

Interpersonal Resources and Vulnerabilities:
The Influence of Parents and Peers on Depressive Symptoms in Relationally Victimized
Adolescents

by

Tracy Lynn Desjardins

B.A., University of Windsor, 2006

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of

MASTER OF SCIENCE

in the Department of Psychology

© Tracy Lynn Desjardins, 2008

University of Victoria

All rights reserved. This thesis may not be reproduced in whole or in part, by photocopy
or other means, without the permission of the author.

Interpersonal Resources and Vulnerabilities:
The Influence of Parents and Peers on Depressive Symptoms in Relationally Victimized
Adolescents

by

Tracy Lynn Desjardins

B.A., University of Windsor, 2006

Supervisory Committee

Dr. Bonnie J. Leadbeater (Department of Psychology)

Supervisor

Dr. Marsha Runtz (Department of Psychology)

Departmental Member

Dr. Erica Woodin (Department of Psychology)

Departmental Member

Supervisory Committee

Dr. Bonnie J. Leadbeater (Department of Psychology)

Supervisor

Dr. Marsha Runtz (Department of Psychology)

Departmental Member

Dr. Erica Woodin (Department of Psychology)

Departmental Member**Abstract**

Adolescence heralds a unique period of vulnerability to depressive symptoms. The current study examined relational victimization, targeting adolescents' interpersonal relationships, as a unique predictor of depressive symptoms in a broad age range of adolescents. Past research shows that interpersonal resources—particularly emotional support—are negatively related to depression. In this study, the moderating effects of emotional support from mothers, fathers, and peers on the association between relational victimization and depressive symptoms were investigated. As expected, high levels of maternal and peer emotional support buffered the association between relational victimization and depressive symptoms. Emotional support from fathers did not moderate this relationship. Findings also suggest that while support from peers is protective against concurrent depressive symptoms, it can be detrimental to adolescent's mental health over time. In contrast, maternal emotional support buffers future depressive symptoms associated with past experiences of relational victimization.

Table of Contents

Title Page.....	i
Supervisory Committee.....	ii
Abstract.....	iii
Table of Contents.....	iv
List of Tables.....	v
List of Figures.....	vi
Acknowledgments.....	vii
Introduction.....	1
Problem and Scope.....	1
Emotional Support as a Predictor of Adolescent Depressive Symptoms.....	4
Peer Victimization.....	9
Who Gets Victimized.....	12
Associations between Peer Victimization and Depressive Symptoms.....	13
The Current Study.....	20
Method.....	28
Participants.....	28
Procedure.....	29
Measures.....	29
Data Screening.....	33
Results.....	34
Discussion.....	54
References.....	65
Appendix A: Victimization Measures.....	78
Appendix B: Depressive Symptoms Measure.....	79
Appendix C: Parental Emotional Support Measures.....	80
Appendix D: Peer Emotional Support Measure.....	81
Appendix E: Aggression Measures.....	82
Appendix F: Parental Psychological Control Measures.....	83

List of Tables

<i>Table 1.</i> Zero-order correlations between depressive symptoms, victimization, emotional support, and sex at <i>T1</i> and <i>T2</i>	36
<i>Table 2.</i> Mean scores on observed variables at <i>T1</i> and <i>T2</i>	37
<i>Table 3.</i> Sex differences in mean scores on observed variables at <i>T1</i> and <i>T2</i>	38
<i>Table 4.</i> Age group differences in mean scores on observed variables at <i>T1</i> and <i>T2</i>	39
<i>Table 5.</i> Summary of hierarchical regression analysis for variables predicting depressive symptoms at <i>T1</i>	42
<i>Table 6.</i> Summary of hierarchical regression analysis for variables predicting depressive symptoms at <i>T2</i>	43
<i>Table 7.</i> Summary of hierarchical regression analysis for variables predicting depressive symptoms across time.....	44
<i>Table 8.</i> Summary of hierarchical regression analysis for variables predicting relational victimization at <i>T1</i>	46
<i>Table 9.</i> Summary of hierarchical regression analysis for variables predicting relational victimization at <i>T2</i>	47
<i>Table 10.</i> Summary of hierarchical regression analysis for variables predicting relational victimization across time.....	48

List of Figures

<i>Figure 1.</i> Proposed model of the associations between (1) <i>T1</i> relational victimization and <i>T2</i> depressive symptoms, and (2) the moderating effects of <i>T1</i> maternal emotional support.....	24
<i>Figure 2.</i> Proposed model of the associations between (1) <i>T1</i> relational victimization and <i>T2</i> depressive symptoms, and (2) the moderating effects of <i>T1</i> peer emotional support.....	27
<i>Figure 3.</i> Graphical depiction of the moderating effects of peer emotional support on the concurrent relationship between relational victimization and depressive symptoms at <i>T1</i>	50
<i>Figure 4.</i> Graphical depiction of the moderating effects of maternal emotional support on the longitudinal relationship between relational victimization and depressive symptoms.....	53

Acknowledgments

I would first like to thank my supervisor, Dr. Bonnie Leadbeater, whose knowledge, guidance and support have been invaluable to this work and to my development as a researcher. I also send kind regards to my committee members, Dr. Marsha Runtz and Dr. Erica Woodin, for their constructive advice that has strengthened this thesis tremendously. In addition, I thank the Community Alliance for Health Research (CAHR) team at the University of Victoria for allowing me to use the Healthy Youth Survey data. This thesis was also generously supported by a Junior Graduate Research Trainee Award from the Michael Smith Foundation for Health Research (MSFHR).

Interpersonal Resources and Vulnerabilities:
The Influence of Parents and Peers on Depressive Symptoms in Relationally Victimized
Adolescents

Problem and Scope

Ample research has demonstrated that the experience of depressive symptoms among adolescents is both widespread and problematic. For example, a 2004 Health Canada report on the health and well-being of adolescents stated that 21% to 36% of 12-16 year old males and females report “feeling depressed” (Boyce, 2006). Alarming rates have also been obtained in research examining clinically significant (i.e., “diagnosable”) levels of depressive symptoms. For example, in a longitudinal study of Statistics Canada’s National Population Health Survey (NPHS), Galambos, Leadbeater, and Barker (2004) found that approximately 11 - 21% of adolescents aged 12 to 23 years met criteria for a Major Depressive Episode (MDE).

Diagnostic criteria for MDE include a 2-week period of depressed mood and/or loss of pleasure (which can be substituted with irritability in adolescents), along with at least four somatic or cognitive symptoms, including weight or appetite changes, changes in sleep, psychomotor difficulties, loss of energy, worthlessness or guilt, concentration problems or indecisiveness, and thoughts of suicide or death (American Psychiatric Association, 2000). Consistent with other research findings, Galambos et al. reported the lowest level of depressive symptoms in their youngest (14-year-old) participants and observed increases in adolescents’ depressive symptoms over time. In stark contrast, both preschool and preadolescent school-age children show extremely low rates of depression and depressive symptoms—generally less than 3% (Hammen & Rudolph, 2003). Clearly,

adolescence represents a unique period of vulnerability to depressive symptoms that requires continued research attention.

Moreover, depressive symptoms in adolescence can herald a chronic and continuous mental health problem (Lewinsohn & Essau, 2002). Indeed, recent findings suggest that for many adults diagnosed with depression, its onset can be traced back to their adolescent years. Studies of the cumulative effects of elevated adolescent depressive symptoms over time have also highlighted their gravity. In a 10–15 year longitudinal study, adolescents who had clinically significant levels of depressive symptoms were at a significantly higher risk for suicide, suicide attempts, recurrent depressive episodes, and psychiatric and medical hospitalizations than their non-depressed peers (Weissman et al., 1999). As adults, their lives were characterized by general maladjustment, including impairments in work, family, and social realms. Similarly poor outcomes have been reported in longitudinal studies of adolescents with sub-clinical levels of depressive symptoms (e.g., Gotlib, Lewinsohn, & Seeley, 1995). Other research shows that when depressive symptoms accompany another illness, adolescents' use of health services, responses to interventions, and treatment outcomes are all negatively affected (Cicchetti & Toth, 1998). Finally, depressive symptoms are also associated with risk-taking behaviours in adolescence, such as smoking and substance use (Nansel et al., 2001).

Despite relatively equal rates of depression in girls and boys prior to adolescence, most findings concur that between the ages of approximately 12 to 15, adolescent girls' rates increase rapidly and a sex difference in depression of about 2:1 is consistent thereafter (e.g., Galambos et al., 2004; Leadbeater, Quinlan, & Blatt, 1995; Nolen-Hoeksema & Girgus, 1994). Of particular interest to the current study is the theory that

interpersonal problems play a significant role in explaining this sex difference. Feingold (1994) stated that relational orientation is one of the most consistent psychological differences between males and females. Females form strong emotional attachments with others and view these ties as central to their self-concepts. As such, girls' greater investment in relationships than boys may increase their vulnerability to interpersonal disruptions (Leadbeater et al., 1995; Nolen-Hoeksema & Girgus, 1994; Rudolph et al., 2000; Rudolph & Hammen, 1999). Indeed, research shows that females are more negatively affected than males by events that disrupt their social relationships (Nolen-Hoeksema, 2006). For example, in a study of preadolescents and adolescents, Rudolph et al. (2000) found that severity of depressive symptoms—particularly in girls—was associated with self-reports of interpersonal stress, after controlling for externalizing symptoms and non-interpersonal sources of stress.

Recent research has consistently linked the experience of peer victimization to depressive symptoms in children. Moreover, a majority of available studies with adolescents report a stronger association between victimization and depressive symptoms in females than males (e.g., Baldry, 2004; Leadbeater, Boone, Sangster, and Mathieson, 2006; Prinstein, Boergers, & Vernberg, 2001; Storch, Phil, Nock, Masia-Warner, & Barlas, 2003; Vuijk, van Lier, Crijnen, & Huizink, 2007). An objective of the current study is to investigate how adolescents' interpersonal relationships with parents and peers operate to produce depressive symptoms at differential rates in male and female adolescents, particularly in the context of victimization that targets adolescents' relationships (i.e., relational victimization). Moreover, as a highly relational phenomenon, peer relational victimization has been shown to contribute to the

development of depressive symptoms in females more than males. At the same time, however, access to interpersonal resources including parental and peer emotional support may buffer the negative effects of victimization. Hence, a primary purpose of this study is also to investigate the moderating effects of maternal, paternal, and peer emotional support on changes in depressive symptoms in adolescents who experience peer relational victimization. A greater understanding of these issues will lead not only to increased knowledge about the etiology of adolescents' depressive symptoms, including possible sex differences in the development and course of depressive symptoms, but will also inform treatment and prevention efforts targeting victimized youth with elevated depressive symptoms.

Emotional Support as a Predictor of Adolescent Depressive Symptoms

At present, little research exists that examines interpersonal relationships as potential buffers against the depressive symptoms associated with relational victimization in adolescence. Interpersonal resources such as parental and peer emotional support are frequently cited as protective factors for depressive symptoms in general (e.g., Cohen & Wills, 1995; Nolen-Hoeksema, 2006). Indeed, parental and peer emotional support have been shown to predict decreases in depressive symptoms in adolescents, especially females (e.g., Barrera, Chassin, & Rogosch, 1993; Carbonell, Reinherz, & Giaconia, 1998; Helsen, Vollebergh, & Meeus, 2000). Thus, research investigating the influence of these interpersonal relationship dynamics on the depressive symptoms associated with relational victimization is warranted to better understand and respond to adolescents who are relationally victimized.

Popular views often portray adolescent-parent relationships as tumultuous and conflictual, with peers replacing parents as the most significant individuals in adolescents' lives. In contrast to this "storm and stress" view, researchers now generally agree that parent-child relations continue to be important throughout adolescence. Family relations remain the primary context for social influence and security (Meece & Laird, 2006). Research shows that the overwhelming majority of adolescents report closeness with their parents, feel their parents love and care for them, value their parents' opinions, and respect their parents as authority figures (Peterson, 2005). Importantly, available research also suggests that perceived parental support is the best indicator of emotional problems in adolescents, including depressive symptoms (e.g., Barrera et al., 1993; Carbonell et al., 1998; Helsen et al., 2000; Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). At the same time, relationships with peers do become increasingly important in early adolescence and these are characterized by higher levels of self-disclosure, intimacy, and support than in childhood (Meece & Laird, 2006). Moreover, research has shown that the quality of peer relationships is also associated with depressive symptoms (Hartup, 1996). Thus, researchers no longer view parents and peers as competing sources of influence during adolescence. Instead, much of the current literature seeks to understand how these two types of relationships function together to enhance or disrupt the lives of adolescents (Collins & Laursen, 2004). As such, the current study investigates aspects of both parental and peer relations as potential buffers against depressive symptoms associated with relational victimization in adolescents.

Past research suggests that support obtained from interpersonal relationships can both decrease the likelihood of psychological maladjustment and increase well-being (see

Cohen & Wills, 1985, for a review). Indeed, findings reveal a robust inverse relation between social support and depressive symptoms, and it is likely that the influence is reciprocal (e.g., Roberts & Gotlib, 1997). Broadly, social support refers to the positive, potentially health-promoting aspects of interpersonal relationships such as instrumental aid, provision of information, emotional concern, and emotional support (House, Umberson, & Landis, 1988). Clearly, social support is a complex, multidimensional construct that may be particularly relevant to buffering adolescents' depressive symptoms. This study focuses on one particular element of the broad social support construct: emotional support. Although descriptions vary by study, emotional support has been defined as "the extent to which personal relationships are perceived as close, confiding, and satisfying" (Slavin & Rainer, 1990, p. 409). Others have included acceptance and listening by providers as key components of emotional support (Colarossi & Eccles, 2003; Demaray & Malecki, 2003). Evidence linking support variables with psychological outcomes appears to be strongest for the emotional support component (House, Kahn, McLeod, & Williams, 1985). Moreover, emotional support has been characterized as the type of support that is most salient in response to the widest variety of stresses (Cohen & Wills, 1985). These findings, coupled with depressive symptoms—a largely emotional problem—as the primary outcome of interest in the current study, suggest that emotional support in particular is a relevant, meaningful construct worthy of attention. As such, the current study will investigate whether emotional support from parents and peers in adolescents' lives serves as a buffer against depressive symptoms in the context of peer relational victimization.

Emotional support from parents and peers. Research focusing on the effects of emotional support in adolescents has found that it is related to both concurrent and future depressive symptoms, but findings differ for males and females and depend on who provides the support (e.g., Barrera & Garrison-Jones, 1992; Schraedley, Gotlib, & Hayward, 1999). For example, Newcomb (1990) conducted a longitudinal study of the predictive relation between levels of parental and peer support and depressive symptoms and self-esteem one-year later. High parental support for girls predicted low depressive symptoms, whereas high parental support for boys predicted high self-esteem. Overall levels of peer support were lower for boys compared to girls; however, peer support predicted low depressive symptoms for boys but not girls. In another prospective study, Colarossi and Eccles (2003) found that high maternal and peer emotional support predicted decreases in adolescents' levels of depressive symptoms one year later. Maternal support emerged as a stronger predictor of depressive symptoms for both boys and girls than peer support. This finding is consistent with extensive research suggesting that maternal support is the best source of support for predicting emotional problems during adolescence (e.g., Barrera et al., 1993; Carbonell et al., 1996; Helsen et al., 2000; Stice et al., 2004). Perceived levels of paternal support were lower than maternal support in Colarossi and Eccles's study, particularly for females, and paternal emotional support was not a significant predictor of depressive symptoms. Whereas past researchers have tended to aggregate measures of maternal and paternal support into a single construct, these findings suggest that they should be assessed separately. Accordingly, independent measurements are used in this study.

Other research focusing on peer support shows that findings regarding the effects of peer support on adolescents' mental health outcomes are mixed. For example, Colarossi and Eccles (2003) found that despite adolescent girls' tendency to report more support from their peers than adolescent boys, the effect of peer support on depressive symptoms was significant for both. Research by Slavin and Rainer (1990) similarly found higher levels of self-reported peer support for girls than boys; however, peer support predicted changes in depressive symptoms only in girls. Conversely, Newcomb (1990) found that high peer support predicted lower levels of depression in adolescent boys, but not girls. Stice, Ragan, and Randall (2004) reported that deficits in peer support did not predict increases in depressive symptoms eight months later in a large sample of adolescent girls. Finally, Helsen et al. (2000) found that the effect of peer support on emotional problems (depressive symptoms, suicidal thoughts, general physical complaints, and lack of general well-being and happiness) was moderated by adolescents' levels of perceived parental support. In the context of high parental support, those who reported high levels of peer support showed slightly fewer emotional problems than those who reported low levels of peer support. In the context of low parental support, however, those who reported high levels of peer support showed greater emotional problems than those who reported low levels of friends' support.

In sum, some studies suggest that emotional support may differentially affect male and female adolescents' psychological health (e.g., Newcomb, 1990; Schraedley et al., 1999; Slavin & Rainer, 1990), whereas others do not (e.g., Colarossi & Eccles, 2003; Cumsille & Epstein, 1994). Furthermore, the protective capacity of emotional support appears to differ depending on the identity of the support provider. Of mothers, fathers,

and peers, support from mothers is most strongly related to adolescents' depressive symptoms. Although paternal support was not related to depressive symptoms in the study by Colarossi and Eccles (2003), little research has examined the unique influence of paternal support. The present study measures both maternal and paternal emotional support independently. Finally, although findings linking peer emotional support to depressive symptoms are inconsistent, peers play an increasingly central role in the lives of adolescents and the influence of the support they provide needs to be better understood. This study aims to elucidate the potentially protective effects of emotional support from different support providers on male and female adolescents' depressive symptoms in the context of one particularly problematic interpersonal domain—namely, victimization by peers.

Peer Victimization

Recent research has identified aspects of adolescents' peer relationships that may contribute to the understanding of both the increase in depressive symptoms in adolescence, and the sex difference in depression that appears at this time. Specifically, peer victimization is a notable risk factor for the development of elevated depressive symptoms in children and adolescents. A number of high-profile instances in which adolescents have been victimized by their peers have stirred considerable research interest as well as unease in the general public. What is startling about these cases is that many of the victims were not physically bullied. Instead, they were repeatedly harassed, intimidated, threatened, taunted, embarrassed and/or excluded by their peers to such a degree that they became shocking news stories—some due to their unnecessarily tragic outcomes. Whereas past studies have mainly focused on physical forms of victimization

in children, more recent research has begun to explore social or relationship-focused victimization and its outcomes.

Peer victimization occurs when a child or adolescent is the repeated target of aggressive behaviour imposed by non-familial others, usually peers, although the perpetrator(s) and victim may be of different ages (Hawker & Boulton, 2000). Such aggressive behaviour may include an extensive range of chronic bullying, teasing, exclusion, and harassment. *Overt victimization* occurs when a child or adolescent is hit, kicked, shoved, pushed or punched by his or her peers (i.e., *physical victimization*), or when threats of such actions are made. As physical forms of aggression and victimization are overt, their occurrence tends to be readily recognizable. Considerable research has focused on physical aggression and victimization (see Olweus, 1993, for a review). Whereas instances of physical victimization decrease as children get older (NICHD Early Child Care Network, 2004), the occurrence and execution of non-physical victimization, sometimes referred to as indirect, social, or relational victimization, becomes more prominent during adolescence (Craig, 1998). These latter terms denote slightly different versions of non-physical bullying, some of which capture a very broad range of harmful behaviours that are directed toward peers. The present study focuses on relational victimization in particular as a specific, relationally-oriented form of victimization in which victims are harmed through hurtful manipulation of or damage to their peer relationships (Crick & Grotpeter, 1996). Thus, the term relational victimization will be used henceforth.

Relational victimization is a type of peer victimization in which a child or adolescent is the target of interpersonal manipulation that threatens his or her reputation,

social status, and/or friendships. Relational victimization includes having rumours spread about oneself, being deliberately excluded from social exchanges and events, having friends threaten to withdraw their friendship if the victim does not comply with their demands, and other forms of social manipulation (Crick & Bigbee, 1998). Relational victimization can include covert acts that are less noticeable to researchers and other adults. Nevertheless, research shows that adolescents distinguish between overt and relational forms of victimization (Prinstein et al., 2001). Factor analytic studies have also yielded distinct factors for ratings of relational and physical victimization across several frequently used self-report measures of victimization in youth (e.g., Social Experiences Questionnaire [SEQ], Crick & Grotpeter, 1996; Revised Peer Experiences Questionnaire [RPEQ], Prinstein et al., 2001).

Results from a meta-analysis of research with community-based samples suggest that 10% to as many as 30% of children and adolescents are chronically victimized (Hawker & Boulton, 2000). In a sample of 13 to 17 year-olds from a moderately sized Canadian city, Leadbeater et al. (2006) found that 32.9% of adolescents were victimized (relational plus physical victimization). Less is known about rates of relational forms of victimization in particular, especially in adolescents. In one study, however, as many as 51% of 13 to 15 year-olds reported being relationally victimized by their peers (Bond, Carlin, Thomas, Rubin, & Patton, 2001). Vuijk et al. (2007) also found that one-third of 11 to 15 year-olds were relationally victimized. As recommended by Crick et al. (2001), research is needed to better understand relational victimization in age periods other than middle childhood. This study aims to build on current knowledge by investigating the

prevalence of relational victimization and its outcomes in adolescents as they transition to young adulthood.

Who Gets Victimized?

Most research concerning the determinants of chronic victimization by peers has been conducted with elementary school children rather than adolescents. Findings suggest that a minority of children occupy stable and consistent roles as victims (e.g., Hodges & Perry, 1999; Olweus, 1978). Not surprisingly, research has shown that children who are rejected by their peers or have no, or very few friends, tend to be targets for victimization (Hodges et al., 1997). Other interpersonal risks for being victimized include a history of insecure attachment; intrusive, overprotective parenting; and parental psychological control (e.g., Finnegan, Hodges, & Perry, 1998; Ladd & Ladd, 1998; Troy & Sroufe, 1987). Little research has been conducted on the family backgrounds of victims of peer aggression, but factors that contribute to disorganized, inconsistent, and harsh parenting and home environments are likely to contribute to victimization by peers (Perry, Hodges, & Egan, 2001).

Some research suggests that deviant physical characteristics (e.g., obesity, speech problems) may be less important than other personal factors in making children targets for victimization, although physical weakness does appear to be a risk factor (Olweus, 1978; Perry et al., 2001). Other qualities such as lack of social skills (e.g., friendliness, sharing, cooperating, appropriately joining in play with others), submissiveness, and poor self-concept have also been linked to being the target of victimization (Egan & Perry, 1998; Schwartz, Dodge, & Coie, 1993). Finally, both externalizing (e.g., aggressive, disruptive, hyperactive and antisocial) and internalizing (e.g., socially withdrawn, fearful,

anxious and depressive) behaviours have been shown to predict victimization (Boulton, 1999; Hodges et al., 1999). Although most studies are cross-sectional, a few longitudinal studies show that depressive symptoms in particular can lead to future victimization (Hodges & Perry, 1999; Leadbeater & Hoglund, in press; Sweeting, Young, West, & Der, 2006).

Associations Between Peer Victimization and Depressive Symptoms

Peer victimization in general. Past evidence suggests that peer victimization *in general* is linked to significant maladjustment, particularly depressive symptoms (see Olweus, 1993 for a review). Hawker and Boulton (2000) conducted a meta-analysis of published cross-sectional studies examining the association between victimization and various forms of psychosocial maladjustment. Participants ranging from young children to adolescents from diverse countries were included in the meta-analysis, as were studies of different subtypes of victimization and social-psychological difficulties. Victimization was significantly related to concurrent self-report measures of both social and psychological maladjustment. Moreover, compared to other forms of adjustment (i.e., loneliness, generalized and social anxiety, global and social self-worth), depressive symptoms were most strongly related to victimization. This association was significant regardless of whether peers assigned or participants self-rated their victim status, with effect sizes ranging from .29 to an astonishing .81, respectively. This pattern of results, collated across numerous studies, strongly suggests that victims of peer aggression suffer from emotional distress, particularly symptoms of depression, compared to their non-victimized peers. The authors argue that such distress “can no longer be ignored” (p. 453).

While the majority of past research linking victimization in general and maladjustment has focused on middle age children (approximately 8 to 13 years of age), cross-sectional findings with adolescent samples are also available (e.g., Baldry, 2004; Ivarsson, Broberg, Arvidsson, & Gillberg, 2005; Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000; Prinstein et al., 2001). For example, Roland (2002) investigated depressive symptoms and suicidal thoughts in victims, bullies, and neutral 14-year olds in a representative sample of Norwegian adolescents. Physical and relational forms of victimization and aggression were both assessed by self-report but were not analyzed separately; depressive symptoms included both psychological and psychosomatic symptoms reflected in current diagnostic criteria. Victims and bullies had significantly higher ratings of depressive symptoms than their peers who were neither victims nor bullies. Victimized adolescents had significantly higher ratings of depressive symptoms than bullies did. In a study of 14 to 17 year-olds in the United States, Seals and Young (2003) similarly found that although levels of depressive symptoms did not differ significantly between victims and bullies, both bullies and victims reported greater depressive symptoms than adolescents who were neither bullies nor victims. Eighth, ninth, and tenth grade victims—particularly girls—also reported more depressive symptoms than their non-victimized peers, regardless of whether they were bullies or not, in a study by Leadbeater et al. (2006). Finally, Roland found that the 14-year-old victims in his sample experienced more suicidal thoughts than non-victims, which has also been reported in other studies (e.g. Ivarsson et al., 2005; Rigby & Slee, 1999). Also noteworthy are findings linking victimization to increased suicide risk in adolescence, which is in turn frequently associated with symptoms of depression (Weissman et al.,

1999). Thus, cross-sectional findings suggest a strong link between victimization *in general* and depressive symptoms in adolescence.

Of course, a strong limitation of these cross-sectional findings is the difficulty understanding the direction of these relationships. Children and adolescents' manifestations of depressive symptoms may precede victimization by peers. As discussed, depressive symptoms have been shown to be a risk factor for peer victimization (e.g., Hodges & Perry, 1999). Many researchers studying the effects of victimization on psychological functioning have acknowledged this possible direction of effects (e.g., Kaltiala-Heino et al., 2000; Roland, 2002), yet few studies have addressed it directly. Sweeting et al. (2006) used structural equation modeling to test competing directional hypotheses about the association between depressive symptoms and general victimization in a sample of 11-year olds measured biannually over 5 years. Their findings provide evidence for a reciprocal relationship between these constructs, with depressive symptoms predicting victimization as well as peer victimization predicting depressive symptoms in 13-year olds. In light of this, although the negative consequences that follow from peer victimization are the primary focus of this study, I will also examine whether depressive symptoms predict victimization both concurrently and across time.

Longitudinal research also shows that peer victimization *in general* is associated with a variety of later adjustment problems, including loneliness, peer rejection, low self-esteem, anxiety, and depressive symptoms (Casey-Cannon, Hayward, & Gowen, 2001; Hanish & Guerra, 2002; Kochenderfer-Ladd & Wardrop, 2001; Nishina, Juvonen, & Witkow, 2005; Prinstein et al., 2001; Troop-Gordon & Ladd, 2005). Furthermore, most

findings show that females are more vulnerable to the negative mental health consequences that may follow from it (e.g., Hawker & Boulton, 2000; Leadbeater et al., 2006; Rigby, 1999). In a prospective study of 13-year olds, Bond et al. (2001) examined the relation between recurrent peer victimization and onset of anxious and depressive symptoms. Adolescent self-ratings were obtained at three separate time points over a two-year period. The authors found that peer victimization, including overt and relational victimization, at both times one and two were significantly associated with symptoms of anxiety and depression at final measurement. However, after controlling for demographic variables and adolescents' perceived availability of "having someone to talk to or depend on when angry, upset...or having a tough time," being victimized had a significant negative impact on the future emotional well-being of young adolescent girls but not boys (p. 481).

In another longitudinal study, Rigby (1999) also found sex differences in predicting the future psychological and physical health of victimized adolescents. He assessed peer victimization and health status in first- and second-year high school students ($M = 13.8$ years) and again three years later. Victimization was associated concurrently with poor physical and mental health, including symptoms of depression and anxiety for both boys and girls. Moreover, a high level of peer victimization at first assessment predicted decreases in physical health three years later in both boys and girls; however, it predicted decreases in mental health (i.e., more symptoms of depression and anxiety) for girls only. Paul and Cillessen (2003) similarly found that victimization predicted increases in depressive symptoms, anxiety, and negative self-perceptions in adolescent girls—but not boys—one year later.

Finally, Olweus (1992) conducted a longitudinal study in which only male participants were assessed first as adolescents and again six years later as young adults. Self-identified victims at first assessment had significantly elevated depressive symptoms both concurrently and six years later, compared to non-victimized males. Importantly, Olweus's findings suggest that maltreatment by peers in adolescence is associated with depressive symptoms in adulthood.

Relational victimization. Recent studies have consistently linked the experience of *relational* victimization, in particular, to poor psychological adjustment, including depressive symptoms (e.g., Baldry, 2004; Leadbeater et al., 2006; Prinstein et al., 2003). With a childhood sample, Crick and Grotpeter (1996) found that self-reported relational victimization was significantly and uniquely related to concurrent depressive symptoms, loneliness, and social anxiety after adjusting for overt victimization experiences. A similar unique effect of relational victimization in predicting social-psychological difficulties, including depressive symptoms, above and beyond overt victimization and children's own acts of both physical and relational aggression was reported by Crick and Bigbee (1998) with a sample of fourth- and fifth-grade children using a multi-informant approach. Finally, Crick, Casas, and Ku (1999) reported a distinctive contribution of relational victimization, after adjusting for physical victimization, to the prediction of internalizing difficulties and peer relationship problems in preschoolers.

Several studies have reached similar conclusions linking relational victimization and depressive symptoms in adolescent samples. For example, Baldry (2004) found that being a victim of relational aggression was the strongest predictor of depressive symptoms in a sample of Italian 11 to 15 year-old girls and boys, compared to other

victimization experiences and their own levels of both direct and indirect aggression. Leadbeater et al. (2006) also reported that relationally victimized eighth to tenth-graders had the highest levels of depressive symptoms compared to their typical, aggressive, and aggressive/victimized peers. In an ethnically diverse sample of adolescents in grades 9 to 12, Prinstein et al. (2001) also found that relational victimization was independently associated with concurrent social-psychological maladjustment, including depressive symptoms, loneliness, low self-esteem, and externalizing symptoms after controlling for the students' own levels of aggression. Furthermore, when compared to experiences of overt victimization, the association of relational victimization to internalizing symptoms (i.e., depressive symptoms, loneliness, and low self-esteem) was higher in girls than boys. Similarly, Storch et al. (2003) found that relational victimization was uniquely related to depressive symptoms after controlling for overt victimization in a sample of 10- to 13-year old Hispanic and African-American preadolescents—but only for girls.

Lastly, as part of a randomized intervention trial, Vuijk et al. (2007) assessed levels of victimization, depressive symptoms, and anxiety symptoms longitudinally in a sample of 448 children at 7, 10, and 13 years of age over a period of three years. Self-reported rates of physical and relational victimization among youth in the intervention group decreased compared to those in control groups, as did symptoms of depression and anxiety. The authors also found that reductions in depressive symptoms were uniquely accounted for by decreases in relational victimization, whereas reductions in symptoms of anxiety were accounted for by reductions in both physical and relational victimization. Finally, the association between relational victimization and depressive symptoms was

stronger among girls compared to boys, although mean levels of relational victimization did not significantly differ by sex.

It is thus clear that the experience of relational victimization is associated with depressive symptoms both concurrently and in the short-term future. Together, research findings suggest that among both children and adolescents, relationally aggressive peer behaviours are distressful and hurtful for their victims. This is particularly true for adolescent females, as available research suggests a stronger association between relational victimization and elevated depressive symptomatology in girls. Girls' specific vulnerability is consistent with the theory that they show a greater relational orientation than boys, and that disruptions or threats in this realm are more harmful for them (e.g., Leadbeater et al., 1995; Leadbeater et al., 2006; Nolen-Hoeksema, 2006; Rudolph et al., 2000; Rudolph & Hammen, 1999). Indeed, available findings with children show that girls feel more emotionally distressed by their peers' relationally aggressive acts than boys do (Crick, 1995).

The present study investigates the relationship between adolescents' relational victimization and depressive symptoms concurrently and two years later. Consistent with both past findings and theory regarding females' greater relational orientation and vulnerability, peer relational victimization is expected to predict greater depressive symptoms in females than males. However, past research has not examined how access to interpersonal resources, including parental and peer emotional support, may moderate the effects of victimization in girls and boys. This study investigates emotional support as a potentially protective process that could be maximized in the future to optimally influence adolescents' mental health. Thus, the present study will contribute to

knowledge of how interpersonal risk (peer relational victimization) and protective (parental and peer emotional support) factors function together to predict depressive symptomatology in a broad age range of adolescents. Findings should inform both treatment and prevention efforts targeting youth with depressive symptoms, as well as bullying and intervention strategies for adolescents who experience relational victimization.

The Current Study

This study assesses relations between victimization by peers and depressive symptoms in the context of the emotionally supportive climate in which relational victimization takes place. To evaluate the supportive context of victimized adolescents, three moderators are investigated (i.e., variables hypothesized to influence the direction or strength of the variables of interest; Baron & Kenny, 1986). The proposed moderators are adolescents' levels of perceived emotional support from mothers, fathers, and peers. All buffering models are tested both cross-sectionally and longitudinally.

Relational victimization and depressive symptoms. The majority of research on relational victimization focuses on middle age children and preadolescents. The current study contributes to this extensive literature by studying relational victimization and depressive outcomes in a large, random sample of adolescents transitioning to young adulthood. A number of specific hypotheses concerning the direct relationships between relational victimization and depressive symptoms will be tested. First, it is expected that relational victimization will predict concurrent and future depressive symptoms in both boys and girls. Second, it is hypothesized that the concurrent and longitudinal relationships between relational victimization and depressive symptoms will be stronger

for girls than boys. Finally, in light of research suggesting that depressive symptoms increase in adolescence, age will also be examined as a moderator of the relationship between relational victimization and depressive symptoms (e.g., Galambos et al., 2004; Leadbeater et al., 1995; Nolen-Hoeksema, 1994). Specifically, it is hypothesized that the concurrent and longitudinal relationships between relational victimization and depressive symptoms will be stronger for older adolescents than for younger adolescents. Finally, exploratory analyses will investigate whether the presence of depressive symptoms predicts relational victimization by peers both cross-sectionally and across time. Consistent with the findings of Sweeting et al. (2006), it is expected that depressive symptoms will predict concurrent and future relational victimization in both boys and girls.

Emotional support and depressive symptoms. Based on the literature reviewed, certain sex and age group differences in emotional support variables and depressive symptoms are expected (e.g., Colarossi & Eccles, 2003; Galambos et al., 2004). With respect to emotional support, the following hypotheses are made: boys will report higher levels of emotional support from fathers than girls; girls will report higher levels of emotional support from peers than boys; younger adolescents will report greater emotional support from mothers and fathers than older adolescents; and older adolescents will report greater emotional support from peers than younger adolescents. With respect to depressive symptoms, it is anticipated that girls will report higher depressive symptoms than boys, and older adolescents will report greater depressive symptoms than younger adolescents.

Parental emotional support as moderators. Emotional support provided by mothers has been shown to have a significant impact on adolescents' depressive symptomatology, with high support predicting fewer depressive symptoms (e.g., Barrera et al., 1993; Carbonell et al., 1996; Colarossi & Eccles, 2003; Helsen et al., 2000; Stice et al., 2004). Nevertheless, research examining parent-child dynamics in the context of adolescents' experiences of peer victimization is scarce beyond acknowledgement that parents are likely important to anti-bullying efforts. However, two studies in this area have recently emerged.

Demaray and Malecki (2003) investigated the perceived social support (including an emotional support component) from parents, teachers, and friends, as well as the perceived importance of these sources of support, in a large sample of adolescents classified as bullies, victims, bully-victims, or neutral to bullying (i.e., neither victims nor bullies). Findings revealed that those involved in bullying as victims, bullies, or bully-victims reported lower levels of parental support than adolescents who were neutral to bullying. Interestingly, however, both victims and bully-victims rated parental support as more important than bullies and neutral adolescents. As the authors suggest, these findings are especially concerning because victims of peer victimization reported inadequate levels of parental support—yet the victims in this sample valued it greatly. Although the direction of the relationship between victimization and low peer support was not discernible in this study, findings reveal that parental support is especially meaningful to adolescent victims of peer harassment.

In a study of the link between peer victimization and mental and physical health, Baldry (2004) examined the potential buffering effect of the quality of the parent-child

relationship in a sample of Italian 11–15 year olds. Relationship quality ratings were based on three items, rated on a 5-point scale ranging from ‘never’ to ‘always’: whether the mother/father was “nice” to them; whether the mother or father “helped” them when needed; and whether the adolescent “agreed” with the mother/father. Victims of peer aggression who reported having a positive relationship with their mother had significantly lower depressive symptoms than victims who reported a poor maternal relationship. Quality of the paternal relationship did not contribute significantly to the prediction of depressive symptoms. The small number of items used to assess parental relationship quality and the relatively vague support component measured limits interpretation of these results. Overall, however, Baldry’s (2004) findings suggest that the general perceived quality of the maternal-child relationship, in particular, plays a significant role in the association between peer victimization and depressive symptoms in adolescence.

The current study aims to expand on these findings by examining the buffering effects of parental and peer emotional support on the relationship between relational victimization (controlling for physical victimization) and depressive symptoms in adolescents. The “stress-buffering” hypothesis proposes that support functions as a cushion or barrier that safeguards individuals from the potentially harmful influences of stressful events (Cohen & Wills, 1985). Emotional support may intervene between victimization and depressive symptoms via several possible mechanisms, such as stress reappraisal, solution generation, reductions in the perceived significance or consequence of a stressor, and the promotion of healthy behaviours (e.g., coping). On the other hand, a lack of perceived emotional support may affect adolescents’ psychological health by

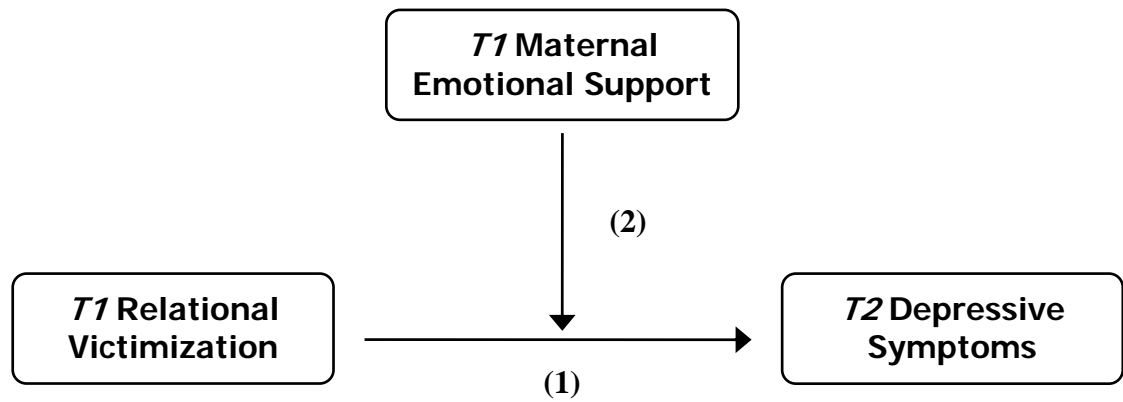


Figure 1. Proposed model of the associations between (1) Time 1 (*T1*) relational victimization and Time 2 (*T2*) depressive symptoms, and (2) the moderating effects of *T1* maternal emotional support.

decreasing beliefs that are negatively associated with depression, such as acceptance, self-worth, the belief that others can and will help when needed, and connectedness to others (Colarossi & Eccles, 2003).

In the current study, levels of maternal emotional support are expected to moderate the association between relational victimization and depressive symptoms two years later (see Fig. 1). Specifically, in the context of high levels of maternal emotional support, it is hypothesized that relational victimization will predict fewer depressive symptoms both concurrently and across time than it will in the context of low levels of maternal emotional support. Sex differences in these relationships will also be examined. Based on past research and theory, it is hypothesized that maternal emotional support will emerge as a stronger buffer of girls' depressive symptoms than boys' depressive symptoms.

Studies that have aggregated measures of maternal and paternal emotional support also report a buffering effect of emotional support on young adolescents' depressive symptoms (e.g., Newcomb, 1990), but the little available research examining the unique influence of paternal support suggests that it does not buffer depressive symptoms in adolescents (Baldry, 2004; Colarossi & Eccles, 2003). These findings are consistent with literature suggesting that the role of fathers is often overshadowed by that of mothers, and that adolescents spend less time with their fathers and perceive them as less understanding and less involved than mothers (see Shulman & Seiffge-Krenke, 1997, for a review). To increase our understanding of support provided by fathers, the current study investigates the moderating effects of paternal emotional support on the relationship between victimization and future depressive symptoms. Contrary to mothers, it is

expected that paternal emotional support will not moderate the relationship between relational victimization and depressive symptoms for boys and girls either concurrently or longitudinally. Rather, it is anticipated that maternal emotional support will emerge as a stronger buffer of adolescents' depressive symptoms than will paternal support.

Peer emotional support as a moderator. Although findings regarding the effects of peer emotional support on adolescents' depressive symptoms are mixed, a growing literature suggests that peers serve an important protective role for young children who are victimized. The presence of a best friend has been shown not only to reduce the probability of being victimized, but also the negative outcomes associated with victimization, including depressive symptoms, in elementary school children (Cowie, 2000; Crick & Grotpeter, 1996). For example, Hodges, Boivin, Vitaro, and Bukowski (1999) reported that victimization led to increases in internalizing symptoms (feeling sad, unfortunate, or close to tears; being fearful or afraid of novel things or situations; worrying; and preferring solitary work and activities) in a sample of fourth and fifth-graders. Internalizing symptoms in turn led to further victimization; however, this association was not found among victims who had a best friend. Current research has not investigated the protective effects of peer relationships in victimized adolescents, nor the specific effects of peer emotional support. Nevertheless, in a similar way that the effects of parental support on depression have been characterized, dyadic friendships that include companionship, support, closeness, and security are hypothesized to provide adolescents with valuable emotional support that serves as a buffer for stressors and, ultimately, poor mental health outcomes.

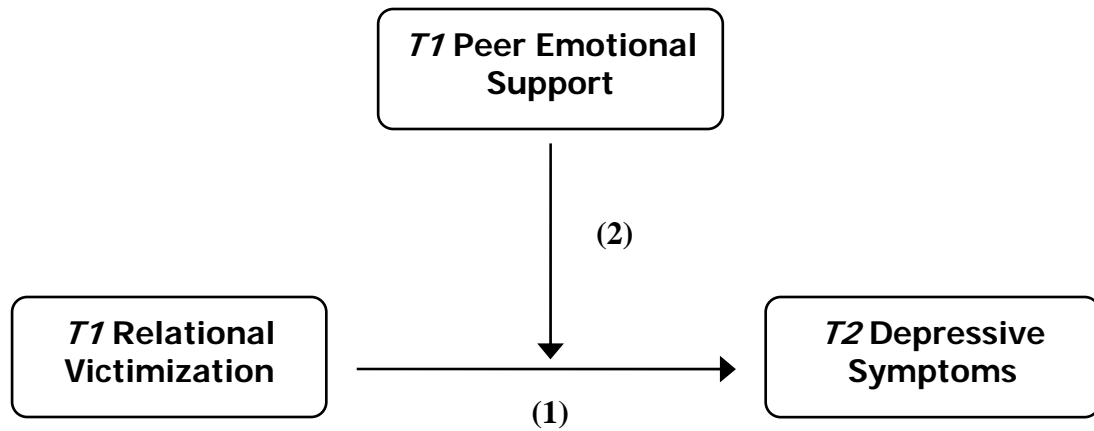


Figure 2. Proposed model of the associations between (1) *T1* relational victimization and *T2* depressive symptoms, and (2) the moderating effects of *T1* peer emotional support.

The current study seeks to investigate the influence of adolescents' perceived levels of peer emotional support on the relationship between relational victimization and depressive symptoms (see Fig. 2). Specifically, in the context of high levels of peer emotional support, it is expected that relational victimization will predict fewer concurrent and future depressive symptoms than it will in the context of low levels of peer emotional support. Sex differences in these relationships will also be examined. Based on past research, it is hypothesized that high peer emotional support will emerge as a stronger buffer of girls' depressive symptoms than boys' depressive symptoms. Also, recall that Helsen et al. (2000) found that the effects of peer support on depressive symptoms depended on adolescents' perceived parental support. Those who reported high levels of parental support showed a slightly positive effect for peer support, whereas adolescents who perceived low parental support showed a negative effect for friends' support. Following from these findings, potential interactions between relational victimization, peer emotional support, and maternal and paternal emotional support (separately) as predictors of adolescent's depressive symptoms will be investigated.

Method

Participants

Participants completed the first "Healthy Youth Survey" questionnaire in the spring of 2003 in a medium-sized Canadian city. The University of Victoria's Human Research Ethics Board approved the research. From a random sample of 9500 telephone listings, 1036 households with an eligible youth between ages 12 to 19 were identified. Of these, 187 youth refused participation and 185 parents or guardians refused their youth's participation. Complete data were available from 644 adolescents (322 boys; 342

girls). Due to the nature of the variables being studied (i.e., depressive symptoms, maternal and paternal emotional support), participants who indicated that one or more of their parents had died at either *T1* ($n = 13$) or *T2* ($n = 17$) were excluded from the analyses. At *T1*, data was used from 644 adolescents (317 boys; 327 girls) from 12 – 19 years of age ($M = 15.5$ years; $SD = 1.9$ years). The ethnic make-up of participants was 85% European-Canadian, 4% Asian or Asian-Canadian, 3% Aboriginal, and 8% other ethnicities. Eighty-seven percent of the original sample completed the survey again two years later. Of these, data was used from 563 adolescents (270 boys; 293 girls), ranging from 13 – 21 years ($M = 17.6$ years; $SD = 1.9$ years).

Procedure

Data were collected as part of the “Greater Victoria Healthy Youth Survey,” which is a large-scale study examining risk and protective factors and injury among BC youth. Adolescents were administered the survey by trained interviewers who met with them individually, either in their home or in a quiet location of their choice. In the first portion of the survey, interviewers read aloud the questions to participants and then recorded their responses. The measures of peer victimization, aggression, parental emotional support and peer emotional support used were collected in this manner. In the second portion of the study, interviewers similarly read the questions aloud; however, adolescents recorded their own answers. The measure of adolescents’ depressive symptoms was collected in this portion of the survey. The survey took approximately one hour to complete and the adolescents received a \$25.00 gift certificate as remuneration. The same procedure was employed at follow-up two years later.

Measures

Victimization. Self-reported experiences of peer victimization (both relational and physical) were measured using the Social Experiences Questionnaire (SEQ; Crick & Grotpeter, 1996; see Appendix A). Participants rated five items that assess the frequency of *relational* victimization (e.g., “How often do your peers tell lies about you to make others not like you anymore?”) on a 3-point scale (1 = never, 2 = sometimes, 3 = almost all the time). Total scale scores were computed by summing each participant’s scores for the items within each scale. Total scores for *relational victimization* ranged from 5 – 15. Internal consistency was adequate ($\alpha = .73$ at *T1*; $\alpha = .72$ at *T2*). Consistent with past research investigating the unique effects of relational victimization, adolescents’ experiences of physical victimization were controlled for in the current study (e.g., Crick & Grotpeter, 1996; Crick & Bigbee, 1998; Baldry, 2004; Prinstein et al., 2001; Vuijk et al., 2002). Participants self-rated their experiences of *physical* victimization on five items (e.g., “How often do you get pushed or shoved by your peers?”) on the same 3-point scale (1 = never, 2 = sometimes, 3 = almost all the time). Total scores for *physical victimization* ranged from 5 – 15. Internal consistency (α) was .67 at *T1* and .63 at *T2*.

Depressive symptoms. Adolescents’ depressive symptoms were assessed using five items from the adolescent self-report form of the Brief Child and Family Phone Interview (BCFPI; Cunningham, Pettingill, & Boyle, 2001; see Appendix C). Participants rated the frequency of their depressive symptoms (e.g., “How often do you notice that you feel hopeless?”) on a 3-point scale (1 = never, 2 = sometimes, 3 = often). Total scores ranged from 5 – 15. Internal consistency was adequate ($\alpha = .73$ at *T1*; $\alpha = .75$ at *T2*).

Parental emotional support. Participants were asked to answer parent-related items with reference to the individuals they consider their “mother” and “father,” such as biological, adoptive, step, foster, or other parental figures. At *T1*, participants completed the maternal emotional support items with reference to the following individuals: 97% ($n = 625$) biological mothers, 1.7% ($n = 11$) adoptive mothers, .6% ($n = 4$) stepmothers, and .2% ($n = 1$) foster mother, grandmother, and half sister, respectively. One participant (.2%) did not identify the support provider. At *T2*, participants identified 97.7% ($n = 550$) biological, 1.6% ($n = 9$) adoptive, .4% ($n = 2$) step, and .4% ($n = 2$) ‘other’ as their maternal emotional support providers. *T1* paternal emotional support items were completed with reference to the following: 89% ($n = 579$) were biological fathers, 5% ($n = 32$) were stepfathers, 2.2% ($n = 14$) were adoptive fathers, .8% ($n = 5$) were mothers’ boyfriends, .6% ($n = 4$) were grandfathers, and .2% ($n = 1$) were a mentor. Seven participants (1.1%) reported having no father figure and did not complete the items. At *T2*, paternal items were completed with reference to 90.9% ($n = 510$) biological, 4.6% ($n = 26$) step, 1.8% ($n = 10$) adoptive, .5% ($n = 3$) grandfather, .2% ($n = 1$) mother’s boyfriend, mentor, and brother-in law, respectively, and .9% ($n = 5$) ‘other’ paternal emotional support providers. Four participants (.7%) had no father figure at *T2*.

Levels of parental emotional support were assessed using the Child’s Report of Parental Behavior Inventory (Schaefer, 1965; see Appendix D). On a three-point scale (1 = not like him/her, 2 = somewhat like him/her, 3 = like him/her), adolescents rated how much support they perceive from their mother and father separately (e.g., “My mother/father is a person who is able to make me feel better when I am upset”). Total scores for both *maternal* and *paternal emotional support* ranged from 5 – 15. Internal

consistency (α) was .75 at *T1* and .72 at *T2* for ratings of maternal support. Alpha was .76 at *T1* and .79 at *T2* for ratings of paternal support.

Because the degree of contact between adolescents and their parental emotional support providers may affect levels of perceived support, knowledge of participants' most recent living situation was used to determine whether or not they lived with the individuals they identified as their maternal and paternal emotional support providers, respectively. Of those living with one or more parental figure, ANOVA was used to examine mean differences in maternal emotional support for adolescents living with ($n = 619$) and without ($n = 20$) their identified maternal emotional support provider. Participants who lived with their maternal support providers reported significantly higher levels of maternal emotional support at *T1* than those who did not ($M = 14.02$ and $M = 13.05$, respectively; $F [1, 637] = 7.72, p < .01$). However, because so few participants fell into the latter group, living status with or without one's identified maternal emotional support provider was not used as a control variable. Differences in maternal emotional support were not significant at *T2*, nor were differences in levels of paternal emotional support based on living status with or without paternal emotional support providers at *T1* or *T2*.

Peer emotional support. Adolescents indicated how much emotional support they receive from their peers on items from the Perceived Social Support From Friends scale (PSS-Fr; Procidano & Heller, 1983; see Appendix E). The nine peer support items (e.g., "I rely on my friends/peers for emotional support") were coded on a 2-point scale (0 = don't know/no, 1 = yes). Total scores for *peer emotional support* ranged from 0 – 9. Alpha (α) was .66 at both *T1* and *T2*.

Control variables. Findings have consistently linked aggressive bullying behaviours with depressive symptoms (e.g., Baldry, 2004; Leadbeater et al., 2006; Seals & Young, 2003), and significant correlations between these measures were observed in the current sample. Consequently, adolescents' self-reported physical and relational aggression (measured using the Children's Peer Relations Scale, Crick & Grotpeter, 1995; see Appendix B) were controlled for. Parental psychological control, which refers to parents' attempts to control their adolescent using strategies such as guilt induction, love withdrawal, ignoring or shaming, is also a well-established contributor to depressive symptoms in adolescents (see Barber & Harmon, 2002, for a review). Furthermore, as expected, parental psychological control was negatively correlated with emotional support from maternal and paternal support providers in the current study. To investigate the effects of parental emotional support beyond parental psychological control, the latter (measured using the Psychological Control Scale – Youth Self-Report; Barber, 1996; see Appendix E) was controlled for in all analyses. Measures of socioeconomic status were not significantly correlated with any of the study's main variables.

Data screening

Missing data were scattered randomly. Imputation of participants' mean scores for items within each scale was used to replace missing item values only if they had completed 80% of the items for a given scale (i.e., ipsative mean imputation; Schafer & Graham, 2002). Total scale scores were created by summing each participant's scores for the items within each scale. Outliers were defined as cases with standardized scores above 3.29 or below -3.29 (Tabachnick & Fidell, 2007). Examination of standardized scale scores revealed 34 univariate outliers on the study's main variables (i.e., relational

victimization; maternal, paternal, and peer emotional support; depressive symptoms) at *T1* and 22 outliers at *T2*. To reduce their impact, outliers were assigned a raw score that was one unit smaller (or larger) than the subsequent most extreme score in the distribution (Tabachnick & Fidell, 2007). Lastly, selective attrition was assessed by examining possible differences on the study's main variables at *T1* between participants who dropped out at *T2* ($n = 81$) and those who did not. Although participants who remain in longitudinal research studies are likely unique in some way (Miller, 1998), multivariate analysis of variance (MANOVA) did not reveal any systematic differences.

Results

Prevalence of relational victimization

Participants' scores on the five relational victimization items were used to create an average scale score (ranging from 1 – 5). These scores were used to assign victim status (Crick & Grotpeter, 1996). Adolescents with scores one standard deviation above the sample mean were considered victimized. At *T1*, this method identified 13.4% ($n = 84$) of adolescents in the sample as relationally victimized by their peers. Victim status significantly differed by both age group ($F [1, 642] = 6.72, p < .05$) and sex ($F [1, 642] = 4.70, p < .05$). More younger adolescents ($n = 52$) and girls ($n = 53$) than older adolescents ($n = 34$) and boys ($n = 33$) were classified as victims. At *T2*, 10% ($n = 57$) of participants were classified as victims of peer relational aggression. Victimization did not significantly differ by age group, but it did differ by sex ($F [1, 561] = 5.47, p < .05$). Similar to *T1* findings, twice as many girls were classified as victims of relational aggression than boys at *T2* ($n = 38$ and 19 , respectively).

Zero-order correlations

Cross-sectional zero-order correlations for peer victimization, emotional support, depressive symptoms, and sex at *T1* and *T2* are presented in Table 1. Depressive symptoms were significantly ($p < .05$) correlated with concurrent levels of relational victimization at *T1* ($r = .32$) and *T2* ($r = .27$). Depressive symptoms were also significantly correlated with concurrent maternal emotional support ($r = -.25$ at *T1*; $r = -.30$ at *T2*), paternal emotional support ($r = -.24$ at *T1*; $r = -.17$ at *T2*), and peer emotional support ($r = -.13$, a *T1*; $r = -.17$ at *T2*). Sex was significantly correlated with relational victimization at *T1* only ($r = .08$), with peer emotional support at both *T1* ($r = -.13$, and *T2* ($r = -.17$), and with depressive symptoms at *T1* only ($r = .13$).

Longitudinal zero-order correlations for the variables also appear in Table 1. *T2* depressive symptoms were modestly correlated with *T1* relational victimization ($r = .19$). *T2* depressive symptoms were also significantly correlated with both maternal and paternal emotional support at *T1* ($r = -.21$ and $r = -.18$, respectively), but not with *T1* peer emotional support.

Time, sex, and age group differences in mean scores on observed variables

Time, sex, and age group differences in mean scores on the study's main variables are shown in Tables 2, 3, and 4, respectively. A multivariate repeated measures analysis of variance (RMANOVA) was used to examine these differences in depressive symptoms, victimization, and emotional support across *T1* and *T2*. Findings revealed a significant main effect of Time on all variables: Depressive symptoms increased over time ($F [1, 545] = 5.02$), whereas relational victimization ($F [1, 545] = 26.00$), maternal emotional support ($F [1, 545] = 13.39$), and paternal emotional support ($F [1, 545] =$

Table 1

Zero-order correlations between depressive symptoms, victimization, emotional support, and sex at T1 (N = 644) and T2 (N = 563)

Variables	Sex	DS		RV		PV		MES		PaES		PrES	
	Time	T1	T2 ^a	T1	T2	T1	T2	T1	T2	T1 ^b	T2 ^c	T1	T2
Sex (1 = male, 2 = female)	--												
Depressive Symptoms (DS)													
T1	.13**	--											
T2 ^a	.08	.53**	--										
Relational Victimization (RV)													
T1	.08*	.32**	.19*	--									
T2	.07	.24**	.27**	.40**	--								
Physical Victimization (PV)													
T1	-.20**	.23**	.09*	.43**	.26**	--							
T2	-.13**	.16**	.17**	.24**	.36**	.41**	--						
Maternal Emotional Support (MES)													
T1	-.00	-.25**	-.21*	-.06	-.13**	-.12**	.00	--					
T2	.12**	-.20**	-.30**	-.08	-.20**	-.15**	-.10*	.47**	--				
Paternal Emotional Support (PaES)													
T1 ^b	-.07	-.24**	-.18**	-.06	.06	-.10*	-.10*	.24**	.10*	--			
T2 ^c	-.06	-.12**	-.17**	-.06	-.11**	-.05	-.14**	.09*	.18**	.58**	--		
Peer Emotional Support (PrES)													
T1	.29*	-.13**	-.05	-.18**	-.12**	-.21**	-.13**	.19**	.17**	.14**	.08	--	
T2	.34**	-.12**	-.17**	-.07	.11**	-.13**	-.16**	.11*	.19**	.06	.03	.47**	--

^aFor T2 Depressive Symptoms, N = 562.

^bFor T1 Paternal Emotional Support, N = 637.

^cFor T2 Paternal Emotional Support, N = 553.

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

Table 2

Mean scores on observed variables at T1 and T2

Variables	Time 1	Time 2	Time	Effect Size
Depressive Symptoms	7.16(1.93)	7.50(2.02)	*	.01
Relational Victimization	5.95(1.36)	5.68(1.12)	**	.04
Maternal Emotional Support	14.02(1.45)	13.76(1.64)	**	.02
Paternal Emotional Support	13.08(1.20)	12.71(2.21)	**	.04
Peer Emotional Support	7.08(1.84)	7.34(1.75)	**	.04

Note. Standard deviations are given in parentheses. Effect size given is partial eta squared (η_p^2).

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

Table 3

Sex differences in mean scores on observed variables at T1 and T2

Variables	Time 1		Time 2		Sex	Sex X Time	Effect Size
	Boys	Girls	Boys	Girls			
Depressive Symptoms	6.91(1.80)	7.39(2.02)	7.34(2.02)	7.65(2.01)	*		.01
Relational Victimization	5.84(1.26)	6.06(1.45)	5.60(1.01)	5.75(1.20)			<i>ns</i>
Maternal Emotional Support	14.03(1.43)	14.02(1.47)	13.55(1.71)	13.95(1.55)		*	.01
Paternal Emotional Support	13.22(1.86)	12.96(2.12)	12.86(1.91)	12.58(2.45)	*		.01
Peer Emotional Support	6.48(1.89)	7.14(1.62)	6.70(1.88)	7.92(1.38)	**		.12

Note. Standard deviations are given in parentheses. Effect size given is partial eta squared (η_p^2), *ns* = non-significant.

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

Table 4

Age group differences in mean scores on observed variables at T1 and T2

Variables	Time 1		Time 2		Age Group	Effect Size	
	Young-Mid Adolescents	Mid-Late Adolescents	Young-Mid Adolescents	Mid-Late Adolescents		T1	T2
Depressive Symptoms	6.94(1.89)	7.35(1.95)	7.09(1.97)	7.60(2.02)	* ^a	.01	.01
Relational Victimization	6.14(1.51)	5.78(1.19)	5.89(1.26)	5.64(1.08)	* ^b	.02	<i>ns</i>
Maternal Emotional Support	14.22(1.31)	13.84(1.56)	13.96(1.56)	13.71(1.66)	* ^b	.02	<i>ns</i>
Paternal Emotional Support	13.37(1.87)	12.83(2.07)	13.15(2.12)	12.62(2.22)	* ^a	.02	.01
Peer Emotional Support	6.76(2.07)	7.15(1.78)	7.00(2.08)	7.31(1.66)	* ^a	.02	.01

Note. Standard deviations are given in parentheses. Effect size given is partial eta squared (η_p^2), *ns* = non-significant. Adolescents range from 12 – 19 years at T1 and from 13 – 21 years at T2.

^a Significant main effect for T1 and T2 Age Groups.

^b Significant main effect for T1 Age Group only. * $p < .05$. ** $p < .01$.

23.48) all decreased from *T1* to *T2*. Peer emotional support increased over time ($F [1, 545] = 26.82$).

Main effects of Sex were significant for three of the variables: Girls reported higher depressive symptoms ($F [1, 545] = 6.39$) and peer emotional support ($F [1, 545] = 72.87$) than boys, whereas boys reported higher paternal emotional support than girls ($F [1, 545] = 4.55$). A main effect of Sex for maternal emotional support was not significant ($F [1, 545] = 2.20$). However, a Sex X Time interaction for maternal emotional support was significant ($F [1, 545] = 3.76$), with boys reporting less support across time than girls.

MANOVA was used to examine differences between early-mid adolescents (age 12 – 15.5 years) and mid-late adolescents (age 15.5 – 21 years) in mean levels of the variables at *T1* and *T2*. A significant main effect of Age Group was observed for both *T1* depressive symptoms ($F [1, 545] = 4.69$) and *T2* depressive symptoms ($F [1, 545] = 6.41$), with older adolescents reporting greater depressive symptoms than younger adolescents at both times. A main effect for Age Group was also found for relational victimization, whereby younger adolescents reported more victimization experiences than older adolescents, but only at *T1* ($F [1, 545] = 12.25$). In their ratings of maternal emotional support, younger adolescents reported higher maternal emotional support than older adolescents ($F [1, 545] = 12.74$), but again only at *T1*. A significant main effect of Age Group was found for adolescents' reports of paternal emotional support ($F [1, 545] = 9.20$ at *T1*; $F [1, 545] = 4.64$ at *T2*), with older adolescents reporting greater peer support than younger adolescents.

Predicting Depressive Symptoms And Relational Victimization

Multiple regression analyses were used to predict depressive symptoms both concurrently (see Tables 5 and 6) and across time (see Table 7). To account for parenting differences that are related to levels of parental emotional support and depressive symptoms, parental psychological control was entered into the first block. Aggression against peers may also lead to depressive symptoms and provoke peer victimization, so it was also entered as a control variable. Lastly, correlations between physical and relational victimization are typically high, so physical victimization was also entered in the first block to allow for examination of the unique effects of relational victimization.

In the second block, relational victimization was entered alone to investigate whether it accounted for a significant amount of variance in depressive symptoms beyond the control variables. Predicted interactions between relational victimization and Sex and Age Group, respectively, were entered in the third block of each analysis. Fourth, main effects of maternal, paternal, and peer emotional support were entered together to assess their relative importance in accounting for variance in depressive symptoms. Two-way interactions between emotional support from the three providers and relational victimization were entered in the fifth block to test whether emotional support moderated the relationship between relational victimization and depressive symptoms. The sixth block assessed whether the potential moderating effects of emotional support functioned differently for boys and girls. Finally, additional three-way interactions between relational victimization, peer emotional support, and maternal/paternal emotional support were entered in the last block to examine whether the relationship between relational

Table 5

Summary of Hierarchical Regression Analysis Regressing T1 Depressive Symptoms on Concurrent Variables (N = 636)

Variables	<i>B</i>	<i>SE B</i>	β	<i>Adj. R</i> ²	ΔR^2
<i>Block 1:</i>				.21	.21**
Sex	.54	.14	.14**		
Age	.01	.00	.16**		
Parental Psychological Control	.10	.02	.24**		
Aggression Against Peers	.06	.03	.09*		
Physical Victimization	.18	.07	.11*		
<i>Block 2:</i>				.25	.04**
Relational Victimization	.30	.05	.23**		
<i>Block 3:</i>				.25	.00
Relational Victimization X Sex	-.01	.05	-.05		
Relational Victimization X Age	-.00	.00	-.35		
<i>Block 4:</i>				.27	.03**
Maternal Emotional Support	-.16	.05	-.13**		
Paternal Emotional Support	-.05	.04	-.06		
Peer Emotional Support	-.06	.03	-.09*		
<i>Block 5:</i>				.27	.00
Relational Victimization X Maternal Support	-.03	.03	-.37		
Relational Victimization X Paternal Support	-.01	.02	-.16		
Relational Victimization X Peer Support	-.10	.041	-1.23*		
<i>Block 6:</i>				.28	.01*
Relational Victimization X Maternal Support X Sex	-.01	.01	-.59		
Relational Victimization X Paternal Support X Sex	.01	.01	.30		
Relational Victimization X Peer Support X Sex	-.01	.00	-.26		
<i>Block 7:</i>				.28	.01
Relational Victimization X Maternal Support X Peer Support	.01	.00	.99		
Relational Victimization X Paternal Support X Peer Support	.00	.00	.41		

Note: All variables measured at T1.

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

Table 6

Summary of Hierarchical Regression Analysis Regressing T2 Depressive Symptoms on Concurrent Variables (N = 551)

Variables	<i>B</i>	<i>SE B</i>	β	<i>Adj. R</i> ²	ΔR^2
<i>Block 1:</i>				.16	.16**
Sex	.30	.16	.08		
Age	.01	.00	.13**		
Parental Psychological Control	.11	.02	.25**		
Aggression Against Peers	.09	.03	.12**		
Physical Victimization	.06	.10	.03		
<i>Block 2:</i>				.17	.02**
Relational Victimization	.25	.07	.15**		
<i>Block 3:</i>				.17	.00
Relational Victimization X Sex	.02	.07	.06		
Relational Victimization X Age	.00	.00	.12		
<i>Block 4:</i>				.22	.05**
Maternal Emotional Support	-.19	.05	-.16**		
Paternal Emotional Support	-.02	.04	-.02		
Peer Emotional Support	-.15	.04	-.16**		
<i>Block 5:</i>				.22	.00
Relational Victimization X Maternal Support	-.01	.03	-.08		
Relational Victimization X Paternal Support	.01	.03	.14		
Relational Victimization X Peer Support	.01	.03	.08		
<i>Block 6:</i>				.22	.00
Relational Victimization X Maternal Support X Sex	.00	.01	.12		
Relational Victimization X Paternal Support X Sex	.00	.01	.12		
Relational Victimization X Peer Support X Sex	-.00	.01	-.14		
<i>Block 7:</i>				.22	.00
Relational Victimization X Maternal Support X Peer Support	.01	.00	1.11		
Relational Victimization X Paternal Support X Peer Support	.00	.00	.28		

Note: All variables measured at T2.

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

Table 7

Summary of Hierarchical Regression Analysis Regressing T2 Depressive Symptoms on T1 Variables Across Time (N = 550)

Variables	B	SE B	β	Adj. R^2	ΔR^2
<i>Block 1:</i>				.35	.37**
Sex	.32	.16	.08*		
Age (T2)	.01	.00	.07		
Parental Psychological Control (T2)	.05	.02	.12**		
Aggression Against Peers (T2)	.06	.03	.09*		
Relational Victimization (T2)	.12	.07	.08		
Physical Victimization (T2)	.03	.09	.01		
Maternal Emotional Support (T2)	-.13	.05	-.11**		
Peer Emotional Support (T2)	-.10	.04	-.11**		
Depressive Symptoms (T1)	.44	.04	.42**		
<i>Block 2:</i>				.35	.00
Relational Victimization (T1)	-.07	.06	-.05		
<i>Block 3:</i>				.35	.00
Relational Victimization (T1) X Sex	-.02	.05	-.05		
Relational Victimization (T1) X Age	.00	.00	.30		
<i>Block 4:</i>				.36	.01
Maternal Emotional Support (T1)	.10	.05	.01		
Paternal Emotional Support (T1)	-.00	.04	-.00		
Peer Emotional Support (T1)	.08	.03	.10*		
<i>Block 5:</i>				.36	.01*
Relational Victimization (T1) X Maternal Support (T1)	-.09	.04	-.96*		
Relational Victimization (T1) X Paternal Support (T1)	.01	.02	.14		
Relational Victimization (T1) X Peer Support (T1)	.03	.02	.41		
<i>Block 6:</i>				.36	.01
Relational Victimization (T1) X Maternal Support (T1) X Sex	.03	.02	.37		
Relational Victimization (T1) X Paternal Support (T1) X Sex	.01	.01	.19		
Relational Victimization (T1) X Peer Support (T1) X Sex	-.00	.01	-.16		
<i>Block 7:</i>				.36	.00
Relational Victimization (T1) X Maternal Support (T1) X Peer Support (T1)	-.00	.00	-.25		
Relational Victimization (T1) X Paternal Support (T1) X Peer Support (T1)	.00	.00	-.17		

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

victimization and depressive symptoms differed depending on levels of both parental and peer emotional support.

Variables were entered in the same sequence in the across-time regression analysis. To predict *T2* depressive symptoms longitudinally, however, additional control variables were entered in the first step. Specifically, *T1* depressive symptoms were controlled for to account for preexisting differences in adolescents' depressive symptoms. Concurrent levels of maternal and peer emotional support were also controlled for due to their relationships with *T2* depressive symptoms and emotional support from these providers.

As expected, relational victimization was uniquely associated with depressive symptoms at both *T1* ($t [625] = 5.57$) and *T2* ($t [540] = 3.24$). It accounted for 4% and 2% of the variance in depressive symptoms at *T1* and *T2*, respectively. Sex and Age Group did not moderate this relationship at either time. Contrary to the longitudinal hypothesis, *T1* relational victimization did not significantly predict depressive symptoms at *T2* ($t [535] = .05$).

Because research has shown a reciprocal relationship between relational victimization and depressive symptoms in children, multiple regression analyses were used to investigate whether depressive symptoms predicted relational victimization in this sample of adolescents (see Tables 8, 9, and 10). As hypothesized, depressive symptoms were uniquely related to relational victimization at both *T1* ($t [625] = 5.57$) and *T2* ($t [539] = 3.24$), accounting for 3% and 1% of the variance in relational victimization, respectively. However, the relationship was not moderated by Sex or Age Group. Further, depressive symptoms did not predict relational victimization across time ($t [539] = 1.53$).

Table 8

Summary of Hierarchical Regression Analysis Regressing T1 Relational Victimization on Concurrent Variables (N = 636)

Variables	<i>B</i>	<i>SE B</i>	β	<i>Adj. R</i> ²	ΔR ²
<i>Block 1:</i>				.27	.27**
Sex	.43	.11	.14**		
Age	-.01	.00	-.10**		
Parental Psychological Control	.01	.01	.03		
Aggression	.05	.02	.09*		
Physical Victimization	.47	.05	.37**		
<i>Block 2:</i>				.30	.03**
Depressive Symptoms	.16	.03	.21**		
<i>Block 3:</i>				.30	.00
Depressive Symptoms X Sex	-.03	.05	-.09		
Depressive Symptoms X Age	-.02	.00	-.51		

Note: All variables measured at T1.

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

Table 9

Summary of Hierarchical Regression Analysis Regressing T2 Relational Victimization on Concurrent Variables (N = 551)

Variables	<i>B</i>	<i>SE B</i>	β	<i>Adj. R</i> ²	ΔR ²
<i>Block 1:</i>				.29	.29**
Sex	.31	.10	.12**		
Age	-.01	.00	-.14**		
Parental Psychological Control	.04	.01	.14**		
Aggression	.07	.02	.16**		
Physical Victimization	.41	.06	.31**		
<i>Block 2:</i>				.30	.01**
Depressive Symptoms	.08	.03	.13**		
<i>Block 3:</i>				.30	.00
Depressive Symptoms X Sex	-.01	.05	-.04		
Depressive Symptoms X Age	.00	.00	-.35		

Note: All variables measured at T2.

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

Table 10

Summary of Hierarchical Regression Analysis Regressing T2 Relational Victimization on T1 Variables Across Time (N = 550)

Variables	<i>B</i>	<i>SE B</i>	β	<i>Adj. R</i> ²	ΔR ²
<i>Block 1:</i>				.35	.36**
Sex	.24	.09	.10**		
Age (<i>T2</i>)	-.01	.00	-.10**		
Parental Psychological Control (<i>T2</i>)	.03	.01	.13**		
Aggression (<i>T2</i>)	.07	.02	.14**		
Physical Victimization (<i>T2</i>)	.36	.05	.27**		
Relational Victimization (<i>T1</i>)	.22	.03	.26**		
<i>Block 2:</i>				.35	.00
Depressive Symptoms (<i>T1</i>)	.04	.03	.06		
<i>Block 3:</i>				.35	.00
Depressive Symptoms (<i>T1</i>) X Sex	-.02	.05	-.08		
Depressive Symptoms (<i>T1</i>) X Age (<i>T2</i>)	-.02	.05	-.06		

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

Moderation Models

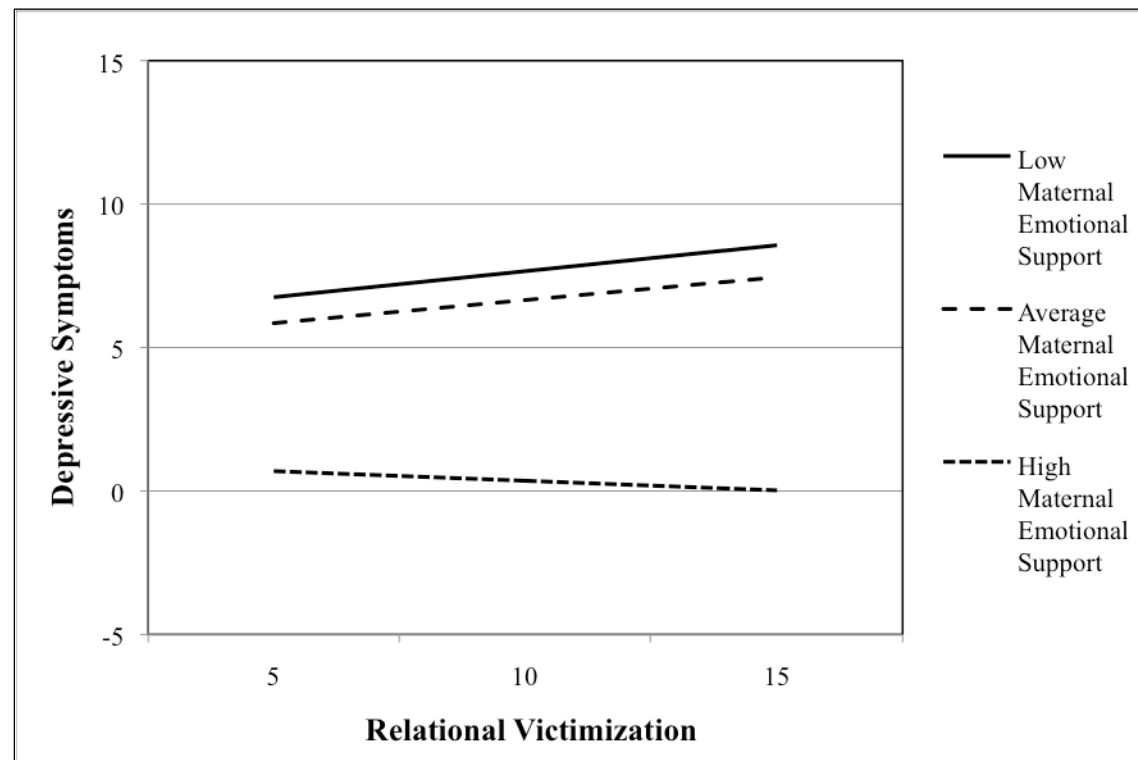
Recall that three variables (adolescents' levels of perceived emotional support from mothers, fathers, and peers) are investigated as moderators of the relationship between relational victimization and depressive symptoms both concurrently and longitudinally. Unstandardized (B) and standardized (β) coefficients, adjusted R^2 , and R^2 change values are presented in Table 5 for $T1$ variables associated with concurrent depressive symptoms, in Table 6 for $T2$ variables associated with concurrent depressive symptoms, and in Table 7 for $T1$ variables predicting changes in $T2$ depressive symptoms.

Maternal emotional support. As expected, significant main effects supported the relations between maternal emotional support and adolescents' depressive symptoms (beyond relational victimization and the control variables) at both $T1$ (t [625] = 3.52) and $T2$ (t [540] = 3.85). However, the main effect of maternal emotional support did not uniquely contribute to the prediction of depressive symptoms across time (t [535] = .19).

Contrary to hypotheses, maternal emotional support did not moderate the concurrent relation between relational victimization and depressive symptoms at $T1$ (t [622] = .92) or $T2$ (t [537] = .30). However, maternal emotional support did moderate this relation longitudinally (t [532] = 2.00). The significant interaction was probed according to procedures outlined by Aiken & West (1991; see Fig. 3). As expected, victimized adolescents showed fewer depressive symptoms two years later in the context of high levels of maternal emotional support ($\beta = -.05, p > .05$). In contrast, adolescent victims who reported average or low levels of emotional support from mothers showed higher depressive symptoms across time ($\beta = .38, p > .05$ and $\beta = .42, p > .05$, respectively).

Figure 3

Graphical Depiction of the Moderating Effects of Maternal Emotional Support on the Across-Time Association Between Relational Victimization and Depressive Symptoms.



Note: Categories of average, low, and high maternal emotional support reflect participants who reported mean, one standard-deviation below, and one standard-deviation above mean ratings of maternal emotional support, respectively.

Although none of the separate regressions were significantly different from zero, the interaction indicates that the difference between them (i.e., in direction) is significant. Further, it is possible that power loss due to data segmentation or non-linear relationships between the variables may explain the insignificant betas.

Three-way interactions between relational victimization, maternal emotional support and sex were all not significant. Finally, maternal emotional support and peer emotional support were investigated as simultaneous moderators of the relationship between relational victimization and depressive symptoms. However, this three-way interaction was not significant at *T1* ($t [617] = 1.91$), *T2* ($t [532] = 1.89$), or across time ($t [528] = .47$).

Paternal emotional support. Contrary to expectations, main effects for paternal emotional support in predicting adolescents' depressive symptoms above relational victimization and the control variables were not significant concurrently or longitudinally. Furthermore, paternal emotional support did not moderate the relationship between relational victimization and depressive symptoms at *T1*, *T2*, or across time. Three-way interactions between relational victimization, paternal emotional support and sex were all insignificant, as were the interactions between relational victimization, paternal emotional support, and peer emotional support.

Peer emotional support. As hypothesized, main effects for peer emotional support in predicting adolescents' depressive symptoms were significant at *T1* ($t [622] = 1.23$), *T2* ($t [540] = 3.90$), and across time ($t [535] = 2.37$). Peer emotional support was negatively related to depressive symptoms at *T1* and *T2* ($\beta = -.09$ and $\beta = -.16$,

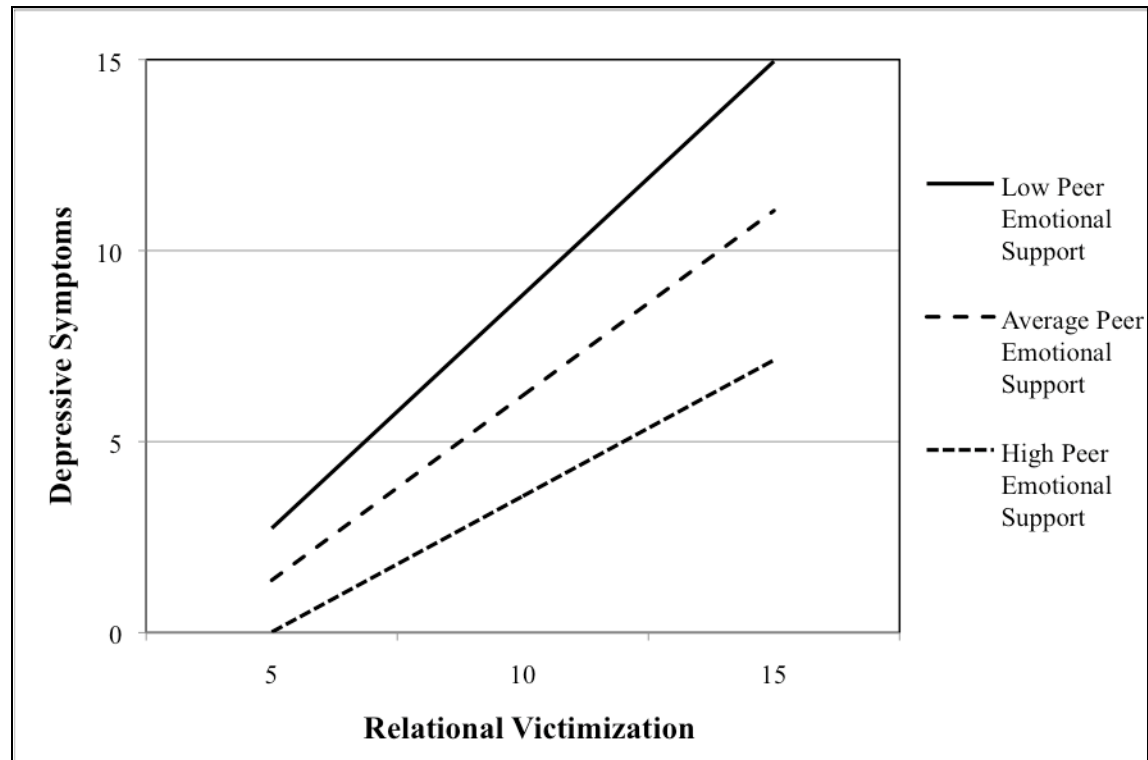
respectively), whereas emotional support from peers was positively related to adolescents' depressive symptoms over time ($\beta = .10$).

Consistent with the primary moderating hypothesis for peers, a significant interaction between relational victimization and peer emotional support in the prediction of depressive symptoms emerged, but only at *T1* ($t [622] = 2.64$). As expected, investigation of the significant moderation effect revealed that the association between relational victimization and depressive symptoms was significant in the context of low peer emotional support ($t [622] = 1.88$; see Fig. 4). However, in the context of average and high levels of peer emotional support, relational victimization did not significantly predict depressive symptoms ($t [622] = 1.45$ at *T1*; $t [622] = 1.02$ at *T2*).

Next, the three-way interaction between relational victimization, peer emotional support, and sex was investigated. Peer emotional support and sex did not moderate the relationship between relational victimization and depressive symptoms at *T1* ($t [619] = .1.23$) or *T2* ($t [534] = .44$). The interaction was also insignificant across time ($t [529] = .71$).

Figure 4

Graphical Depiction of the Moderating Effects of Peer Emotional Support on the Concurrent Relation Between Relational Victimization and Depressive Symptoms at *T1*.



Note: Categories of average, low, and high peer emotional support reflect participants who reported mean, one standard-deviation below, and one standard-deviation above mean ratings of peer emotional support, respectively.

Discussion

Past research shows that a considerable number of children experience relational victimization by their peers and that they have an increased vulnerability to depressive symptoms. Less is known about the prevalence and consequences of relational victimization in adolescents and young adults. The current study addresses this gap by studying self-reports of relational victimization in a large, representative sample of adolescents and young adults. The results show that adolescent victims of relational victimization are vulnerable to concurrent depressive symptoms. Furthermore, although a large body of research shows that emotional support buffers depressive symptoms in general, the present study is among the first to show that emotional support from mothers and peers buffers the depressive symptoms specifically associated with relational victimization. These findings are discussed after the prevalence of relational victimization and sex, time, and age group differences in the study's main variables are considered.

Prevalence of Relational Victimization

In this study approximately 13.5% of adolescents at *T1* and 10% of adolescents at *T2* reported serious relational victimization by their peers. These figures are somewhat lower than the rates reported in studies with younger adolescents (e.g., 51%, Bond et al., 2001; 33%, Vuijk et al., 2007) but they fall within the broad range of victimization typically found in research with community-based samples (i.e., 10 - 30%, Hawker & Boulton, 2000). Findings of the current study show that younger adolescents may report greater relational victimization than older adolescents. Girls were also more likely to be classified as victims of relational victimization than boys at both times, which is

consistent with some findings (Crick & Grotpeter, 1995; Crick & Bigbee, 1998) but not others (Baldry, 2004; Crick & Grotpeter, 1996; Leadbeater et al., 2006; Prinstein et al., 2001). Taken together, the current study shows that adolescent girls and boys are both victims of relational victimization; however, girls may experience more severe victimization than boys. Although it is easy to narrowly associate relational victimization with early school experiences, the current findings suggest that it also can pose a problem for older youth as well. For example, co-habitation with roommates, socializing with co-workers, romantic relationships, and the dynamics of personal peer groups—in addition to post-secondary educational environments—are all potential arenas within which relational victimization may occur in adolescence and young adulthood.

Time, Sex and Age Group Differences in Mean Levels of Victimization, Depressive Symptoms, and Emotional Support

Sex differences in mean levels of relational victimization were not observed in the current study. This result is consistent with past research (e.g., Baldry, 2004; Prinstein et al., 2001). The current findings suggest that, contrary to popular views, adolescent boys are as likely as adolescent girls to be the targets of relational forms of victimization—although this may not be true of those who experience more severe victimization. In fact, findings from at least one study (Leadbeater et al., 2006) found that eighth- to tenth-grade boys reported greater relational victimization than girls. Overall, in this study adolescents' reports of relational victimization decreased across the two-year period in this study, and younger adolescents reported more relational victimization than older adolescents. While these results suggest that relational victimization may occur less frequently in later adolescence, it is still apparent in this age group and, importantly,

relational victimization is concurrently associated with elevated depressive symptoms in both younger and older adolescents.

Sex and age differences in adolescents' depressive symptoms were all as expected, and consistent with past research (e.g., Galambos et al., 2004; Leadbeater et al., 1995): girls reported greater depressive symptoms than boys, depressive symptoms increased over time, and older adolescents reported greater depressive symptoms than younger adolescents. Similarly, differences in the amount of emotional support received from adolescents' support providers corroborate past findings and support the study's hypotheses. Girls report receiving more emotional support from peers than boys do (e.g., Newcomb, 1990; Slavin & Rainer, 1990), whereas boys report more emotional support from fathers than girls do (Colarossi & Eccles, 2003). The current findings lend partial support to the view that boys and girls report similar levels of emotional support from mothers; however, boys reported less maternal emotional support than girls did across time.

Finally, consistent with the study's predictions, an overall increase in peer emotional support was observed, with older adolescents reporting greater support from peers over time. This finding is not surprising given the increasing importance of peer relations in adolescence. Conversely, also as expected, perceptions of both maternal and paternal emotional support decreased over time, with older adolescents reporting less support from parents than younger adolescents. Although parents remain a primary source of influence throughout adolescence, existing evidence suggests that time spent together, companionship, intimacy, and subjective feelings of closeness between adolescents and parents all decrease across these years (see Collins & Steinberg, 2006,

for a review). This pattern of increasing peer and decreasing parental influence is parallel to the one observed in the social support literature (e.g., Furman & Buhrmester, 1992; Helsen et al., 2001) and thus suggests that emotional support changes in a comparable way.

Relations Between Depressive Symptoms and Relational Victimization

As hypothesized, relational victimization was consistently and uniquely associated with concurrent depressive symptoms after adolescents' experiences of physical victimization and a number of other correlates of depressive symptoms (e.g., parental psychological control and physical and relational aggression) were controlled for. However, relational victimization did not predict increases in adolescents' depressive symptoms two years later (i.e., after controlling for *TI* symptoms). While the depressive symptoms of victims of relational aggression may not progressively increase over time, the significant correlations nevertheless show that relational victimization has serious consequences for the concurrent psychological well-being of youth. Past research has found a stronger relationship between relational victimization and depressive symptoms in girls than boys (e.g., Baldry, 2004; Prinstein et al., 2001; Storch et al., 2003, Vuijk et al., 2007). In the current study, however, such a difference did not occur, suggesting that the harmful effects of relational victimization are not exclusive to adolescent girls.

Research has also begun to suggest that adolescent psychopathology, such as the presentation of depressive symptoms, might be a risk factor for physical victimization and victimization *in general* (see Sweeting et al., 2006). The present findings reveal that depressive symptoms are associated with concurrent relational victimization as well (after controlling for physical victimization, parental psychological control, aggression, and

grades obtained in school), but not over time. It is difficult to untangle the possible temporal priority of environmental risk (i.e., peer victimization) or adolescent pathology (i.e., depressive symptoms) from true reciprocal effects. Reciprocal effects pose a unique difficulty for researchers in this area as we would not necessarily expect depressive symptoms to predict future relational victimization—for example, two years later when adolescents may be in a different school, grade, and peer group—unless the symptoms continued to be exhibited in that future context. Nevertheless, these findings point to the possibility of a particularly bleak cycle in which adolescents' experiences of relational victimization and their depressive symptoms are concurrently entangled, making both experiences difficult to terminate. Encouragingly, concurrent emotional support from peers and emotional support from mothers across time play a role in decreasing the depressive symptoms exhibited by victims of relational aggression.

Main and Moderating Effects of Emotional Support from Parents and Peers

Peer emotional support. As hypothesized, emotional support from peers was related to adolescents' depressive symptoms concurrently and across time (after controlling for peer emotional support at *T1*). This relationship did not differ by sex or age group. Higher levels of peer emotional support were related to fewer depressive symptoms. These findings are consistent with studies suggesting that positive peer relationships buffer depressive symptoms in adolescence (e.g., Colarossi & Eccles, 2001; Newcomb, 1990; Slavin & Rainer, 1990). Surprisingly, emotional support from peers and adolescents' depressive symptoms were positively related across time, with increasing levels of peer emotional support predicting increasing depressive symptoms two years later. Thus, it may be that concurrent peer support is comforting and thus buffers

adolescents' depressive symptoms in the short-term, but over time, too much peer support is detrimental to adolescent's mental health.

One possible explanation for this finding is co-rumination in friendships. Co-rumination occurs when peers excessively and repeatedly discuss and speculate about problems and focus on negative feelings (Rose, 2002). For example, in the context of relational victimization, co-rumination might involve adolescents talking at length about a victimization experience or reasons why the victim was targeted. While co-rumination involves elements of high-quality peer relationships such as self-disclosure and sharing personal thoughts and feelings, at the same time it also involves a social form of rumination that has been linked to depressive symptoms in children and adolescents (Rose, 2002). Thus, co-rumination may explain the seemingly contradictory findings that peer emotional support buffers depressive symptoms cross-sectionally (i.e., due to positive aspects such as intimacy) but not over time (i.e., due to its negative aspects such as focusing on problems). More generally, peer support may be of a relatively poor quality and may sometimes reflect undeveloped, undesirable values. For example, peers might give bad, forceful, or even unsolicited advice, for example, by promoting retaliation for victimization, all of which may serve to promote, rather than dispel, the depressive symptoms of a friend in need over time. These findings highlight the necessity for future research examining the effects of different types and qualities of peer support.

In support of the concurrent moderating hypothesis for peer emotional support, adolescents who reported being relationally victimized showed fewer depressive symptoms if they also reported average or high levels of peer emotional support compared to those who reported low levels of peer support. This encouraging result fits

with the body of literature showing that young children who are victimized show better mental health outcomes if they report having a best friend (e.g., Cowie, 2000; Crick & Grotpeter, 1996; Hodges et al., 1999). Although such studies have not specifically measured emotional peer support, the current finding raises the possibility that emotional support may be one mechanism by which close friends mitigate the harmful effects of peer victimization in adolescents. Contrary to expectations, the buffering effects of peer emotional support did not differ by sex or age group. Although peers may be more central to the lives of girls and older adolescents, the current findings suggest that emotional support from peers is just as beneficial for boys and younger adolescents as it is for girls and older adolescents—at least in the short term. Across time, however, peer support may not buffer victims' depressive symptoms due to mechanisms such as co-rumination or poor quality emotional support, as discussed above.

Maternal emotional support. As hypothesized, emotional support from mothers was associated with adolescents' depressive symptoms concurrently (at both *T1* and *T2*). Higher levels of maternal emotional support were related to fewer depressive symptoms in adolescents. These findings are consistent with the extensive literature suggesting that support from mothers is associated with reduced depressive symptoms in adolescence (e.g., Colarossi & Eccles, 2003; Schraedley et al., 1999). The effects of maternal emotional support on concurrent depressive symptoms did not differ by sex or age group, as some authors have found (e.g., Barrera & Garrison-Jones, 1992; Newcomb, 1990).

As hypothesized, maternal emotional support and relational victimization interacted to predict adolescents' depressive symptoms longitudinally. Specifically, adolescents who were relationally victimized showed fewer depressive symptoms two

years later if they also reported high levels of maternal emotional support at first measurement. In contrast, adolescent victims who reported low or average levels of emotional support from mothers showed significantly higher depressive symptoms across time. Thus, it appears that while peer emotional support buffers adolescents' depressive symptoms in the short-term, high levels of emotional support from mothers effectively safeguards victimized adolescents from increases in future depressive symptoms.

Maternal support may be more consequential than peer support over time because of its endurance and stability, whereas peer support may be less secure as adolescents' social networks and best friends change (Stice et al., 2004). It is also possible that the emotional support provided by mothers is of a higher quality than that provided by peers, drawing on their maturity and experience.

Paternal emotional support. Consistent with past findings (Baldry, 2004; Colarossi & Eccles, 2003), main effects of paternal emotional support on adolescents' depressive symptoms were not observed cross-sectionally or longitudinally. Furthermore, the depressive symptoms reported by adolescent victims of relational aggression were not moderated by paternal emotional support. As a group, fathers have a long history of being viewed as having relatively little influence on their children's development. Although more recent evidence suggests that paternal influences are important in many areas of children and adolescents' lives (see Lamb, 2004), these and other findings suggest that the emotional support provided by fathers does not affect adolescents' depressive symptoms, whereas maternal and peer emotional support do. In the present study, adolescents' ratings of paternal emotional support were consistently lower than the support they received from mothers and peers. This result fits with past findings that

adolescents view their mothers as more present, open, understanding, and accepting, and that they generally talk more to mothers than fathers (Youniss & Smollar, 1985). More recent findings similarly reveal that adolescents tend to spend more time alone with mothers than fathers and that they feel more comfortable talking to mothers rather than fathers about problems and other emotional matters (Williams & Kelly, 2005). As some authors have suggested, fathers may play a greater consultative role in objective matters (e.g., school-related choices) than they do in more personal matters that call for support or guidance (e.g., romantic relationship issues; Steinberg, 2008). This study's assessment of emotional support solely may not be a culturally sensitive way to investigate and characterize the role that fathers play in adolescents' lives.

Lack of Sex Differences in the Current Study

Despite a large literature showing that girls are more likely than boys to have a depressive reaction to stressful experiences—particularly stressful interpersonal experiences (see Nolen-Hoeksema, 2006, for a review)—the concurrent relations between relational victimization and depressive symptoms did not differ for boys and girls in this study. Moreover, the moderating effects of maternal and peer emotional support on the associations between relational victimization and depressive symptoms did not differ by sex. These findings suggest a robust relationship between the variables. Clearly, disrupting interpersonal experiences such as relational victimization affect the mental health of both boys and girls. Further, emotional support from others buffers the depressive symptoms associated with relational victimization in both sexes. Thus, it may be that past theory has underestimated the importance of interpersonal vulnerabilities and resources for males in this age group.

Limitations and Future Directions

A noteworthy limitation of this study is that all data are self-reports. As such, mono-method variance may have inflated the associations between victimization, depressive symptoms, and emotional support. For example, consistent with the negative cognitive biases associated with depression (e.g., negative cognitive triad, Beck, 1972; self-attribution theory, Graham & Juvonen, 2001), adolescents with elevated depressive symptoms may have been more likely to report more victimization experiences or to rate them as more severe. They also may have been less likely to report receiving emotional support from others. Importantly, this raises the possibility that adolescents who *perceive* themselves as depressed are more likely to perceive themselves as victimized, regardless of the objective reality.

Future research should consider using multi-informant or multi-reporter approaches to corroborate or expand on the current findings. For example, future studies might obtain peer nominations of victimization (e.g., Crick & Bigbee, 1998; see Pellegrini, 2001, for a review), as well as parental ratings of adolescents' depressive symptoms and the amount of emotional support they provide, which would permit comparisons of adolescent and parents' perceptions of their emotional exchanges. It is possible that underreporting of parental emotional support may mask buffering effects of parental support on depressive symptoms in the current study. Also, the emotional support investigated in the current study was nonspecific to adolescents' victimization experiences. Future studies examining the emotional support adolescents receive surrounding their victimization experiences in particular may find different results. When surrounded by supportive contexts that are *responsive* to victims' emotional needs,

greater buffering effects may be found (e.g., see Woods, Coyle, Hoglund, & Leadbeater, 2007).

Additionally, the use of more advanced statistical procedures such as structural equation modeling would permit complete and simultaneous tests of the complex and multidimensional relationships proposed in the current study (Tabachnick & Fidell, 2007). By estimating and removing measurement error, structural equation modeling techniques often produce more reliable results. Finally, although this sample is considerably large and well-representative of adolescents in a medium-sized western Canadian city, the prevalence of relational victimization as well as the buffering effects of emotional support on depressive symptoms associated with victimization should be tested with more culturally and economically diverse populations.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. London, England: Sage.
- Baldry, A. C. (2004). Mental and physical health of Italian youngsters directly and indirectly victimized at school and home. *International Journal of Forensic Mental Health, 3*, 77-91.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296-3319.
- Barber, B. K., Harmon, E. L. (2002). Violating the self: Parent psychological control of children and adolescents. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 15-52). Washington, DC: American Psychological Association.
- 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.
- Barrera, M., Chassin, L., Rogosch, F. (1993). Effects of social support and conflict on adolescent children of alcoholic and nonalcoholic fathers. *Journal of Personality and Social Psychology, 64*(4), 602-612.
- Barrera, M., & Garrison-Jones, C. (1992). Family and peer social support as specific correlates of adolescent depressive symptoms. *Journal of Abnormal Child Psychology, 20*, 1-16.
- Beck, A. T. (1972). *Depression: Causes and treatment*. Philadelphia: University of Pennsylvania Press.

- Bond, L., Carlin, J. B., Thomas, L., Rubin, K., & Patton, G. (2001). Does bullying cause emotional problems? A prospective study of young teenagers. *British Medical Journal*, *323*, 480-484.
- Boulton, M. J. (1999). Concurrent and longitudinal relations between children's playground behaviour and social preference, victimization, and bullying. *Child Development*, *70*, 944-954.
- Boyce, W. F. (2006). *Young people in Canada: Their health and well-being*. Health Canada Report.
- Cairns, R. B., Cairns, B. D., Neckerman, H. J., Gerguson, L. L., & Garipey, J. L. (1989). Growth and aggression: Childhood to early adolescence. *Developmental Psychology*, *25*(2), 320-330.
- Carbonell, D. M., Reinherz, H. Z., & Giaconia, R. M. (1998). Risk and resilience in late adolescence. *Child and Adolescent Social Work Journal*, *15*(4), 251-272.
- Casey-Cannon, S., Hayward, C., & Gowen, K. (2001). Middle-school girls' reports of peer victimization: Concerns, consequences, and implications. *Professional School Counseling*, *5*(2), 138-147.
- Cicchetti, D., & Toth, S. (1998). The development of depression in children and adolescents. *American Psychologist*, *53*(2), 221-241.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310-157.
- Colarossi, L. G., & Eccles, J. S. (2003). Differential effects of support providers on adolescents' mental health. *Social Work Research*, *27*, 19-30.

- Collins, W., & Laursen, B. (2004). Changing relationships, changing youth: Interpersonal contexts of adolescent development. *Journal of Early Adolescence, 24*, 1200.
- Collins, W., & Steinberg, L. (2006). Adolescent development in interpersonal context. In Eisenberg, N (Ed.), *Handbook of child psychopathology, volume 3: Social, emotional, and personality development* (6th ed.). New York: Wiley & Sons.
- Cowie, H. (2000). Bystanding or standing by: Gender issues in coping with bullying in English schools. *Aggressive Behaviour, 26*, 85-97.
- Craig, W. M. (1998). The relationship among bullying, victimization, depression, anxiety, and aggression in elementary school children. *Personality & Individual Differences, 24*(1), 123-130.
- Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology, 7*, 313-322.
- Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology, 66*(2), 337-347.
- Crick, N. R., Casas, J. F., & Ku, H. C. (1999). Relational and physical forms of peer victimization in preschool. *Developmental Psychology, 35*(2), 376-385.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710-722.
- Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development & Psychopathology, 8*(2), 367-380.
- Crick, N. R., Nelson, D. A., Morales, J. R., Cullerton-Sen, C., Casas, J. F., & Hickman, S. (2001). Relational victimization in childhood and adolescence: I hurt you

through the grapevine. In J. Juvonen & S. Graham (Eds.), *School-based peer harassment: The plight of the vulnerable and victimized* (pp. 196-214). New York: Guilford Press.

Cumsille, P. E., & Epstein, N. (1994). Family cohesion, family adaptability, social support, and adolescent depressive symptoms in outpatient clinic families. *Journal of Family Psychology, 8*, 202-214.

Demaray, K. P., & 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*, 471-489.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders*, fourth edition, text revision. Washington, DC: American Psychiatric Association.

Egan, S. K., & Perry, D. G. (1998). Peer and sibling aggression: An investigation of intra- and extra-familial bullying. *Journal of Interpersonal Violence, 14*, 871-886.

Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin, 116*, 29-456.

Finnegan, R. A., Hodges, E. V. E., & Perry, D. G. (1998). Victimization by peers: Associations with children's reports of mother-child interaction. *Journal of Personality and Social Psychology, 75*, 1076-1086.

Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of networks of personal relationships. *Child Development, 63*, 103-115.

- Galambos, N.L., Leadbeater, B.J., & Barker, E.T. (2004). Gender differences in and risk factors for depression in adolescence: A 4-year longitudinal study. *International Journal of Behavioural Development, 28*, 16-25.
- Gotlib, I. H., Lewinsohn, P. M., & Seeley, J. R. (1995). Symptoms versus a diagnosis of depression: Differences in psychosocial functioning. *Journal of Consulting and Clinical Psychology, 63*, 90-100.
- Graham, S., & Juvonen, J. (2001). An attributional approach to peer victimization. In J. Juvonen & S. Graham (Eds.), *School-based peer harassment: The plight of the vulnerable and victimized* (pp. 196-214). New York: Guilford Press.
- Hammen, C., & Rudolph, K. D. (2003). Childhood mood disorders. In Mash, E. J., & Barkley, R. A. (Eds.), *Child Psychopathology* (2nd ed.). New York: Guilford Press.
- Hanish, L. D., & Guerra, N. G. (2002). A longitudinal analysis of patterns of adjustment following peer victimization. *Development & Psychopathology, 14*(1), 69-89.
- Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1-13.
- Hawker, D. S., & 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 & Psychiatry, 41*(4), 441-455.
- Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29*(3), 319-335.

- Hodges, E. V. E., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology, 35*, 98-101.
- Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology, 33*, 1032-1039.
- Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology, 76*, 677-685.
- House, J. S., Kahn, R. L., McLeod, J. D., & Williams, D. (1985). Measures and concepts of social support. In S. Cohen & S. L. Syme (Eds.), *Social support and health*. New York: Academic Press.
- House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. *Annual Review of Sociology, 14*, 293-318.
- Ivarsson, T., Broberg, A.G., Arvidsson, T., & Gillberg, C. (2005). Bullying in adolescence: Psychiatric problems in victims and bullies as measured by the Youth Self Report (YSR) and the Depression Self-Rating Scale (DSRS). *Nordic Journal of Psychiatry, 9*, 365-373.
- Kaltiala-Heino, R., Rimpela, M., Rantanen, P., & Rimpela, A. (2000). Bullying at school—an indicator of adolescents at risk for mental disorders. *Journal of Adolescence, 23*, 61-674.
- Kochenderfer, B., & Ladd, G. W. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development, 67*(4), 1305-1317.

- Kochenderfer-Ladd, B., & Wardrop, J. L. (2001). Chronicity and instability of children's peer victimization experiences as predictors of loneliness and social satisfaction trajectories. *Child Development, 72*, 134-151.
- Ladd, G. W., & Ladd, B. K. (1998). Parenting behaviours and parent-child relationships: Correlates of peer victimization in kindergarten? *Developmental Psychology, 34*, 1450-1458.
- Lamb, M. E. (Ed.) (2004). *The role of the father in child development* (4th ed.). New Jersey: Wiley & Sons.
- Leadbeater, B. J., Blatt, S. J., & Quinlan, D. M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress, and problem behaviours in adolescents. *Journal of Research on Adolescence, 5*, 1-29.
- Leadbeater, B. J., Boone, E. M., Sangster, N. A., & Mathieson, L. C. (2006). Sex differences in the personal costs and benefits of relational and physical aggression in high school. *Aggressive Behavior, 32*, 409-419.
- Leadbeater, B. J., & Hoglund, W. L. (in press). The effects of peer victimization and physical aggression on changes in internalizing from first to third grade. *Child Development*.
- Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology, 35*, 1268-1282.
- Lewinsohn, P., & Essau, C. (2002). Depression in adolescents. In Ian H. Gotlib & Constance L. Hammen (Eds.), *Handbook of Depression* (541-559). New York: The Guilford Press.

- Meece, D., & Laird, R. D. (2006). The importance of peers. In F. A. Villarruel & T. Luster (Eds.), *The crisis in youth mental health: Critical issues and effective programs (vol 2): Disorders in adolescence*. Westport, CT: Praeger Publishers.
- Miller, R. (1998). *Developmental Research Methods* (2nd ed.). Upper Saddle, NJ: Prentice Hall.
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Journal of the American Medical Association*, 285(16), 2094-2100.
- Newcomb, M. D. (1990). Social support and personal characteristics: A developmental and interactional perspective. *Journal of Social and Clinical Psychology*, 9, 54-68.
- NICHD Early Child Care Network (2004). Trajectories of physical aggression from toddlerhood to middle childhood: Predictors, correlates, and outcomes. *Monographs of the Society for Research in Child Development*, serial no. 279, 69.
- Nishina, A., Juvonen, J., and Witkow, M. R. (2005). Sticks and stones may break my bones, but names will make me feel sick: The psychosocial, somatic, and scholastic consequences of peer harassment. *Journal of Clinical Child and Adolescent Psychology*, 34, 37-48.
- Nolen-Hoeksema, S., & Girgus, J. (2004). The emergence of gender differences in depression during adolescence. *Psychological Bulletin*, 115(3), 424-443.

- Nolen-Hoeksema, S. (2006). Gender differences in depression. In Ian H. Gotlib & Constance L. Hammen (Eds.), *Handbook of Depression* (492-509). New York: The Guilford Press.
- Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, DC: Hemisphere (Wiley).
- Olweus, D. (1992). Victimization by peers: Antecedents and long-term outcomes. In K. H. Rubin & J. B. Asendorf (Eds.), *Social withdrawal, inhibition and shyness in children* (pp. 315-342). Hillsdale, NJ: Erlbaum.
- Olweus, D. (1993). *Bullying at school*. Cambridge, UK: Blackwell.
- Paul, J. J., & Cillessen, A. H. (2003). Dynamics of peer victimization in early adolescence: Results from a four-year longitudinal study. *Journal of Applied Psychology, 19*(2), 25-43.
- Pellegrini, A. D. (2001). Sampling instances of victimization in middle school. In J. Juvonen & S. Graham (Eds.), *School-based peer harassment: The plight of the vulnerable and victimized* (pp. 196-214). New York: Guildford Press.
- Perry, D. G., Hodges, E. V. E., & Egan, S. K. (2001). Determinants of chronic victimization by peers. In Juvonen, J. (Ed), *Peer harassment in school: The plight of the vulnerable and victimized*. New York: Guildford Press.
- Peterson, G. W. (2005). Family influences on adolescent development. In T. P. Gullotta & G. R. Adams (Eds.), *Handbook of adolescent behavioral problems*. New York: Springer.

- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30*(4), 479-491.
- Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and family: Three validation studies. *American Journal of Community Psychology, 11*, 1-24.
- Rigby, K. (1999). Peer victimization at school and the health of secondary students. *British Journal of Educational Psychology, 69*, 95-104.
- Rigby, K., & Slee, P. (1999). Suicidal ideation among adolescent school children, involvement in bully-victim problems, and perceived social support. *Suicide & Life Threatening Behaviour, 29*, 119-130.
- Roberts, J. E., & Gotlib, I. H. (1997). Temporal variability in global self-esteem and specific self-evaluation as prospective predictors of emotional distress: Specificity in predictors and outcome. *Journal of Abnormal Psychology, 106*(4), 521-529.
- Roland, E. (2002). Bullying, depressive symptoms and suicidal thoughts. *Educational Research, 44*, 55-67.
- Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development, 73*(6), 1830-1843.
- Rudolph, K. D., & Hammen, C. (1999). Age and gender as determinants of stress exposure, generation, and reactions in youngsters: A transactional perspective. *Child Development, 70*(3), 660-677.
- Rudolph, K. D., Hammen, C., Burge, D., Lindberg, N., Herzberg, D., & Daley, S. E. (2000). Toward an interpersonal life-stress model of depression: The

- developmental context of stress generation. *Development and Psychopathology*, 12, 215-234.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7(2), 147-177.
- Schraedley, P. K., Gotlib, I. H., & Hayward, C. (1999). Gender differences in correlates of depressive symptoms in adolescents. *Journal of Adolescent Health*, 25, 98-108.
- Schwartz, D., Dodge, K. A., & Coie, J. D. (1993). The emergence of chronic peer victimization in boys' play groups. *Child Development*, 64, 1755-1722.
- Seals, D., & Young, J. (2003). Bullying and victimization: Prevalence and relationship to gender, grade level, ethnicity, self-esteem, and depression. *Adolescence*, 38(152), 735-747.
- Shulman, S., & Seiffge-Krenke, I. (1997). *Fathers and adolescents*. New York: Routledge.
- Slavin, L. A., & Rainer, K. L. (1990). Gender differences in emotional support and depressive symptoms among adolescents: A prospective analysis. *American Journal of Community Psychology*, 18(3), 407-421.
- Slee, P. T. (1995). Peer victimization and its relationship to depression among Australian primary school students. *Personality and Individual Differences*, 18, 57-62.
- Steinberg, L. (2008). *Adolescence* (8th ed.). New York: McGraw-Hill.
- Storch, E. A., Phil, M., Nock, M. K., Masia-Warner, C., & Barlas, M. E. (2003). Peer victimization and social-psychological adjustment in Hispanic and African-American children. *Journal of Child and Family Studies*, 12(4), 439-452.

- Stice, E., Ragan, J. & Randall, P. (2004). Prospective relations between social support and depression: Differential directions of effects for parent and peer support? *Journal of Abnormal Psychology, 113*, 155-159.
- Sweeting, H., Young, R., West, P., & Der, G. (2006). Peer victimization and depression in early-mid adolescence: A longitudinal study. *British Journal of Educational Psychology, 76*, 577-594.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). New York: Pearson Education.
- Troop-Gordon, W., & Ladd, G. (2005). Trajectories of peer victimization and perceptions of self and schoolmates: Precursors to internalizing and externalizing problems. *Child Development, 76*, 1072-1091.
- Troy, M., & Sroufe, L. A. (1987). Victimization among preschoolers: Role of attachment relationship history. *Journal of Child and Adolescent Psychiatry, 2*, 166-172.
- Vuijk, P., van Lier, P. A. C., Crijnen, A. A. M., & Huizink, A. C. (2007). Testing sex-specific pathways from peer victimization to anxiety and depression in early adolescents through a randomized intervention trial. *Journal of Affective Disorders, 100*, 221-226.
- Weissman et al. (1999). Children with prepubertal-onset major depressive disorder and anxiety grown up. *Archives of General Psychiatry, 56*(9), 794-801.
- Williams, S. K., & Kelly, F. D. (2005). Relationships among involvement, attachment, and behavioral problems in adolescence: Examining fathers' influence. *Journal of Early Adolescence, 25*, 168-196.

Woods, T., Coyle, K., Hoglund, W., & Leadbeater, B. (2007). Changing the contexts of peer victimization: The effects of a primary prevention program on school and classroom levels of victimization. In Zins, J. E., Elias, M. J., & Maher, C. A. (Eds.), *Bullying, victimization, and peer harassment: A handbook of prevention and intervention*. New York: Haworth Press.

Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers and friends*. Chicago: University of Chicago Press.

Appendix A

Items assessing Victimization from the Social Experiences Questionnaire (SEQ; Crick & Grotpeter, 1996).

Relational Victimization

1. How often do your peers leave you out on purpose when it is time to do an activity?
2. How often does a peer who is mad at you try to get back at you by not letting you be in the group anymore?
3. How often do your peers tell lies about you to make others not like you anymore?
4. How often do your peers say they won't like you unless you do what they want you to do?
5. How often do your peers try to keep others from liking you by saying mean things about you?

Physical Victimization

1. How often do you get hit by your peers?
 2. How often do your peers yell at you or call you mean names?
 3. How often do you get pushed or shoved by your peers?
 4. How often do your peers kick you or pull your hair?
 5. How often do your peers say they will beat you up if you don't do what they want you to do?
-

Appendix B

Items assessing Aggression from the Children's Peer Relations Scale (CPRS; Crick & Grotpeter, 1995)

Relational Aggression

1. Some teens tell lies about someone so that the others won't like them anymore. How often do you do this?
2. Some teens try to keep certain teens from being in their group when it is time to do an activity. How often do you do this?
3. When they are mad at someone, some teens get back at the person by not letting the person be in their group anymore. How often do you do this?
4. Some teens tell their friends that they will stop liking them unless the friends do what they say. How often do you tell friends this?
5. Some teens try to keep others from liking someone by saying mean things about them. How often do you do this?

Physical Aggression

1. Some teens hit others. How often do you do this?
 2. Some teens yell at others and call them mean names. How often do you do this?
 3. Some teens push and shove others. How often do you do this?
-

Appendix C

Items assessing Depressive Symptoms from the Brief Child and Family Phone Interview (BCFPI; Cunningham, Pettingill, & Boyle, 2001)

Depressive Symptoms

Do you notice that you...

1. Generally have a cheerful mood?
 2. Feel hopeless?
 3. Get no pleasure from your usual activities?
 4. Have trouble enjoying yourself?
 5. Are unhappy, sad or depressed?
-

Appendix D

Items assessing Parental Emotional Support from the Child's Report of Parental Behavior Inventory (Schaefer, 1965)

Maternal Emotional Support

My "mother" is a person who...

1. Understands my problems and worries
2. Is able to make me feel better when I am upset
3. Enjoys talking things over with me
4. Has a good time at home with me
5. Enjoys doing things with me

Paternal Emotional Support

My "father" is a person who...

1. Understands my problems and worries
 2. Is able to make me feel better when I am upset
 3. Enjoys talking things over with me
 4. Has a good time at home with me
 5. Enjoys doing things with me
-

Appendix E

Items assessing Peer Emotional Support from the Perceived Social Support From Friends scale (PSS-Fr; Procidano & Heller, 1983)

Peer Emotional Support

1. My friends/peers give me the moral support I need
 2. I rely on my friends/peers for emotional support
 3. If I felt that one or more of my friends/peers were upset with me, I'd just keep it to myself
 4. There is a friend/peer I could go to if I were just feeling down, without feeling funny about it later
 5. My friends/peers and I are very open about what we think about things
 6. My friends/peers are sensitive to my personal needs
 7. My friends/peers are good at helping me to solve problems
 8. I have a deep sharing relationship with a number of peers
 9. I have a relationship with a friend/peer that is as intimate as other people's relationships with friends/peers
-

Appendix F

Items assessing Parental Psychological Control from the Psychological Control Scale – Youth Self-Report (PCS-YSR; Barber, 1996)

Maternal Psychological Control

My “mother” is a person who...

1. Is always trying to change how I feel or think about things
2. Changes the subject whenever I have something to say
3. Often interrupts me
4. Blames me for other family members’ problems
5. Brings up past mistakes when she criticizes me
6. Is less friendly with me if I do not see things her way
7. Will avoid looking at me when I have disappointed her
8. If I hurt her feelings, stops talking to me until I please her again

Paternal Psychological Control

My “father” is a person who...

1. Is always trying to change how I feel or think about things
 2. Changes the subject whenever I have something to say
 3. Often interrupts me
 4. Blames me for other family members’ problems
 5. Brings up past mistakes when he criticizes me
 6. Is less friendly with me if I do not see things his way
 7. Will avoid looking at me when I have disappointed him
 8. If I hurt his feelings, stops talking to me until I please him again
-