Bird, H. R., Canino, G., Rubio-Stipec, M., Gould, M. S., Ribera, J., Sesman, M., ... Sanchez-Lacay, A. (1988). Estimates of the prevalence of childhood maladjustment in a community

- survey in Puerto Rico. The use of combined measures. *Archives of general psychiatry*, 45(12), 1120–1126.
- Bird, H. R., Gould, M. S., & Staghezza-Jaramillo, B. M. (1994). The comorbidity of ADHD in a community sample of children aged 6 through 16 years. *Journal of Child and Family Studies*, 3(4), 365–378. doi:10.1007/BF02233996
- Bishop, J. A., & Inderbitzen, H. M. (1995). Peer acceptance and friendship: An investigation of their relation to self-esteem. *The Journal of Early Adolescence*, 15(4), 476–489. doi:10.1177/0272431695015004005
- Blachman, D. R., & Hinshaw, S. P. (2002). Patterns of friendship among girls with and without Attention-Deficit/Hyperactivity Disorder. *Journal of Abnormal Child Psychology*, 30(6), 625–640. doi:10.1023/A:1020815814973
- Blatt, S. J., Hart, B., Quinlan, D. M., Leadbeater, B., & Auerbach, J. (1993). Interpersonal and self-critical dysphoria and behavioral problems in adolescents. *Journal of Youth and Adolescence*, 22(3), 253–269. doi:10.1007/BF01537791
- Boivin, M., & Bégin, G. (1989). Peer status and self-perception among early elementary school children: The case of the rejected children. *Child Development*, 60(3), 591–596. doi:10.2307/1130725
- Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology*, 33(1), 135–145. doi:10.1037/0012-1649.33.1.135
- Boivin, M., Hymel, S., & Bukowski, W. M. (1995). The roles of social withdrawal, peer rejection, and victimization by peers in predicting loneliness and depressed mood in childhood. *Development and Psychopathology*, 7(04), 765–785. doi:10.1017/S0954579400006830

- Boivin, M., Vitaro, F., & Poulin, F. (2005). Peer relationships and the development of aggressive behavior in early childhood. In R. E. Tremblay, W. W. Hartup, & J. Archer (Eds.), *Developmental origins of aggression* (pp. 376–397). New York, NY, US: Guilford Press.
- Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: the role of friendship quality as a protective factor in peer victimization and bullying. *Journal of interpersonal violence, 20*(6), 701–712. doi:10.1177/0886260504272897
- Borg, M. G. (1999). The extent and nature of bullying among primary and secondary schoolchildren. *Educational Research, 41*(2), 137–153. doi:10.1080/0013188990410202
- Boulton, M J, & Underwood, K. (1992). Bully/victim problems among middle school children. *The British journal of educational psychology, 62 (Pt 1)*, 73–87.
- Boulton, M. J., Trueman, M., Chau, C., Whitehand, C., & Amatya, K. (1999). Concurrent and longitudinal links between friendship and peer victimization: implications for befriending interventions. *Journal of Adolescence, 22*(4), 461–466. doi:10.1006/jado.1999.0240
- Boulton, Michael J., & Smith, P. K. (1994). Bully/victim problems in middle-school children: Stability, self-perceived competence, peer perceptions and peer acceptance. *British Journal of Developmental Psychology, 12*(3), 315–329. doi:10.1111/j.2044-835X.1994.tb00637.x
- Bowker, J. C., Rubin, K. H., Rose-Krasnor, L., & Booth-LaForce, C. (2007). Good friendships, bad friends: Friendship factors as moderators of the relation between aggression and social information processing. *European Journal of Developmental Psychology, 4*(4), 415–434. doi:10.1080/17405620701632069
- Brendgen, M., Little, T. D., & Krappmann, L. (2000). Rejected children and their friends: A shared evaluation of friendship quality? *Merrill-Palmer Quarterly, 46*(1), 45–70.

- Brown, B. B., & Lohr, M. J. (1987). Peer-group affiliation and adolescent self-esteem: an integration of ego-identity and symbolic-interaction theories. *Journal of personality and social psychology*, 52(1), 47–55.
- Bruyn, E. H. de, Cillessen, A. H. N., & Wissink, I. B. (2010). Associations of peer acceptance and perceived popularity with bullying and victimization in early adolescence. *The Journal of Early Adolescence*, 30(4), 543–566. doi:10.1177/0272431609340517
- Buhs, E. S., & Ladd, G. W. (2001). Peer rejection as an antecedent of young children's school adjustment: an examination of mediating processes. *Developmental psychology*, 37(4), 550–560.
- Buhs, Eric S., Ladd, G. W., & Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology*, 98(1), 1–13. doi:10.1037/0022-0663.98.1.1
- Bukowski, W. M., & Adams, R. (2005). Peer relationships and psychopathology: Markers, moderators, mediators, mechanisms, and meanings. *Journal of Clinical Child & Adolescent Psychology*, 34(1), 3–10. doi:10.1207/s15374424jccp3401_1
- Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement, and outcome. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15–45). Oxford, England: John Wiley & Sons.
- Burgess, K. B., Wojslawowicz, J. C., Rubin, K. H., Rose-Krasnor, L., & Booth-LaForce, C. (2006). Social information processing and coping strategies of shy/withdrawn and aggressive children: Does friendship matter? *Child Development*, 77(2), 371–383. doi:10.1111/j.1467-8624.2006.00876.x

- Campbell, S. B. (1995). Behavior problems in preschool children: a review of recent research. *Journal of child psychology and psychiatry, and allied disciplines*, 36(1), 113–149.
- Caravita, S. C. S., Di Blasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development*, 18(1), 140–163. doi:10.1111/j.1467-9507.2008.00465.x
- Chung, T.-Y., & Asher, S. R. (1996). Children's goals and strategies in peer conflict situations. *Merrill-Palmer Quarterly (1982-)*, 42(1), 125–147. doi:10.2307/23090523
- Coie, J. D., Dodge, K. A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology*, 18(4), 557–570. doi:10.1037/0012-1649.18.4.557
- Coie, J. D., & Kupersmidt, J. B. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development*, 54(6), 1400–1416. doi:10.2307/1129803
- Coie, J., Terry, R., Lenox, K., Lochman, J., & Hyman, C. (1995). Childhood peer rejection and aggression as predictors of stable patterns of adolescent disorder. *Development and Psychopathology*, 7(04), 697–713. doi:10.1017/S0954579400006799
- Cole, D. A., & Carpentieri, S. (1990). Social status and the comorbidity of child depression and conduct disorder. *Journal of Consulting and Clinical Psychology*, 58(6), 748–757. doi:10.1037/0022-006X.58.6.748
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality and Individual Differences*, 24(1), 123–130. doi:10.1016/S0191-8869(97)00145-1

- Crick, N R, Werner, N. E., Casas, J. F., O'Brien, K. M., Nelson, D. A., Grotpeter, J. K., & Markon, K. (1998). Childhood aggression and gender: a new look at an old problem. *Nebraska Symposium on Motivation. Nebraska Symposium on Motivation, 45*, 75–141.
- Crick, Nicki R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology, 7*(02), 313–322.
doi:10.1017/S0954579400006520
- Crick, Nicki R. (1997). Engagement in gender normative versus nonnormative forms of aggression: Links to social–psychological adjustment. *Developmental Psychology, 33*(4), 610–617. doi:10.1037/0012-1649.33.4.610
- Crick, Nicki R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*(1), 74–101. doi:10.1037/0033-2909.115.1.74
- Crothers, L. M., & Levinson, E. M. (2004). Assessment of bullying: A review of methods and instruments. *Journal of Counseling & Development, 82*(4), 496–503. doi:10.1002/j.1556-6678.2004.tb00338.x
- Deater-Deckard, K. (2001). Annotation: Recent research examining the role of peer relationships in the development of psychopathology. *Journal of child psychology and psychiatry, and allied disciplines, 42*(5), 565–579.
- Demaray, M. K., & Malecki, C. K. (2003). Perceptions of the frequency and importance of social support by students classified as victims, bullies, and bully/victims in an urban middle school. *School Psychology Review, 32*(3), 471–489.
- Dishion, T J, McCord, J., & Poulin, F. (1999). When interventions harm. Peer groups and problem behavior. *The American psychologist, 54*(9), 755–764.

- Dishion, Thomas J., & Kavanagh, K. (2003). *Intervening in adolescent problem behavior: A family-centered approach* (Vol. xi). New York, NY, US: Guilford Press.
- Dishion, Thomas J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescent friendships. *Behavior Therapy, 27*(3), 373–390.
doi:10.1016/S0005-7894(96)80023-2
- Dodge, K. A. (1985). Facets of social interaction and the assessment of social competence in children. In B. H. Schneider, K. H. Rubin, & J. E. Ledingham (Eds.), *Children's Peer Relations: Issues in Assessment and Intervention* (pp. 3–22). Springer US. Retrieved from http://link.springer.com/chapter/10.1007/978-1-4684-6325-5_1
- Dodge, K. A., & Coie, J. D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*(6), 1146–1158. doi:10.1037/0022-3514.53.6.1146
- Dodge, K. A., Lansford, J. E., Burks, V. S., Bates, J. E., Pettit, G. S., Fontaine, R., & Price, J. M. (2003). Peer rejection and social information-processing factors in the development of aggressive behavior problems in children. *Child development, 74*(2), 374–393.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12*(1), 1–22. doi:10.1037/1082-989X.12.1.1
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., ... Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development, 72*(4), 1112–1134.
doi:10.1111/1467-8624.00337

- Eisenberg, N., Guthrie, I. K., Fabes, R. A., Reiser, M., Murphy, B. C., Holgren, R., ... Losoya, S. (1997). The relations of regulation and emotionality to resiliency and competent social functioning in elementary school children. *Child Development, 68*(2), 295–311.
doi:10.2307/1131851
- Erhardt, D., & Hinshaw, S. P. (1994). Initial sociometric impressions of attention-deficit hyperactivity disorder and comparison boys: predictions from social behaviors and from nonbehavioral variables. *Journal of consulting and clinical psychology, 62*(4), 833–842.
- Espelage, D. L., & Holt, M. K. (2001). Bullying and victimization during early adolescence. *Journal of Emotional Abuse, 2*(2-3), 123–142. doi:10.1300/J135v02n02_08
- Espelage, D. L., & Swearer, S. M. (2004). *Bullying in American schools: A social-ecological perspective on prevention and intervention*. Routledge.
- Fagot, B. I. (1984). The consequents of problem behavior in toddler children. *Journal of Abnormal Child Psychology, 12*(3), 385–395. doi:10.1007/BF00910654
- Farmer, T. W., Leung, M.-C., Pearl, R., Rodkin, P. C., Cadwallader, T. W., & Van Acker, R. (2002). Deviant of diverse peer groups? The peer affiliations of aggressive elementary students. *Journal of Educational Psychology, 94*(3), 611–620. doi:10.1037/0022-0663.94.3.611
- Fleming, J. E., Cook, T. D., & Stone, C. A. (2002). Interactive influences of perceived social contexts on the reading achievement of urban middle schoolers with learning disabilities. *Learning Disabilities Research & Practice, 17*(1), 47–64. doi:10.1111/1540-5826.00031
- Fox, C. L., & Boulton, M. J. (2006). Friendship as a moderator of the relationship between social skills problems and peer victimisation. *Aggressive Behavior, 32*(2), 110–121.
doi:10.1002/ab.20114

- Gadow, K. D., & Sprafkin, J. N. (1994). *Child Symptom Inventories*. Checkmate Plus.
- Garandeau, C. F., & Cillessen, A. H. N. (2006). From indirect aggression to invisible aggression: A conceptual view on bullying and peer group manipulation. *Aggression and Violent Behavior, 11*(6), 612–625. doi:10.1016/j.avb.2005.08.005
- Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis-stress model of internalizing trajectories in childhood. *Child Development, 74*(1), 257–278. doi:10.2307/3696355
- Gest, S. D., Graham-Bermann, S. A., & Hartup, W. W. (2001). Peer experience: Common and unique features of number of friendships, social network centrality, and sociometric status. *Social Development, 10*(1), 23–40. doi:10.1111/1467-9507.00146
- Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*(4), 235–284. doi:10.1016/S0022-4405(03)00048-7
- Gillmore, M. R., Hawkins, J. D., Day, L. E., & Catalano, R. F. (1992). Friendship and deviance: New evidence on an old controversy. *The Journal of Early Adolescence, 12*(1), 80–95. doi:10.1177/0272431692012001005
- Gini, G. (2006). Bullying as a social process: The role of group membership in students' perception of inter-group aggression at school. *Journal of School Psychology, 44*(1), 51–65. doi:10.1016/j.jsp.2005.12.002
- Gould, M. S., Bird, H., & Jaramillo, B. S. (1993). Correspondence between statistically derived behavior problem syndromes and child psychiatric diagnoses in a community sample. *Journal of Abnormal Child Psychology, 21*(3), 287–313. doi:10.1007/BF00917536

- Gresham, F. M., & Kern, L. (2004). Internalizing behavior problems in children and adolescents. In R. B. Rutherford, M. M. Quinn, & S. R. Mathur (Eds.), *Handbook of research in emotional and behavioral disorders* (pp. 262–281). New York, NY, US: Guilford Press.
- Grotzinger, J. K., & Crick, N. R. (1996). Relational aggression, overt aggression, and friendship. *Child Development, 67*(5), 2328–2338. doi:10.1111/j.1467-8624.1996.tb01860.x
- Hanish, L. D., & Guerra, N. G. (2000). Predictors of peer victimization among urban youth. *Social Development, 9*(4), 521–543. doi:10.1111/1467-9507.00141
- Hartup, W. W. (1989). Social relationships and their developmental significance. *American Psychologist, 44*(2), 120–126. doi:10.1037/0003-066X.44.2.120
- Hartup, W. W., Glazer, J. A., & Charlesworth, R. (1967). Peer reinforcement and sociometric status. *Child Development, 38*(4), 1017. doi:10.2307/1127099
- Hartup, W. W., & Stevens, N. (1997). Friendships and adaptation in the life course. *Psychological Bulletin, 121*(3), 355–370. doi:10.1037/0033-2909.121.3.355
- Haselager, G. J. T., Cillessen, A. H. N., Van Lieshout, C. F. M., Riksen-Walraven, J. M. A., & Hartup, W. W. (2002). Heterogeneity among peer-rejected boys across middle childhood: developmental pathways of social behavior. *Developmental psychology, 38*(3), 446–456.
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*(4), 441–455. doi:10.1111/1469-7610.00629
- Henrich, C. C., Blatt, S. J., Kuperminc, G. P., Zohar, A., & Leadbeater, B. J. (2001). Levels of interpersonal concerns and social functioning in early adolescent boys and girls. *Journal of Personality Assessment, 76*(1), 48–67. doi:10.1207/S15327752JPA7601_3

- Hinshaw, S. P. (2002). Preadolescent girls with attention-deficit/hyperactivity disorder: I. Background characteristics, comorbidity, cognitive and social functioning, and parenting practices. *Journal of consulting and clinical psychology, 70*(5), 1086–1098.
- Hodges, E. V., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: protection against an escalating cycle of peer victimization. *Developmental psychology, 35*(1), 94–101.
- Hodges, E. V., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental psychology, 33*(6), 1032–1039.
- Hodges, E. V., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of personality and social psychology, 76*(4), 677–685.
- Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology, 27*(1), 87–96.
doi:10.1093/jpepsy/27.1.87
- Hoza, B., Gerdes, A. C., Mrug, S., Hinshaw, S. P., Bukowski, W. M., Gold, J. A., ... Wigal, T. (2005). Peer-assessed outcomes in the multimodal treatment study of children with Attention Deficit Hyperactivity Disorder. *Journal of Clinical Child & Adolescent Psychology, 34*(1), 74–86. doi:10.1207/s15374424jccp3401_7
- Hymel, S., & Asher, S. R. (1977). Assessment and training of isolated children's social skills. Retrieved from <http://www.eric.ed.gov/ERICWebPortal/detail?accno=ED136930>
- Hymel, S., Wagner, E., & Butler, L. J. (1990). Reputational bias: View from the peer group. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 156–186). New York, NY, US: Cambridge University Press.

- Jarvinen, D. W., & Nicholls, J. G. (1996). Adolescents' social goals, beliefs about the causes of social success, and satisfaction in peer relations. *Developmental Psychology, 32*(3), 435–441. doi:10.1037/0012-1649.32.3.435
- Johnston, C. (1996). Parent characteristics and parent-child interactions in families of nonproblem children and ADHD children with higher and lower levels of oppositional-defiant behavior. *Journal of Abnormal Child Psychology, 24*(1), 85–104. doi:10.1007/BF01448375
- Jones, D. C., Abbey, B. B., & Cumberland, A. (1998). The development of display rule knowledge: linkages with family expressiveness and social competence. *Child development, 69*(4), 1209–1222.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., ... Ryan, N. (1997). Schedule for affective disorders and schizophrenia for school-age children-present and lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(7), 980–988. doi:10.1097/00004583-199707000-00021
- Kazdin, A. E., Esveldt-Dawson, K., Unis, A. S., & Rancurello, M. D. (1983). Child and parent evaluations of depression and aggression in psychiatric inpatient children. *Journal of Abnormal Child Psychology, 11*(3), 401–413. doi:10.1007/BF00914248
- Keil, V., & Price, J. M. (2006). Externalizing behavior disorders in child welfare settings: Definition, prevalence, and implications for assessment and treatment. *Children and Youth Services Review, 28*(7), 761–779. doi:10.1016/j.childyouth.2005.08.006
- Kelly, B., Schwartz, D., Gorman, A., & Nakamoto, J. (2008). Violent victimization in the community and children's subsequent peer rejection: The mediating role of emotion

dysregulation. *Journal of Abnormal Child Psychology*, 36(2), 175–185.

doi:10.1007/s10802-007-9168-6

Kochenderfer, B. J., & Ladd, G. W. (1996). Peer victimization: cause or consequence of school maladjustment? *Child development*, 67(4), 1305–1317.

Kochenderfer-Ladd, B. (2004). Peer Victimization: The role of emotions in adaptive and maladaptive coping. *Social Development*, 13(3), 329–349. doi:10.1111/j.1467-9507.2004.00271.x

Kochenderfer-Ladd, B., & Skinner, K. (2002). Children's coping strategies: Moderators of the effects of peer victimization? *Developmental Psychology*, 38(2), 267–278.

doi:10.1037/0012-1649.38.2.267

Kumpulainen, K., Räsänen, E., Henttonen, I., Almqvist, F., Kresanov, K., Linna, S. L., ...

Tamminen, T. (1998). Bullying and psychiatric symptoms among elementary school-age children. *Child abuse & neglect*, 22(7), 705–717.

Kuperminc, G. P., Blatt, S. J., & Leadbeater, B. J. (1997). Relatedness, self-definition, and early adolescent adjustment. *Cognitive Therapy and Research*, 21(3), 301–320.

doi:10.1023/A:1021826500037

Ladd, G. W. (1983). Social networks of popular, average, and rejected children in school settings. *Merrill-Palmer Quarterly*, 29(3), 283–307.

Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children's early school adjustment? *Child Development*, 61(4),

1081–1100. doi:10.2307/1130877

- Ladd, G. W. (2006). Peer rejection, aggressive or withdrawn behavior, and psychological maladjustment from ages 5 to 12: An examination of four predictive models. *Child Development, 77*(4), 822–846. doi:10.1111/j.1467-8624.2006.00905.x
- Ladd, G. W., & Kochenderfer, B. J. (1996). Linkages between friendship and adjustment during early school transitions. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 322–345). New York, NY, US: Cambridge University Press.
- Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1997). Classroom peer acceptance, friendship, and victimization: Distinct relation systems that contribute uniquely to children's school adjustment? *Child Development, 68*(6), 1181–1197. doi:10.1111/j.1467-8624.1997.tb01993.x
- Ladd, G. W., & Troop-Gordon, W. (2003). The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child development, 74*(5), 1344–1367.
- Lansford, J. E., Malone, P. S., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2010). Developmental cascades of peer rejection, social information processing biases, and aggression during middle childhood. *Development and Psychopathology, 22*(Special Issue 03), 593–602. doi:10.1017/S0954579410000301
- Leadbeater, B. J., & Hoglund, W. L. G. (2009). The effects of peer victimization and physical aggression on changes in internalizing from first to third grade. *Child development, 80*(3), 843–859. doi:10.1111/j.1467-8624.2009.01301.x

- Liu, J. (2004). Childhood externalizing behavior: Theory and implications. *Journal of child and adolescent psychiatric nursing : official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc*, 17(3), 93–103.
- Lopez, C., & DuBois, D. L. (2005). Peer victimization and rejection: Investigation of an integrative model of effects on emotional, behavioral, and academic adjustment in early adolescence. *Journal of Clinical Child & Adolescent Psychology*, 34(1), 25–36.
doi:10.1207/s15374424jccp3401_3
- Maccoby, E. E. (1990). Gender and relationships. A developmental account. *The American psychologist*, 45(4), 513–520.
- MacKinnon, D P, Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention science: the official journal of the Society for Prevention Research*, 1(4), 173–181.
- MacKinnon, David P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual review of psychology*, 58, 593. doi:10.1146/annurev.psych.58.110405.085542
- MacKinnon-Lewis, C., Rabiner, D., & Starnes, R. (1999). Predicting boys' social acceptance and aggression: the role of mother-child interactions and boys' beliefs about peers. *Developmental psychology*, 35(3), 632–639.
- McDowell, D. J., & Parke, R. D. (2009). Parental correlates of children's peer relations: an empirical test of a tripartite model. *Developmental psychology*, 45(1), 224–235.
doi:10.1037/a0014305
- Mikami, A. Y., Boucher, M. A., & Humphreys, K. (2005). Prevention of peer rejection through a classroom-level intervention in middle school. *The Journal of Primary Prevention*, 26(1), 5–23. doi:10.1007/s10935-004-0988-7

- Mikami, A. Y., Griggs, M. S., Lerner, M. D., Emeh, C. C., Reuland, M. M., Jack, A., & Anthony, M. R. (2013). A randomized trial of a classroom intervention to increase peers' social inclusion of children with attention-deficit/hyperactivity disorder. *Journal of consulting and clinical psychology, 81*(1), 100–112. doi:10.1037/a0029654
- Mikami, A. Y., Jack, A., Emeh, C. C., & Stephens, H. F. (2010). Parental influence on children with Attention-Deficit/Hyperactivity Disorder: I. Relationships between parent behaviors and child peer status. *Journal of abnormal child psychology, 38*(6), 721–736. doi:10.1007/s10802-010-9393-2
- Mikami, A. Y., Lerner, M. D., Griggs, M. S., McGrath, A., & Calhoun, C. D. (2010). Parental influence on children with Attention-Deficit/Hyperactivity Disorder: II. Results of a pilot intervention training parents as friendship coaches for children. *Journal of Abnormal Child Psychology, 38*(6), 737–749. doi:10.1007/s10802-010-9403-4
- Miller-Johnson, S., Coie, J. D., Maumary-Gremaud, A., Lochman, J., & Terry, R. (1999). Relationship between childhood peer rejection and aggression and adolescent delinquency severity and type among African American youth. *Journal of Emotional and Behavioral Disorders, 7*(3), 137–146. doi:10.1177/106342669900700302
- Moote, G. T., Smyth, N. J., & Wodarski, J. S. (1999). Social skills training with youth in school settings: A review. *Research on Social Work Practice, 9*(4), 427–465. doi:10.1177/104973159900900403
- Mostow, A. J., Izard, C. E., Fine, S., & Trentacosta, C. J. (2002). Modeling emotional, cognitive, and behavioral predictors of peer acceptance. *Child Development, 73*(6), 1775–1787. doi:10.1111/1467-8624.00505

- Mrug, S., Molina, B. S. G., Hoza, B., Gerdes, A. C., Hinshaw, S. P., Hechtman, L., & Arnold, L. E. (2012). Peer rejection and friendships in children with Attention-Deficit/Hyperactivity Disorder: contributions to long-term outcomes. *Journal of abnormal child psychology*, *40*(6), 1013–1026. doi:10.1007/s10802-012-9610-2
- MTA Cooperative Group. (1999). A 14-month randomized clinical trial of treatment strategies for attention-deficit/hyperactivity disorder. The MTA Cooperative Group. Multimodal Treatment Study of Children with ADHD. *Archives of general psychiatry*, *56*(12), 1073–1086.
- Murray-Close, D., Ostrov, J. M., & Crick, N. R. (2007). A short-term longitudinal study of growth of relational aggression during middle childhood: Associations with gender, friendship intimacy, and internalizing problems. *Development and Psychopathology*, *19*(01), 187–203. doi:10.1017/S0954579407070101
- Nangle, D. W., Erdley, C. A., & Gold, J. A. (1996). A reflection on the popularity construct: The importance of who likes or dislikes a child. *Behavior Therapy*, *27*(3), 337–352. doi:10.1016/S0005-7894(96)80021-9
- Nansel, T. R., Craig, W., Overpeck, M. D., Saluja, G., & Ruan, W. J. (2004). Cross-national consistency in the relationship between bullying behaviors and psychosocial adjustment. *Archives of pediatrics & adolescent medicine*, *158*(8), 730–736. doi:10.1001/archpedi.158.8.730
- Neary, A., & Joseph, S. (1994). Peer victimization and its relationship to self-concept and depression among schoolgirls. *Personality and Individual Differences*, *16*(1), 183–186. doi:10.1016/0191-8869(94)90122-8

- Nesdale, D., & Lambert, A. (2007). Effects of experimentally manipulated peer rejection on children's negative affect, self-esteem, and maladaptive social behavior. *International Journal of Behavioral Development, 31*(2), 115–122. doi:10.1177/0165025407073579
- Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: a meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological bulletin, 113*(1), 99–128.
- O'Connell, P., Pepler, D., & Craig, W. (1999). Peer involvement in bullying: Insights and challenges for intervention. *Journal of Adolescence, 22*(4), 437–452.
doi:10.1006/jado.1999.0238
- Olweus, D. (1991). Bully/victim problems among schoolchildren: Basic facts and effects of a school based intervention program. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 411–448). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do* (1st ed.). Wiley-Blackwell.
- Östberg, V. (2003). Children in classrooms: Peer status, status distribution and mental well-being. *Social Science & Medicine, 56*(1), 17–29. doi:10.1016/S0277-9536(02)00006-0
- Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*(4), 611–21.
- Parkhurst, J. T., & Hopmeyer, A. (1998). Sociometric popularity and peer-perceived popularity two distinct dimensions of peer status. *The Journal of Early Adolescence, 18*(2), 125–144.
doi:10.1177/0272431698018002001

- Pedersen, S., Vitaro, F., Barker, E. D., & Borge, A. I. H. (2007). The timing of middle-childhood peer rejection and friendship: Linking early behavior to early-adolescent adjustment. *Child Development, 78*(4), 1037–1051. doi:10.1111/j.1467-8624.2007.01051.x
- Pelham, W. E., & Bender, M. E. (1982). Peer relationships in hyperactive children: Description and treatment. *Advances in Learning & Behavioral Disabilities, 1*, 365–436.
- Pellegrini, A. D., Bartini, M., & Brooks, F. (1999). School bullies, victims, and aggressive victims: Factors relating to group affiliation and victimization in early adolescence. *Journal of Educational Psychology, 91*(2), 216–224. doi:10.1037/0022-0663.91.2.216
- Pepler, Debra J. (1991). *Development Treatment Childh*. Routledge.
- Polanczyk, M. D., de Lima, M. D., Horta, M. D., Biederman, M. D., & Rohde, M. D. (2007). The worldwide prevalence of ADHD: A systematic review and metaregression analysis. *American Journal of Psychiatry, 164*(6), 942–948.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods, 40*(3), 879–891.
- Price, J. M., & Dodge, K. A. (1989). Reactive and proactive aggression in childhood: Relations to peer status and social context dimensions. *Journal of Abnormal Child Psychology, 17*(4), 455–471. doi:10.1007/BF00915038
- Prinstein, M. J., Cheah, C. S. L., & Guyer, A. E. (2005). Peer victimization, cue interpretation, and internalizing symptoms: Preliminary concurrent and longitudinal findings for children and adolescents. *Journal of Clinical Child & Adolescent Psychology, 34*(1), 11–24. doi:10.1207/s15374424jccp3401_2

- Putallaz, M., & Bierman, K. L. (2004). *Aggression, antisocial behavior, and violence among girls: A developmental perspective*. Guilford Press.
- Rodkin, P. C., Farmer, T. W., Pearl, R., & Acker, R. V. (2006). They're cool: Social status and peer group supports for aggressive boys and girls. *Social Development, 15*(2), 175–204. doi:10.1046/j.1467-9507.2006.00336.x
- Rose, A. J., & Asher, S. R. (1999). Children's goals and strategies in response to conflicts within a friendship. *Developmental Psychology, 35*(1), 69–79. doi:10.1037/0012-1649.35.1.69
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*(1), 98–131. doi:10.1037/0033-2909.132.1.98
- Rose, A. J., Swenson, L. P., & Waller, E. M. (2004). Overt and relational aggression and perceived popularity: Developmental differences in concurrent and prospective relations. *Developmental Psychology, 40*(3), 378–387. doi:10.1037/0012-1649.40.3.378
- Rose, S. L., Rose, S. A., & Feldman, J. F. (1989). Stability of behavior problems in very young children. *Development and Psychopathology, 1*(01), 5–19. doi:10.1017/S0954579400000213
- Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2007). Peer interactions, relationships, and groups. In *Handbook of Child Psychology*. John Wiley & Sons, Inc. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/9780470147658.chpsy0310/abstract>
- Rubin, K. H., Wojslawowicz, J. C., Rose-Krasnor, L., Booth-LaForce, C., & Burgess, K. B. (2006). The best friendships of shy/withdrawn children: Prevalence, stability, and relationship quality. *Journal of Abnormal Child Psychology, 34*(2), 139–153. doi:10.1007/s10802-005-9017-4

- Rudolph, K. D. (2002). Gender differences in emotional responses to interpersonal stress during adolescence. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine*, 30(4 Suppl), 3–13.
- Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior*, 15(2), 112–120. doi:10.1016/j.avb.2009.08.007
- Salmivalli, C., Huttunen, A., & Lagerspetz, K. M. J. (1997). Peer networks and bullying in schools. *Scandinavian Journal of Psychology*, 38(4), 305–312. doi:10.1111/1467-9450.00040
- Sandstrom, M. J., & Coie, J. D. (1999). A developmental perspective on peer rejection: Mechanisms of stability and change. *Child Development*, 70(4), 955–966. doi:10.2307/1132254
- Schwartz, D, Dodge, K. A., Pettit, G. S., & Bates, J. E. (2000). Friendship as a moderating factor in the pathway between early harsh home environment and later victimization in the peer group. The Conduct Problems Prevention Research Group. *Developmental psychology*, 36(5), 646–662.
- Schwartz, David. (2000). Subtypes of victims and aggressors in children's peer groups. *Journal of Abnormal Child Psychology*, 28(2), 181–192. doi:10.1023/A:1005174831561
- Schwartz, David, McFadyen-Ketchum, S., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1999). Early behavior problems as a predictor of later peer group victimization: Moderators and mediators in the pathways of social risk. *Journal of Abnormal Child Psychology*, 27(3), 191–201. doi:10.1023/A:1021948206165

- Sharp, S. (1996). Self-esteem, response style and victimization: Possible ways of preventing victimization through parenting and school based training programmes. *School Psychology International*, 17(4), 347–357. doi:10.1177/0143034396174004
- Slaby, R. G., & Guerra, N. G. (1988). Cognitive mediators of aggression in adolescent offenders. *Developmental Psychology*, 24(4), 580–588. doi:10.1037/0012-1649.24.4.580
- Slee, P. T. (1994). Situational and interpersonal correlates of anxiety associated with peer victimisation. *Child psychiatry and human development*, 25(2), 97–107.
- Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, 74(4), 565–581. doi:10.1348/0007099042376427
- Snyder, J., Schrepferman, L., McEachern, A., Barner, S., Johnson, K., & Provines, J. (2008). Peer deviancy training and peer coercion: Dual processes associated with early-onset conduct problems. *Child development*, 79(2), 252–268. doi:10.1111/j.1467-8624.2007.01124.x
- Sobel, M. E. (1987). Direct and indirect effects in linear structural equation models. *Sociological Methods & Research*, 16(1), 155–176. doi:10.1177/0049124187016001006
- Sourander, A., Jensen, P., Rönning, J. A., Niemelä, S., Helenius, H., Sillanmäki, L., ... Almqvist, F. (2007). What is the early adulthood outcome of boys who bully or are bullied in childhood? The Finnish “From a Boy to a Man” study. *Pediatrics*, 120(2), 397–404. doi:10.1542/peds.2006-2704
- Spinrad, T. L., Eisenberg, N., Harris, E., Hanish, L., Fabes, R. A., Kupanoff, K., ... Holmes, J. (2004). The relation of children’s everyday nonsocial peer play behavior to their

- emotionality, regulation, and social functioning. *Developmental psychology*, *40*(1), 67–80.
doi:10.1037/0012-1649.40.1.67
- Szatmari, P., Offord, D. R., & Boyle, M. H. (1989). Ontario Child Health Study: prevalence of attention deficit disorder with hyperactivity. *Journal of child psychology and psychiatry, and allied disciplines*, *30*(2), 219–230.
- Teräsahjo, T., & Salmivalli, C. (2003). “She is not actually bullied.” The discourse of harassment in student groups. *Aggressive Behavior*, *29*(2), 134–154. doi:10.1002/ab.10045
- Toblin, R. L., Schwartz, D., Hopmeyer, A., & Abou-ezzeddine, T. (2005). Social–cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology*, *26*(3), 329–346. doi:10.1016/j.appdev.2005.02.004
- Tu, K. M., Erath, S. A., & Flanagan, K. S. (2012). Can socially adept friends protect peer-victimized early adolescents against lower academic competence? *Journal of Applied Developmental Psychology*, *33*(1), 24–30.
- Unnever, J. D., & Cornell, D. G. (2003). Bullying, self-control, and ADHD. *Journal of Interpersonal Violence*, *18*(2), 129–147. doi:10.1177/0886260502238731
- Van Lier, P. A. C., & Koot, H. M. (2010). Developmental cascades of peer relations and symptoms of externalizing and internalizing problems from kindergarten to fourth-grade elementary school. *Development and psychopathology*, *22*(3), 569–582.
doi:10.1017/S0954579410000283
- Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: a comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental psychology*, *41*(4), 672–682.
doi:10.1037/0012-1649.41.4.672

- Wechsler, D. (1999). *Wechsler Abbreviated Scale of Intelligence*. New York: Psychological Corporation/Harcourt Brace.
- Weiss, B., & Catron, T. (1994). Specificity of the comorbidity of aggression and depression in children. *Journal of Abnormal Child Psychology*, 22(3), 389–401.
doi:10.1007/BF02168081
- Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research*, 35(1), 3–25.
doi:10.1080/0013188930350101
- Wiener, J., & Mak, M. (2009). Peer victimization in children with Attention-Deficit/Hyperactivity Disorder. *Psychology in the Schools*, 46(2), 116–131.
doi:10.1002/pits.20358
- Wolke, D., Woods, S., Stanford, K., & Schulz, H. (2001). Bullying and victimization of primary school children in England and Germany: prevalence and school factors. *British journal of psychology (London, England: 1953)*, 92(Pt 4), 673–696.
- Zhao, X., Lynch Jr., J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206.
doi:10.1086/651257