

Do positive peer relations mitigate transactions between depressive symptoms and peer victimization in adolescence?



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A B S T R A C T

This study's purpose was to evaluate whether two aspects of positive peer relations—having a friend and being well-liked—mitigate prospective transactions between depressive symptoms and peer victimization. Participants were early adolescents in fifth and sixth grades ($N = 483$; 50% girls; M_{age} in 5th grade spring = 11.10 years; $SD = 0.40$) and late adolescents in ninth and tenth grades ($N = 444$; 52% girls; M_{age} in 9th grade spring = 14.70 years; $SD = 0.62$). Data were collected in the spring annually. Depressive symptoms were assessed via parent-, teacher-, and self-reports (late adolescence only) and peer victimization by self-, peer-, and teacher-reports. Mutual friendship nominations and peer acceptance ratings indexed positive peer relations. Results showed that positive peer relations are protective: Depressive symptoms contributed to peer victimization for early and late adolescents without a friend; moreover, late adolescents high on acceptance were at decreased risk for peer victimization.

Peer victimization occurs when youth are the recipients of peers' physical, verbal, or relational aggression (e.g., Salmivalli & Peets, 2009). Unfortunately, peer victimization affects a sizeable proportion of school-age youth, with estimates ranging from 5 to 30% (see Salmivalli & Peets, 2009), and is associated both concurrently and over time with internalizing problems such as depression, anxiety, and loneliness (e.g., Desjardins & Leadbeater, 2011; Haltigan & Vaillancourt, 2014; Reijntjes, Kamphuis, Prinzie, & Telch, 2010; Troop-Gordon, Rudolph, Sugimura, & Little, 2015; Zwierzyńska, Wolke, & Lereya, 2013), externalizing problems such as aggression and delinquent behavior (e.g., Kawabata, Tseng, & Crick, 2014; Reijntjes et al., 2011; van Lier et al., 2012), and deficits in school and academic adjustment (e.g., Iyer, Kochenderfer-Ladd, Eisenberg, & Thompson, 2010; Nakamoto & Schwartz, 2010; van Lier et al., 2012). Evaluating contributors to and consequences of peer victimization, as well as identifying factors that protect against the likelihood of victimization, represent important research objectives given their potential to inform intervention and prevention efforts. This study's purpose is to evaluate two aspects of adolescents' positive peer relations, mutual friendship and peer acceptance, as factors that mitigate transactions between peer victimization and depressive symptoms, an important correlate of peer victimization.

1. A transactional model of peer victimization and depressive symptoms

Interpersonal theories of depression posit that interpersonal dysfunction and depression are related in a transactional way (Coyne, 1976; Joiner, Coyne, & Blalock, 1999). Coyne (1976, p. 187) referred to a “depressive social process” whereby depressed individuals display aversive symptoms that elicit nondepressed others' support and reassurance on the one hand, and social rejection on the other. Inconsistencies in these responses undermine depressed individuals' perceptions of their social competencies, which leads to disturbances in their interpersonal relationships and, in turn, intensifies their symptoms of depression.

Rudolph (2009) builds on traditional interpersonal theories by applying a developmental perspective and, in doing so, accounts for ways in which the transition into adolescence and the ongoing interactions between youth and their environments may enhance the cycle of dysfunction. More specifically, she proposes that deficits in social competencies lay the groundwork for relationship difficulties—ones that have the potential to affect the onset, maintenance, and

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recurrence of depression. Depression, in turn, leaves a lasting interpersonal “scar,” creating relationship disturbances in the short- and long-term and fostering a cycle of dysfunction (Nolen-Hoeksema, Girgus, & Seligman, 1992; Rudolph, 2009; Rudolph, Flynn, & Abaied, 2008). Importantly, social-contextual challenges such as middle school entry, puberty, and a shift in the relative importance of family versus peer contexts, increase adolescents' susceptibility to depression and interpersonal disturbances (Rudolph et al., 2008). The study of transactions between depression and victimization during adolescence is, therefore, particularly germane.

Drawing upon interpersonal theories of depression (Coyne, 1976; Rudolph et al., 2008), researchers have begun to test transactional models involving peer victimization and depression (e.g., Kaltiala-Heino, Fröjd, & Marttunen, 2010; Kawabata et al., 2014). In particular, studies in which depression is simultaneously evaluated as an antecedent and consequence of peer victimization provide information about the relative strength of each variable's contribution to the other and, thus, have the potential to offer the most persuasive empirical evidence for interpersonal theories of depression. Findings from such investigations provide compelling evidence for the cyclical nature of depression and peer victimization. For example, among samples of Finnish, Taiwanese, American, and Scottish youth in early childhood through later adolescence, symptoms of depression predicted, and were predicted by, peer victimization across lags ranging from six to 24 months (Kaltiala-Heino et al., 2010; Kawabata, Wan-Ling, & Crick, 2014; Snyder et al., 2003; Sweeting, Young, West, & Der, 2006). Other investigators, however, obtained evidence for one direction of effect or the other but not both. Two studies reinforce the perspective that victimization more strongly forecasts depressive symptoms compared to the reverse. This pattern of associations was obtained for samples of American and Australian youth in late childhood and early adolescence, respectively (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Schwartz, Gorman, Nakamoto, & Toblin, 2005).

Yet, three studies found stronger evidence for the role of depression in eliciting peer victimization than vice versa. These investigations show that, among samples of American and Finnish adolescents, symptoms of depression predicted, but were not predicted by, peer victimization over a period of a year (Kochel, Ladd, & Rudolph, 2012; Sentse, Prinzie, & Salmivalli, 2016; Tran, Cole, & Weiss, 2012). Although there was some discrepancy in the supported direction of effect across these studies, collectively they make a strong case for the plausibility of a transactional model and Rudolph's (2009) interpersonal theory of youth depression; that is, accrued evidence provides support for prospective pathways from depression to peer victimization and from peer victimization to depression, in some cases within the context of a single study (Kaltiala-Heino et al., 2010; Kawabata et al., 2014; Snyder et al., 2003; Sweeting et al., 2006). Operating under the assumption that depression and interpersonal dysfunction (here, peer victimization) are associated in a transactional way evokes the need to move beyond the examination of temporal precedence and investigate how transactions between youth and their environments have the potential to interrupt this cycle of dysfunction.

2. The protective role of positive peer relations

Models of youth resilience are predicated on the assumption that, even in the presence of significant adversity, features of the individual and/or environment may predispose youth to experience desirable outcomes (e.g., Cicchetti & Rogosch, 2009; Masten et al., 1999). Historical and contemporary theoretical perspectives that emphasize the significance of interpersonal fulfillment for adaptive development also acknowledge the potentially protective function of satisfying interpersonal relationships (Baumeister & Leary, 1995; Sullivan, 1953). For example, Sullivan (1953) proposes that interpersonal needs emerging at different periods of development are satisfied by specific relationships. The skills and competencies arising from participating in these interpersonal relationships can serve as

protective factors. In particular, mutual friendship and peer acceptance might contribute to resilience because of the provisions, such as intimacy and peer group belonging, afforded by each (Bagwell & Schmidt, 2011; Furman & Rose, 2015; Ladd, Kochenderfer, & Coleman, 1997; Rubin, Bukowski, & Bowker, 2015). Though resilience models have most often provided a framework for investigating the protective function of positive peer relations within dysfunctional family environments (Cicchetti & Rogosch, 2009), models of child resilience can likewise be applied to the study of school environments—ones that include interpersonal and/or intrapersonal challenges. For example, resilience models lay the foundation for studies aimed at investigating the role of positive peer relations, including mutual friendship and peer acceptance, in ameliorating threats to youth adjustment, namely depression and peer victimization in school.

The main goal of the current study is to investigate whether friendship and peer acceptance indeed mitigate the prospective link from depression to peer victimization and/or vice versa in early and late adolescence. Importantly, research suggests that differing forms of peer relations make partially distinct contributions to youth adjustment (Hartup, 2009; Ladd et al., 1997) underscoring the need to evaluate the potentially protective role of multiple forms of peer relationships.

2.1. Mutual best friendship

Friendship, which is characterized by strong affective ties, is developmentally normative (i.e., most children participate in at least one) and significant (i.e., it provides an optimal context for social development). In adolescence, friendship involves having fun together, sharing intimate feelings, and providing one another with support; moreover, friendship can serve an important protective function (Boulton, 1999).

One way that friendship is protective is that it alters the link between risk factors and negative outcomes, such as peer victimization (Bagwell & Schmidt, 2011). Friendship may make youth less vulnerable, and thus, less suitable targets of victimization (e.g., Veenstra et al., 2007). The role that friendship plays in diminishing vulnerability is of particular importance for depressed youth because they are especially likely to signal vulnerability in the form of depressive symptoms and depression-linked behaviors. For example, sad affect, low self-esteem, reassurance seeking, negative feedback-seeking, and poor self-regulation are all commonly displayed by individuals who are symptomatic for depression (Borelli & Prinstein, 2006; Creemers, Scholte, Engels, Prinstein, & Wiers, 2012; Prinstein, Borelli, Cheah, Simon, & Aikins, 2005; Rudolph, 2009; Silk, Steinberg, & Morris, 2003) and may very well present as vulnerabilities to potential aggressors. Friendship might decrease vulnerability for depressed youth by providing a context for the development of social and emotional competencies. Friends may help depressed youth develop conflict resolution skills and problem solving efficacy as well as learn how to understand, express, and regulate emotion (Bagwell & Schmidt, 2011). Not surprisingly, research shows that socially and emotionally competent youth are less apt to become victims of peer abuse (e.g., Card & Hodges, 2008). Having an ally may also lessen vulnerability among depressed youth because research suggests that aggressors are less likely to target peers with potential defenders (e.g., Sainio, Veenstra, Huising, & Salmivalli, 2011).

Another way that friendship plays a protective role is by attenuating negative outcomes associated with prior victimization. For example, friends provide important coping resources, such as emotional support, a sense of security, assistance with problem-solving, and enjoyable companionship (Bagwell & Schmidt, 2011), all of which may buffer negative consequences associated with peer victimization. Empirical tests of this proposition are in short supply, but in one such study, Schmidt and Bagwell (2007) reported that friendship features, particularly security and help, mitigated the association between victimization and anxiety and depression for girls in third through fifth grade. Together, theory and research provide a basis for hypothesizing that

friendship will mitigate risk for peer victimization following depressive symptoms as well as vice versa.

2.2. Peer acceptance

Peer acceptance reflects an adolescent's relative likeability by the peer group (Asher & McDonald, 2009; Cillessen & Marks, 2011). Unlike mutual friendship, peer acceptance is unilateral; that is, it reflects peers' sentiments about an individual but not vice versa (Asher, Parker, & Walker, 1996) and is another important dimension of adolescents' peer relations at school. There is reason to believe that, like friendship, peer acceptance has the potential to diminish risk for victimization among adolescents with depressive symptoms. For example, it is conceivable that aggressors not only minimize risk for *retaliation* by targeting peers without friends or allies (e.g., Sainio et al., 2011), but also, they minimize risk of *social disapproval* by targeting youth who are disliked or have few ties within the peer network (Salmivalli & Peets, 2009). In other words, the path of least resistance presumably involves targeting individuals who have poor standing in the peer group. It is possible, therefore, that even depressed adolescents are not likely to make good targets for victimization if they are reasonably well-regarded by the peer group.

It is also possible that peer acceptance mitigates risk for depressive symptoms that would result from peer victimization. For example, research suggests that loneliness is often experienced by recipients of peer victimization (Kochenderfer-Ladd & Wardrop, 2001; Reijntjes et al., 2010). Because belongingness in close relationships is a basic human need, it is not surprising that loneliness is common among individuals who are symptomatic for depression (Baumeister & Leary, 1995). Compared to individuals who are victimized and poorly accepted by peers, individuals who are victimized (i.e., targeted by one or a few aggressors) but generally accepted (i.e., the consensus of the peer group is one of liking) presumably have at least some opportunity to engage in positive peer interactions with classmates both within and outside the school context. Assuming that peer acceptance promotes a sense of belongingness, and in turn decreases feelings of loneliness (Asher & Paquette, 2003), it stands to reason that youth who are victimized but nevertheless feel they belong might be at lower risk for the emergence of depressive symptoms.

3. Purpose and hypotheses

The primary aim of the present study was to investigate the extent to which positive peer relations mitigate transactions between depressive symptoms and peer victimization in early and late adolescence. On the basis of theory and accumulated evidence, we first hypothesized that depressive symptoms and peer victimization would be reciprocally related (i.e., depressive symptoms would both predict and be predicted by peer victimization). We evaluated this hypothesis by estimating two cross-lagged panel models—one each in early (i.e., 5th to 6th grades) and later (i.e., 9th to 10th grades) adolescence—that included pathways from depressive symptoms to peer victimization and vice versa.

According to Rudolph's (2009) interpersonal theory of youth depression, individuals' susceptibility to interpersonal disturbances and depression increases during the transition to adolescence. Consistent with this perspective, research shows that adolescents increasingly turn to peers, more so than parents, for intimacy, companionship, and support (Brown & Larson, 2009), which presumably elevates the importance of the peer ecology (Johnson, Crosnoe, & Elder, 2011) and increases the likelihood of psychological dysfunction (e.g., depression) in the case of peer relationships "gone wrong". In fact, in middle-to-late adolescence, rates of depression increase (Hankin et al., 1998), suggesting that adolescents are at heightened risk for the onset, maintenance, and recurrence of depression (Rudolph, 2009). Adolescence, therefore, represents an important developmental period in which to evaluate transactions among depression symptoms and

victimization.

Consistent with models of resilience (Cicchetti & Rogosch, 2009), it stands to reason that aspects of positive peer relations may ameliorate the harmful effects associated with depressive symptoms and/or peer victimization. The kinds of peer relationships that serve a protective function may depend on development. Although it is well-understood that "peers are necessities not luxuries" throughout childhood and adolescence (Hartup, 2009, p.3), youth may experience a shifting of priorities in some aspects of their peer relations from early to late adolescence (LaFontana & Cillessen, 2010). For example, Sullivan's (1953) interpersonal theory suggests that peer acceptance is of great concern for children but becomes less so as they move through adolescence, a shift that may in part be a consequence of the emerging need for sexuality. In other words, as adolescents increasingly prioritize sexual relationships and romantic intimacy, the adaptive significance of acceptance by the larger peer group may decrease somewhat. Indeed, a small body of empirical evidence lends support for the proposition that the importance of peer group acceptance peaks around early- to mid-adolescence (see LaFontana & Cillessen, 2010). Our second hypothesis, therefore, was that, in early but not late adolescence, peer acceptance would serve a protective function, reducing the strength of the transactional association between depressive symptoms and peer victimization.

Whereas the importance of peer status may wane as youth progress into mid and late adolescence, there is reason to believe that the developmental significance of friendship is consistently high over the course of adolescence. From a theoretical standpoint, Sullivan (1953) contends that the need for intimacy from peers, especially friends, arises in early adolescence and remains essential for interpersonal fulfillment throughout adolescence. Empirically, research generally demonstrates that intimacy emerges as a salient expectation in early adolescence and that levels of intimacy remain stable or increase over the course of the adolescent period (Bagwell & Schmidt, 2011). It seems likely that, as long as the need for intimacy remains high, so too will the developmental significance of friendship. Thus, our third hypothesis is that, in both early and later adolescence, friendship will mitigate the transactional association between depressive symptoms and peer victimization.

In several ways, the current study provides conceptual and empirical extensions to important prior work in which friendship was found to moderate links between early internalizing problems and subsequent peer victimization (Hodges, Boivin, Vitaro, & Bukowski, 1999), and peer rejection amplified associations between internalizing symptoms and peer victimization (e.g., Hodges & Perry, 1999). First, because studies are needed that provide an empirical test of interpersonal theories of depression, we measured depressive symptoms specifically, rather than internalizing problems more broadly. Second, we assessed peer victimization using a comprehensive measure that combines self-, peer-, and teacher-ratings and indexes physical, verbal, and relational forms of victimization. Third, within a single longitudinal study, we included two types of peer relations—both dyad- (i.e., friendship) and group-level (i.e., peer acceptance) peer relations. We did so in the context of cross-lagged structural equation (i.e., latent variable) models that allowed for the simultaneous estimation of competing predictive hypotheses (depressive symptoms to victimization *and* victimization to depressive symptoms).

4. Method

4.1. Participants

Data for this study came from a longitudinal investigation of 483 youth (240 girls, 243 boys; M_{age} in spring of 5th grade = 11.10 years; $SD = 0.40$) assessed when they were in the fifth, sixth, ninth, and tenth grades. In the spring of fifth grade, the sample was primarily Caucasian (79.7%) and African American (16.0%) and included a small percent-

tage of adolescents from Hispanic, mixed race, or other backgrounds (4.3%). Most participants ($n = 383$) were recruited in 1992, at kindergarten entry. Surveys were administered to fifth and sixth graders (i.e., early adolescents) in the spring of 1998 and 1999, respectively, and ninth and tenth graders (i.e., late adolescents) in the spring of 2002 and 2003, respectively. Due to the longitudinal nature of the study and student mobility, recruitment was ongoing. By the time participants were in fifth grade, they were dispersed across 145 classrooms and 68 schools that were located in diverse socioeconomic settings within urban, suburban, and rural areas throughout the United States. While following these participants to new schools, their new classmates were often recruited, especially to provide sociometric data (e.g., peer acceptance, friendship nominations). Attrition from fifth to sixth grade, and from ninth to tenth grade, was $< 1\%$ and 7% , respectively, and most likely due to mobility. Complete data were not obtained for all participants. The total percentage of missing data across study variables, including adolescent-, peer-, teacher-, and parent-reports, was $< 9\%$ in early adolescence and about 29% in late adolescence. The missing data technique employed in our study, full information maximum likelihood (FIML), is recommended widely, largely because it produces unbiased estimates under both MCAR and MAR assumptions (Baraldi & Enders, 2010; Enders & Bandalos, 2001). Although MAR is impossible to verify because it depends on unobserved data, methodologists have suggested that the MAR assumption may be especially tenable in school-based studies where student mobility is often the most common reason for attrition (Baraldi & Enders, 2010; Enders, Dietz, Montague, & Dixon, 2006).

Consent was obtained from urban, suburban, and rural school districts in the Midwestern United States before recruitment began, and written informed parental consent and assent was obtained from all participants at the time of recruitment. Of the families recruited for the longitudinal study, 95% consented to their child's participation. At the time of recruitment, the median household income was between \$30,001 and \$40 K; 20% of participants came from low income backgrounds (below \$20 K), and 43% of families reported backgrounds of middle income or higher (above \$50 K).

4.2. Procedure

Participants' teachers were mailed measures of depressive symptoms and peer victimization, and parents were mailed measures of depressive symptoms; teachers and parents were instructed to return their completed forms by mail. In secondary schools, research staff first received permission to review participants' class schedules. Research staff then identified participants' homeroom teachers (with the assumption that the teacher and classroom was the student's home base) and interviewed homeroom teachers to gauge their willingness to participate and knowledge of the participant. If teachers reported not knowing the participant well, or simply preferred not to participate, research staff identified another teacher on the participant's schedule and, again, interviewed the teacher to assess his/her willingness to participate and knowledge of the participant. This process was repeated until a teacher was identified for each participant.

Peers completed surveys about their perceptions of participants' peer victimization and peer acceptance in school. Sociometric measures (i.e., peer victimization and peer acceptance measures) were administered by trained personnel to adolescents and their classmates. Adolescents underwent training on how to use each response format, after which they completed the measures individually. All fifth grade participants and 61% of sixth grade participants belonged to classrooms that were housed in elementary schools, thus; sociometric procedures were administered in self-contained classrooms. Otherwise, classmates who shared a minimum of one class with the target participant were identified. From the pool of identified classmates who had permission to participate, up to 40 raters/nominators were selected at random (see Parkhurst & Asher, 1992). The mean classroom consent rate was 83% in

fifth grade, 78% in sixth grade, 82% in ninth grade, and 72% in tenth grade.

Participants also completed measures assessing their own peer victimization experiences. These measures were completed by adolescents in all four grades. In addition, participants in ninth and tenth grades completed a self-report measure of depressive symptoms. To reduce the likelihood of missing data due to student absences from school, research staff returned to schools, including those of participants who moved out-of-state, to do makeups on one or more occasions.

Adolescents and their classmates, teachers, and parents were compensated for their participation. Teacher and parent payments increased over time to reflect the fact that participation became increasingly valuable over the course of the long-term longitudinal study. Teachers received a cash payment (i.e., between \$10 and \$18) for every participant about whom they completed a set of questionnaires. Parents also received a cash payment (i.e., between \$25 and \$150) at each wave of data collection for which they completed a set of questionnaires. Child and adolescent participants received an age-appropriate gift, such as a pencil in the fifth and sixth grades and a choice of a \$5–\$10 gift card for a store or restaurant (e.g., Borders, McDonalds) in the ninth and tenth grades.

4.3. Measures

Depressive symptoms were assessed using parent- and teacher-reports in fifth and sixth grades and parent-, teacher-, and self-reports in ninth and tenth grades; victimization was assessed using peer-, self-, and teacher-reports (Ladd & Kochenderfer-Ladd, 2002); and peer nominations and ratings were used to measure mutual friendship and peer acceptance. Theory and previous research guided our decision to utilize a multiple-informant approach. From a theoretical standpoint, gathering data from multiple informants has the potential to increase our understanding of the specific contexts in which participants display the constructs under investigation (De Los Reyes, Thomas, Goodman, & Kundey, 2013). Empirically, multi-informant approaches for measuring mental health and relational constructs have been shown to be reliable and valid (De Los Reyes & Aldao, 2015; Ladd & Kochenderfer-Ladd, 2002).

4.3.1. Depressive symptoms

Parents completed the Child Behavior Checklist (CBCL; Achenbach, 1991a), which includes 118 items rated on a 3-point scale (0 = *Not True* or *Never True*, 2 = *Very True* or *Often True*) to indicate how often their adolescent displayed each symptom. When more than one parent was available, the one with the most knowledge about the adolescent's development was asked to complete this measure. Typical scoring of the CBCL yields an anxiety/depression subscale, but research suggests that it is possible to utilize CBCL items to form a valid subscale that focuses more specifically on depressive symptoms (Connor-Smith & Compas, 2003; Lengua, Sadowski, Friedrich, & Fisher, 2001). Because depression was the construct of interest in the current study, the depressive symptom subscale developed by Lengua et al. (2001) was used. This subscale was based on a reorganization of the CBCL items to more closely coincide with clinical diagnoses as reflected in the Diagnostic and Statistical Manual (DSM-IV-TR; American Psychiatric Association, 2000). Confirmatory factor analyses and coefficient alphas demonstrated adequate construct validity and reliability, respectively, based on findings from one nonclinical sample and two clinical samples (CFIs = 0.90, 0.91, and 0.89, respectively; α s = 0.67, 0.81, and 0.81, respectively; Lengua et al., 2001). The IRB did not permit administration of two of the CBCL items concerning suicidal ideation/behavior that are included in the Lengua et al. depressive symptom scale (items 18 and 91). Our depressive symptom subscale, therefore, consisted of the remaining 10 items (items 12, 14, 33, 35, 54, 76, 77, 100, 102, 103 on the CBCL; Achenbach, 1991a). Depressive symptom scores were created by averaging the 10 items (α s = 0.73–0.81).

Teachers completed the Teacher Report Form (TRF; Achenbach,

Table 1
Bivariate correlations, means and standard deviations.

	1	2	3	4	5	6	7	8	9	10	11	Mean	SD
1. G5 Parent-report depression												1.17	0.23
2. G6 Parent-report depression	0.57											1.16	0.23
3. G5 Teacher-report depression	0.30	0.24										1.14	0.24
4. G6 Teacher-report depression	0.31	0.33	0.32									1.16	0.27
5. G5 Self-report victimization	0.27	0.15	0.31	0.23								1.97	0.88
6. G6 Self-report victimization	0.16	0.14	0.16	0.22	0.36							2.05	0.87
7. G5 Peer-report victimization	0.20	0.17	0.27	0.16	0.46	0.23						9.82	12.94
8. G6 Peer-report victimization	0.32	0.34	0.26	0.27	0.34	0.25	0.71					8.63	11.96
9. G5 Teacher-report victimization	0.16	0.17	0.45	0.30	0.38	0.15	0.50	0.47				1.19	0.37
10. G6 Teacher-report victimization	0.29	0.27	0.26	0.53	0.30	0.21	0.42	0.47	0.45			1.20	0.35
11. G5 Mutual best friendship	-0.14	-0.10	-0.20	-0.16	-0.30	-0.12	-0.38	-0.35	-0.34	-0.25		0.78	0.42
12. G5 Peer acceptance	-0.23	-0.19	-0.22	-0.16	-0.36	-0.18	-0.61	-0.49	-0.33	-0.32	0.39	2.56	0.64

Note. G5 = 5th grade; G6 = 6th grade. Coefficients in bold represent stabilities. All correlations are significant at $p < 0.05$. Raw (unstandardized) means are presented.

1991b), and late adolescents (i.e., ninth and tenth grade) completed the Youth Self Report Form (YSR; Achenbach, 1991c). Using the TRF and YSR items, we created depressive symptoms subscales that were comparable to the parent-report depressive symptoms measure described above. When a participant had multiple teachers, project staff selected a teacher who (1) professed to be knowledgeable about the adolescent's development, and (2) demonstrated a willingness to complete the questionnaire battery. Depressive symptom scores were created by averaging seven items (12, 14, 33, 35, 54, 102, and 103; $\alpha_s = 0.68\text{--}0.76$) on the TRF (Achenbach, 1991b) and ten items (12, 14, 33, 35, 54, 76, 77, 100, 102, 103; $\alpha_s = 0.76\text{--}0.91$) on the YSR (Achenbach, 1991c). The parent report measure includes three sleep-related items that do not appear on the TRF or YSR.

4.3.2. Peer victimization

Peers completed four nomination items to assess the extent to which each adolescent was victimized at school. Each item represents a specific form of victimization: (a) physical ("gets hit, pushed or kicked"), (b) verbal ("gets called bad names"), (c) relational ("kids say bad things about him/her to other kids"), and (d) general ("gets picked on"). For each item, adolescents were asked to nominate an unlimited number of classmates fitting the descriptor. Scores on each item were separately summed and standardized within classrooms, and a total peer victimization score was computed by averaging the standardized scores for physical, verbal, relational, and general victimization ($\alpha_s = 0.81\text{--}0.94$). The resulting standardized victimization scores index how victimized each participant is within his/her classroom environment, or the frequency with which classroom peers perceive a child to be the target of victimization.

Adolescents completed a 4-item victimization scale (Kochenderfer & Ladd, 1996) to assess the frequency with which they experienced four forms of victimization (physical, verbal, relational, and general). Participants were trained to use a 5-point scale (1 = *no, never or rarely*; 3 = *sometimes*; 5 = *a lot of the time*) to respond to the following questions: Does anyone in your class ever: (1) "...hit you at school?" (2) "...say mean things to you at school?" (3) "...say bad things about you to other kids at school?" and (4) "...pick on you at school?" Peer victimization scores at each grade level were calculated by averaging across the four items ($\alpha_s = 0.72\text{--}0.84$).

Teachers completed a 6-item victimization scale to assess how often each adolescent experienced physical, verbal, relational, and general victimization at school. Teachers used a 3-point scale (1 = *does not apply*; 2 = *applies sometimes*; 3 = *certainly applies*) to rate the following items: (1) "is picked on by other children," (2) "is called names by peers," (3) "is pushed around by other children," (4) "is teased or made fun of by peers," (5) "is someone who peers say negative things about to others," and (6) "is hit or kicked by other children." Peer victimization scores were calculated by averaging across the six items at each grade level ($\alpha_s = 0.88\text{--}0.91$).

4.3.3. Mutual best friendship

Participants were instructed first to nominate an unlimited number of classmates as best friends and, second, among those nominated, to select one very best friend (Parker & Asher, 1993). Using a dichotomous measure of friendship, participants had a mutual best friend if the peer they nominated as a very best friend also nominated them as a best friend or very best friend. If their very best friend nomination was not reciprocated as a best or very best friend, participants were scored as not having a mutual best friend (0 = *no mutual best friendship*, 1 = *yes, mutual best friendship*). In the fifth and ninth grades, students nominated an average of 3.85 and 2.15 best friends, respectively. In the fifth grade, 391 participants, or 93% of the total sample, nominated a best friend. Of these, 319 (82% of friendship nominations) were reciprocated. In ninth grade, 230 participants, or 79% of the total sample, nominated a best friend. Of these, 118 (51% of friendship nominations) were reciprocated.

4.3.4. Peer acceptance

We used a rating-scale instrument (Asher, Singleton, Tinsley, & Hymel, 1979) as a measure of peer acceptance. Adolescents were presented with a list of their classmates' names and instructed to indicate how much they like to hang out with each classmate by circling a number on a scale that ranged from 1 to 5 (1 = *I don't like to*; 5 = *I like to a lot*). Prior to administering this measure, adolescents were shown class rosters, tested until they could identify all classmates, and trained to conduct ratings with practice criteria. Scores were averaged and standardized within classrooms; higher scores reflect greater peer acceptance. Past research shows that roster-and-rating instruments yield reliable and valid data (see Asher et al., 1979; Cillessen & Bukowski, 2000).

5. Results

5.1. Descriptive analyses

Correlations, means and standard deviations appear in Table 1 for grades five and six and in Table 2 for grades nine and ten. The stabilities of parent, teacher, and self (ninth to tenth grade) reports of depressive symptoms were moderate with parents showing somewhat greater consistency in ratings over time. Peer-report victimization was highly stable from fifth to sixth grades and from ninth to tenth grades, and teacher- and self-reports of victimization were moderately stable across these grades. Correlations between depressive symptoms and victimization were modest to moderate with ratings provided by corresponding informants (i.e., teachers and self) yielding the highest association. This pattern was consistent across all four grades. Mutual friendship and peer acceptance (i.e., indices of positive peer relations) were negatively correlated with depressive symptoms and victimization. In fifth and sixth grades, correlations between positive peer relations variables and depressive symptoms and victimization were modest to moderate with

Table 2
Bivariate correlations, means and standard deviations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	Mean	SD
1. G9 Parent-report depression														1.21	0.29
2. G10 Parent-report depression	0.59													1.20	0.28
3. G9 Teacher-report depression	0.30	0.25												1.13	0.22
4. G10 Teacher-report depression	0.19	0.22	0.39											1.15	0.24
5. G9 Self-report depression	0.19	0.27	0.16	0.07										1.41	0.36
6. G10 Self-report depression	0.26	0.46	0.15	0.25	0.57									1.44	0.38
7. G9 Self-report victimization	0.12	0.15	0.14	0.09	0.41	0.33								1.43	0.66
8. G10 Self-report victimization	0.20	0.31	0.11	0.19	0.34	0.48	0.47							1.41	0.64
9. G9 Peer-report victimization	0.25	0.11	0.19	0.17	0.17	0.12	0.23	0.15						9.74	10.30
10. G10 Peer-report victimization	0.18	0.24	0.19	0.11	0.17	0.12	0.23	0.18	0.68					8.91	9.46
11. G9 Teacher-report victimization	0.22	0.13	0.44	0.21	0.14	0.15	0.25	0.17	0.33	0.29				1.13	0.30
12. G10 Teacher-report victimization	0.12	0.16	0.19	0.31	0.09	0.18	0.17	0.26	0.33	0.30	0.36			1.15	0.32
13. G9 Mutual best friendship	-0.23	-0.25	-0.22	-0.18	-0.07	-0.14	-0.04	-0.17	-0.16	-0.12	-0.17	-0.13		0.51	0.50
14. G9 Peer acceptance	-0.25	-0.27	-0.29	-0.26	-0.17	-0.24	-0.21	-0.31	-0.43	-0.31	-0.24	-0.24	0.45	2.20	0.56

Note. G9 = 9th grade; G10 = 10th grade. Coefficients in bold represent stabilities. All correlations above 0.12 are significant at $p < 0.05$. Raw (unstandardized) means are presented.

the highest correlations representing consistency in informants across measures (i.e., peer-reports of victimization and peer acceptance). This pattern applies in ninth and tenth grades for peer, parent, and teacher reports of depressive symptoms and victimization.

We conducted a series of independent *t*-tests to provide a preliminary analysis of gender differences in levels of depressive symptoms, peer victimization, peer acceptance, and mutual friendship. Only five, out of 10, *t*-tests conducted to evaluate mean levels of depressive symptoms in boys versus girls were significant. Fifth and tenth grade teachers reported that boys were more symptomatic for depression than girls, but, according to ninth and tenth grade participants, and parents of tenth graders, girls outscored boys on depressive symptoms. With respect to peer victimization, six of 10 *t*-tests were significant and, in all cases, boys' victimization scores exceeded those of girls. There were no gender differences in mean levels of peer acceptance and mutual friendship. Overall, preliminary findings regarding gender effects are inconsistent and require attention in future investigations.

5.2. Data analytic strategy

We estimated a series of structural equation models via *Mplus* 7.3 (Muthén & Muthén, 1998–2012) with FIML as our estimator. First, we estimated a set of increasingly constrained models to analyze factorial invariance of the latent constructs (i.e., the extent to which relations between latent variables and their manifest indicators are invariant across time). Second, to evaluate whether mutual friendship and peer acceptance mitigate the association between depressive symptoms and peer victimization, we estimated two structural equation models in which depression predicted peer victimization and vice versa. For both the early and late adolescence models, we used the *xwith* command in *Mplus* to create interaction terms: a positive peer relations variable (i.e., mutual friendship or peer acceptance) measured in fifth or in ninth grade and the corresponding predictor variable (i.e., either peer victimization or depressive symptoms).

Several criteria were employed to evaluate model fit: the comparative fit index (CFI) compares the fit of the model under consideration with that of the baseline model; the root mean square error of approximation (RMSEA) assesses closeness of fit; and the Bayesian Information Criterion (BIC) facilitates the comparison of competing models. CFI values are considered adequate at > 0.90 , the RMSEA estimate should fall below 0.08, and a lower BIC value indicates a better trade-off between fit and complexity (Kline, 2010; van de Schoot, Lugtig, & Hox, 2012).

5.3. Measurement models

We evaluated factorial invariance by estimating and comparing fit

across three nested models (Muthén & Muthén, 2010; Widaman, Ferrer, & Conger, 2010). For Model 1, the *measurement non-invariance* model, we freely estimated factor loadings and intercepts. For Model 2, the *factor loading invariance* model, we constrained corresponding factor loadings to be invariant across time. For Model 3, the *factor and intercept loading invariance* model, we imposed the Model 2 constraints and, also, constrained corresponding intercepts to be invariant across time. As recommended by Widaman et al. (2010), we evaluated chi-square difference tests and practical fit indices (i.e., CFI, RMSEA, BIC) to compare fit across models (see Table 3 for fit indices). In early adolescence, a significant chi square difference test revealed worsening in fit from Model 1 to 2. Given no appreciable change in practical fit indices, however, we opted to accept the more restricted Model 2 and compare its fit to that of Model 3 (see Widaman et al., 2010). When comparing Models 2 and 3, we obtained a nonsignificant chi square difference test and observed nearly identical fit indices. With no worsening in fit from Model 2 to 3, we accepted Model 3, the *factor and intercept loading invariance* model, as best fitting. In late adolescence, all chi square difference tests were nonsignificant, and fit indices for Model 3 were acceptable. Thus, we accepted Model 3, which included equality constraints for factor loadings and intercepts. Results provide evidence for strong factorial invariance (Widaman et al., 2010).

Table 3

Summary of fit indices for measurement and structural equation models in early and late adolescence.

	χ^2	df	CFI	RMSEA	BIC	$\Delta \chi^2$	df
Early adolescence							
Model 1: Non-variance	49.69	22	0.98	0.05	4753.21	–	–
Model 2: Factor loading invariance	63.76	25	0.97	0.06	4748.63	14.07*	3
Model 3: Factor loading and intercept invariance	68.29	30	0.97	0.05	4722.38	4.63	5
Model 4: Factor loading and intercept invariance with all paths	68.29	30	0.97	0.05	4722.38	4.63	5
Late adolescence							
Model 1: Non-variance	66.10	38	0.97	0.04	3497.56	–	–
Model 2: Factor loading invariance	70.17	42	0.97	0.04	3477.25	4.07	4
Model 3: Factor loading and intercept invariance	78.08	48	0.97	0.04	3448.59	7.91	6
Model 4: Factor loading and intercept invariance with all paths	78.08	48	0.97	0.04	3448.59	7.91	6

Note. Model 3 included across-time correlations between factors, which accounted for four degrees of freedom. Model 4 included four cross-lag paths in lieu of correlations; thus, degrees of freedom and model fit were unchanged from Model 3 to Model 4.

* $p < 0.05$.

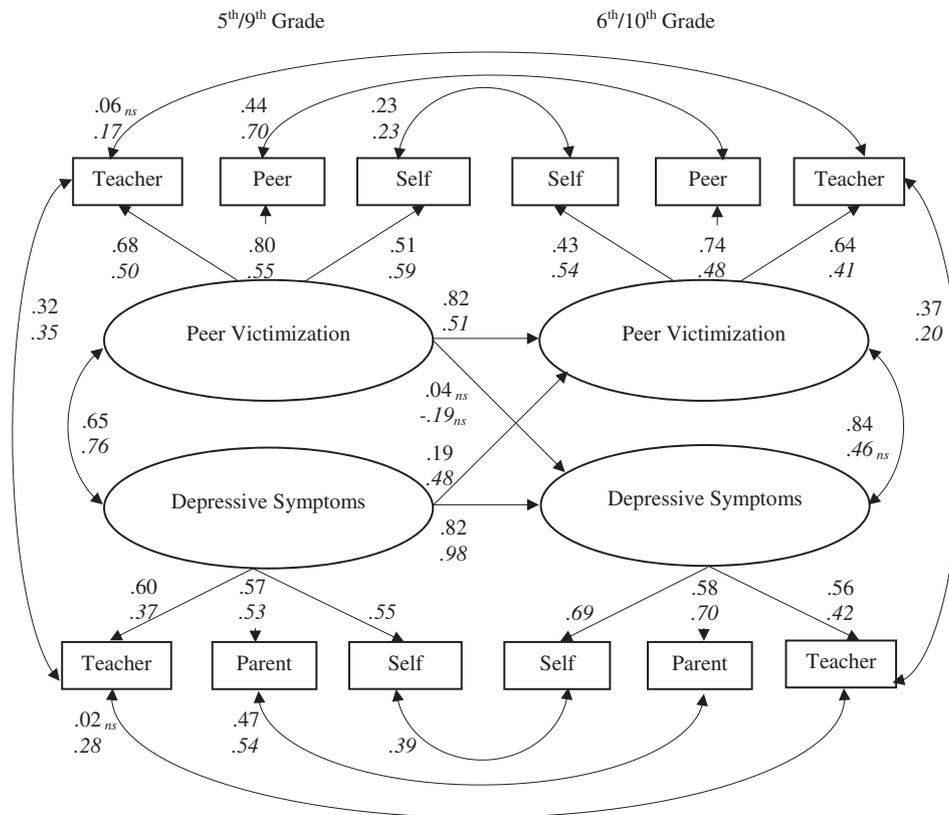


Fig. 1. Cross-lagged model of associations between peer victimization and depressive symptoms from 5th to 6th grade and 9th to 10th grade. We present standardized parameter estimates; those in italics denote late adolescence (9th–10th grade). One-headed arrows depict unidirectional effects whereas double-headed arrows designate non-directional relations between variables (i.e., variances or covariances). The covariance between self-reports of victimization and depression in 5th/9th grade and 6th/10th grade are 0.21 and 0.23, respectively. *ns* = nonsignificance.

5.3.1. Structural equation models

First, we estimated Model 4, a factor loading and intercept invariance model with all paths, which included all constraints specified in Model 3 plus four paths: prior depressive symptoms to subsequent depressive symptoms, prior depressive symptoms to subsequent peer victimization, prior peer victimization to subsequent depressive symptoms, and prior peer victimization to subsequent peer victimization (see Fig. 1 for standardized estimates). Model fit was adequate in both early and late adolescence; moreover, the significant path leading from prior depressive symptoms to subsequent peer victimization was significant in both early and late adolescence (0.19 and 0.48, respectively), and the path from prior peer victimization to subsequent depressive symptoms was nonsignificant in both early and late adolescence (0.04 and -0.19, respectively). Results provide support for a symptoms-driven model, or a model in which depressive symptoms forecasted peer victimization but not vice versa.

Next, we separately included friendship and peer acceptance in Model 4 to evaluate whether each mitigates the link between prior depressive symptoms and subsequent peer victimization and vice versa. Because latent variables have arbitrary metrics, we present standardized coefficients (β). Analyses revealed, first, that in both early and late adolescence, the interaction between depressive symptoms and friendship was significant ($\beta = -0.51, p < 0.05$ and $\beta = -0.32, p < 0.05$, respectively) such that depressive symptoms forecasted peer victimization for adolescents without, but not with, a mutual best friend ($\beta = 1.91, p < 0.05$ vs. $\beta = 0.68, ns$ and $\beta = 0.99, p < 0.05$ vs. $\beta = 0.35, ns$, respectively). The interaction between victimization and friendship was not significant in either early or late adolescence ($\beta = 0.00, ns$ and $\beta = 0.00, ns$, respectively). Second, in early adolescence, the interaction between depressive symptoms and peer acceptance was significant ($\beta = -0.90, p < 0.01$) but the interaction

between prior peer victimization and peer acceptance was not ($\beta = 0.01, ns$). Depressive symptoms predicted victimization for adolescents who were low (i.e., one standard deviation below the mean, $\beta = 2.35, p < 0.001$) or average (i.e., at the mean, $\beta = 1.43, p < 0.001$) but not high (i.e., one standard deviation above the mean, $\beta = 0.52, ns$) on acceptance. However, in late adolescence, peer acceptance did not significantly mitigate the association between prior depressive symptoms and subsequent peer victimization ($\beta = -0.24, ns$) or between prior peer victimization and subsequent depression ($\beta = -0.01, ns$). In sum, depressive symptoms contribute to peer victimization for early and late adolescents without a mutual best friend. High peer acceptance served a protective function for early but not late adolescents.

6. Discussion

This study's results extend knowledge about risk and protective factors associated with peer victimization. Data supported a symptoms-driven model whereby depressive symptoms predicted adolescents' risk for peer victimization one year later, but not vice versa. This temporal pattern, which is consistent with one direction of effect specified within interpersonal theories of depression, emerged in both early (fifth to sixth grades) and late (ninth to tenth grades) adolescence and was somewhat at odds with our prediction that depressive symptoms and peer victimization would be reciprocally related. Results from this study further revealed that two aspects of positive peer relations—friendship and peer acceptance—served as protective factors, by mitigating the effect of depressive symptoms on peer victimization. Specifically, consistent with our expectations, there was no evidence of a link between depressive symptoms in one school year and peer victimization in the next for youth with a mutual best friend (compared

to those without). Also in line with our hypotheses, we found that, in early adolescence, depressive symptoms in fifth grade did not predict peer victimization in sixth grade for youth who had high peer acceptance (compared to those who had average or low peer acceptance). Peer acceptance, however, was not a protective factor in late adolescence. Consistent with models of child resilience (e.g., Cicchetti & Rogosch, 2009; Masten, 2014; Masten et al., 1999), it appears that the contribution of depressive symptoms to risk for peer victimization depends, at least in part, on factors within the school environment, namely whether or not a child's peer ecology includes positive peer relations.

6.1. Prospective links between depressive symptoms and peer victimization

Interpersonal theories of depression, especially those grounded in developmental research, suggest transactional associations between depression and interpersonal problems (Rudolph, 2009; Rudolph et al., 2008). Peer victimization is one manifestation of interpersonal dysfunction, and a recent meta-analysis of longitudinal studies examining the link between peer victimization and internalizing problems, including depression, provides support for internalizing problems as both precursors to and consequences of peer victimization (Reijntjes et al., 2010). Since the publication of the Reijntjes et al. (2010) meta-analysis, additional evidence of transactional associations between depression and peer victimization has been obtained—occasionally within the context of a single study (e.g., Kawabata et al., 2014). In general, however, the strongest evidence for the transactional nature of depression—victimization linkages comes from an amalgamation of findings reported across multiple investigations—ones that provide support for one temporal pattern or the other but not both (e.g., Kochel et al., 2012; Sentse et al., 2016; Tran et al., 2012).

The fact that most studies, ours included, have yielded evidence consistent with a single direction of effect has several possible explanations. For example, the temporal ordering of depression and victimization is likely dependent upon the developmental period under investigation, the number of lags examined, and/or the length of time between lags; moreover, studies that lend support for one direction of association only reflect the strength of one temporal pattern relative to the other. They do not rule out the possibility that evidence would be obtained for both directions of association if they were evaluated within separate models rather than in the context of a single model. It is also likely that directionality is partially a function of depression's stability relative to that of victimization such that there is more variability to be accounted for in the less stable variable (here, victimization). It is unknown which, if any, of these reasons explicate the temporal patterning of associations reported within this study. Regardless, our results reinforce the symptoms-driven component of interpersonal models of depression—depression's contribution to interpersonal dysfunction—and, in turn, add to a growing body of literature that supports the transactional nature of depression and victimization.

6.2. Positive peer relations as a protective factor

The primary aim of the current study was to evaluate whether positive peer relations can mitigate prospective transactions between depressive symptoms and peer victimization. Our findings indicate that two important dimensions of positive peer relations—mutual friendship and peer acceptance—serve a protective function.

Mutual friendship emerged as a strong protective factor against victimization that was associated with prior depressive symptoms. Specifically, the depressive symptoms to victimization link emerged for youth who did not have a mutual best friend, but having a mutual best friend mitigated the association between earlier depressive symptoms and subsequent victimization. Close friendships are especially valued and influential as youth progress through adolescence (e.g., Buhrmester, 1996; Furman & Rose, 2015) because they confer provi-

sions such as companionship, security, instrumental and emotional support, and intimacy (Bagwell & Schmidt, 2011; Furman & Buhrmester, 2009). Importantly, as this study suggests, adolescent friends may also be capable of serving a protective function against victimization. Although the present findings do not explain how friendship exerts these positive effects, there are several theoretically plausible mechanisms. A best friend may provide depressed youth with help or advice about conflict management and about negotiating challenging situations with potential aggressors, offering emotional support, and perhaps retaliating against aggressors (e.g., Hodges, Malone, & Perry, 1997; Sainio et al., 2011; Veenstra et al., 2007). Indeed, the hypothesis that friendship serves a protective role (e.g., Boulton, 1999) has gained traction in recent years with growing evidence that friendship attenuates the link between individual characteristics, such as depression, and various negative outcomes including victimization (Bagwell & Schmidt, 2011).

Peer acceptance was found to be a significant protective factor for early but not late adolescents. The link between fifth-grade depressive symptoms and sixth-grade peer victimization was significant only for youth who were low or average on acceptance but not for those who were high on acceptance and, therefore, well-liked by the larger peer group. Because bullies are inclined to dominate vulnerable peers (e.g., Salmivalli & Peets, 2009; Veenstra et al., 2007), adolescents who are known to be highly disliked may be perceived as legitimate targets. Aggressors can assume that there will not be negative repercussions in the peer group for their attacks and that there is limited risk to their own social standing for victimizing peers of low social status (Hodges et al., 1997). Our findings suggest that early adolescents with depressive symptoms may not be attractive victims if they have some level of social cachet in the form of being accepted by others. It is noteworthy that peer acceptance served a protective role only when it was high. Early adolescents with average levels of acceptance still showed a link between depressive symptoms and victimization. Assuming that some aggressors are driven by status goals, this finding implies that aggressors view youth who are neither particularly liked nor disliked as “fair game”, perhaps because they know that their transgressions against these children are unlikely to be met with social disapproval or retribution.

Interestingly, peer acceptance was a protective factor in early but not late adolescence. Research suggests that a sense of belonging to a peer group is valued more so by early compared to late adolescents (Gavin & Furman, 1989). One possible reason for this is that peer group acceptance affords early adolescents provisions (e.g., inclusion, nurturance, companionship; Furman & Buhrmester, 1985) and promotes the development of behavioral competencies (Aikins & Litwack, 2011; Asher & McDonald, 2009) that help them navigate the tasks of distancing themselves from their parents and establishing more intimate relationships with peers (Gavin & Furman, 1989). In late adolescence, however, dyadic relationships with friends and/or romantic partners take on a greater role than the peer group when it comes to fulfilling emotional needs, such as affiliation and intimacy (Gavin & Furman, 1989). The perspective that peer acceptance is valued to a greater extent in early versus late adolescence and, thus, more likely to mitigate risk for peer victimization, is consistent with findings reported here.

6.3. Limitations and future directions

The current findings extend knowledge about the role of positive peer relations in promoting youth resilience, or mitigating prospective linkages between depression and victimization. Study results do not, however, shed light on the processes through which depressive symptoms are a risk factor for peer victimization. There are multiple possible pathways to be explored. One possibility is that youth who are depressed send signals to potential aggressors that they are vulnerable. Their submissiveness and sad affect may suggest to bullies that they are unable or unlikely to defend themselves (Hodges et al., 1999; Tran

et al., 2012). A second possibility is that depressive symptoms impede the development of interpersonal skills (Rudolph, 2009; Rudolph et al., 2008), including appropriate social engagement, conflict management skills, and peer group entry skills, that are integral for adaptive peer relations. These social-skills deficits might lead to an increased likelihood of aggressive responses from peers. Third, the self-doubt and low self-worth that often characterize youth with depression may lead them to seek approval via excessive reassurance seeking and self-disclosure (Rudolph, 2009). Behaviors that reflect excessive self-focus may make youth especially vulnerable to relational forms of victimization as youth who are depressed may be offering up concerns and information that can be used against them by ill-intentioned peers. A strength of the current study is the comprehensive assessment of peer victimization, including measures of physical, relational, verbal, and general victimization; however, it may be valuable to evaluate pathways to particular types of victimization, such as relational versus physical victimization. Research is needed to provide evidence for or against these possibilities.

Results reported here imply that some adolescents affected by depression are more likely than others to have a mutual best friendship or be well-regarded by the peer group. Findings do not, however, shed light on what intrapersonal characteristics differentiate depressed youth with versus without friends and those high versus low on peer acceptance. Identifying these distinguishing characteristics is important to rule out the possibility that such characteristics – rather than positive peer relations, including friendship and peer acceptance – are protecting depressed youth from peer victimization.

This study's friendship measure is useful in that it provides important information about the presence versus absence of mutual friendship; nevertheless, it is not without shortcomings. For example, some adolescents may have been erroneously identified as friendless if none of their friends appeared on their class list (early adolescence) or randomly-generated list (late adolescence). As a result, the moderation effects reported here may be conservative estimates. Moreover, this study does not account for the fact that mutual friendships differ on important dimensions such as the quality of the relationship and the characteristics of the friend (see Hartup & Stevens, 1997). It is plausible, for instance, that friendships with high levels of support, security, and trust are more protective than lower quality friendships. Likewise, it may be that some friends are better than others at offering protection. Research lends support for the contagion of depression between adolescents and their friends (e.g., Prinstein et al., 2005; Stevens & Prinstein, 2005), which suggests that the friends of youth with depressive symptoms may be symptomatic for depression and thus less capable of actively defending their friends. However, recent evidence suggests that even friends affected by depression provide emotional support, including listening to one another's concerns, and engender feelings of closeness (Schwartz-Mette et al., 2016); thus, even depressed friends may serve a protective role.

Although not tested here, it is conceivable that findings reported within this study differ by gender. For example, research suggests that girls are more interpersonally engaged than boys and are more likely to endorse connection-oriented and intimacy goals (Rose & Rudolph, 2006). Thus, close mutual friendship and peer group acceptance may be especially beneficial, and likely to mitigate risk for victimization, among girls compared to boys. For depressed girls, in particular, positive peer relations may afford feelings of affiliation, nurturance, and intimacy, all of which could decrease vulnerability and, in turn, ward off victimization. Although our preliminary findings on gender effects yielded no clear or consistent evidence for differences between boys and girls, the investigation of gender differences in the protective function of positive peer relations is theoretically substantiated and, thus, needed.

Two additional limitations warrant mention to aid in interpretation of study findings. First, 29% of data are missing in late adolescence due to challenges associated with collecting data from multiple informants who were dispersed across multiple schools in various parts of the country.

Importantly, however, missingness was minimal in early adolescence, yet we observed a consistent pattern of results in early and late adolescence. Second, despite the nested nature of our data, we were unable to employ a multilevel approach because, by late adolescence, many classrooms and schools included only one or a few participants.

6.4. Implications and conclusions

The findings have implications for intervention and prevention efforts with youth who suffer from symptoms of depression. First, they indicate that limiting the negative effects of depressive symptoms on youths' peer relations might be an important goal for intervention. These efforts would involve targeting behaviors that annoy or otherwise distance peers (e.g., excessive reassurance seeking). Second, fostering positive peer relations by encouraging the development of interpersonal skills linked with forming and maintaining friendships may have multiple benefits for youth with symptoms of depression, one of which might be decreased vulnerability for peer victimization. To the extent that helping youth develop the skills and competencies that facilitate establishing and maintaining at least one mutual friendship is easier than helping adolescents change their reputation among many classmates and thus promoting positive peer acceptance, this strategy warrants attention. Skills relevant to building friendships, including companionship, reciprocity, reliability, self-disclosure, mutual caring, and conflict resolution (Asher et al., 1996), would be especially important to promote throughout adolescence.

In sum, the findings from the current study contribute to ongoing efforts to better understand risk factors for peer victimization and especially factors that promote resilience by mitigating risk for peer victimization. Notably, by focusing on depressive symptoms specifically, the current findings also provide support for interpersonal theories of depression and especially the symptoms-driven component of the transactional model whereby depression makes contributions to interpersonal dysfunction. The current findings imply that even sub-clinical levels of depressive symptoms in a normative sample of adolescents are associated with peer victimization by the next school year. However, it is generally the combination of this individual-level risk factor and unsupportive peer relations—not having a mutual best friend or not being well-liked by the peer group—that leads to increased victimization. Although mutual friendship appears to serve a protective function in both early and late adolescence, our findings suggest that peer acceptance mitigates risk for victimization in early but not late adolescence.

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