



# Peer Victimization and Depressive Symptoms in Early Adolescents: The Protective Role of Perceived Supportive Parenting

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## Abstract

**Objectives** As peers become more salient during early adolescence, the perception of supportive parenting may become an important buffer against peer-related stressors, such as peer victimization. The purpose of the current study was to examine whether perceived supportive parenting moderates the association between peer victimization and depressive symptoms among early adolescents. The study contributes to the literature by specifically addressing both the source of supportive parenting (mothers vs. fathers) and the type of victimization (physical vs. relational).

**Methods** Survey data on peer victimization, depressive symptoms, and perceived supportive parenting were collected from 237 middle school students (50% female;  $M_{\text{age}} = 12.21$  years) in a mid-Atlantic metropolitan area.

**Results** Regression analyses indicated that both relational ( $b = 0.45$ ,  $p = 0.0005$ ) and physical victimization ( $b = 0.35$ ,  $p = 0.0265$ ) were positively associated with depressive symptoms and that perceived supportive parenting from both parents was negatively associated with depressive symptoms (mothers:  $b = -0.20$ ,  $p = 0.0006$ ; fathers:  $b = -0.14$ ,  $p = 0.0093$ ). Perceived supportive parenting from mothers, but not fathers, moderated the association between each form of victimization and depressive symptoms (relational:  $b = -0.28$ ,  $p = 0.0258$ ; physical:  $b = -0.03$ ,  $p = 0.0275$ ), such that the associations were non-significant when perceived supportive parenting by mothers was high.

**Conclusions** The results underscore the link between relational victimization and depressive symptoms among early adolescents. Supportive parenting, especially from mothers, may serve as a potential buffer against the harmful effects of peer victimization.

**Keywords** Peer victimization · Depression · Parenting · Adolescence · Social support

Peer victimization is common during adolescence, with ~21% of students between 12 and 18 years old reporting being victims of bullying in the past school year (Musu-Gillette et al. 2017). Peer victimization may take several forms; physical victimization refers to being a victim of direct acts of physical aggression (e.g., shoving, kicking, and hitting; Gomes 2007), while relational victimization refers to being the target of both overt and covert aggression designed to threaten or damage one's peer relationships or

social standing in a peer group (e.g., rumor spreading, gossiping, and social isolation; Crick and Grotpeter 1996). Regardless of form, peer victimization is of concern because it is associated with concurrent and long-term risk of significant adjustment difficulties, including lower school engagement and academic performance (e.g., Cullerton-Sen 2006), higher levels of depression (e.g., Hawker and Boulton 2000; Sweeting et al. 2006) and anxiety (e.g., La Greca and Harrison 2005), and greater suicidal ideation and non-suicidal self-injury (e.g., Bonanno and Hymel 2010; Hay and Meldrum 2010).

The frequency and impact of peer victimization experiences vary by adolescent gender, as studies demonstrate consistently that boys experience physical victimization more often than girls in childhood and adolescence (Crick and Grotpeter 1996; Peskin et al. 2006; Storch et al. 2003). Gender differences for relational victimization are less consistent, with some studies indicating that girls are relationally victimized more often than boys (e.g., Crick and

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Grotspeter 1996; Smith et al. 2010) and other studies finding no gender difference in the experience of relational victimization (Prinstein et al. 2001). In terms of psychosocial impact, there is some evidence that girls experience more distress related to peer victimization than boys (Paquette and Underwood 1999). For both boys and girls, peer victimization peaks during early to middle adolescence and declines slightly during the later adolescent years (Nansel et al. 2001).

The rise in peer victimization during early adolescence coincides with an increase in depression and depressive symptoms during the same developmental period (Center for Behavioral Health Statistics and Quality [CBHSQ] 2015). Approximately 11% of adolescents aged 12–17 years have experienced a major depressive episode during the past year (CBHSQ 2015), and depression is the most commonly diagnosed mental health problem among adolescents (Maag and Irvin 2005). In addition, 14% of youth suffer from sub-clinical depressive symptoms (Sihvola et al. 2007). While rates of depression are approximately equal for boys and girls in childhood, by age 13 to 14 gender differences emerge such that girls have two to three times the rate of depression compared to boys (Twenge and Nolen-Hoeksema 2002; Wade et al. 2002). Past research suggests that gender differences in the prevalence of depressive symptoms may emerge as a result of gender differences in biological and psychological attributes that form a diathesis for depression that combine with gender differences in exposure and reaction to stressful adverse experiences, particularly interpersonal stressors like peer victimization (Hyde et al. 2008; Piccinelli and Wilkinson 2000; Shih et al. 2006).

The potential for depressive symptoms to emerge or worsen during early adolescence is likely related to the increase in interpersonal stressors, such as peer victimization, experienced during this developmental period (Evans et al. 2005; Hammen 2012; Seiffge-Krenke 2000). Peer victimization predicts greater depressive symptoms among adolescents both concurrently (e.g., Klomek et al. 2008) and longitudinally (e.g., Sweeting et al. 2006). Peer victimization is also associated with loneliness and a negative self-image among early adolescents, both of which are themselves predictors of depression (Hawker and Boulton 2000; Rothon et al. 2009). Thus, early adolescence represents a distinct period of vulnerability for peer victimized youth, as the experience of peer victimization at this age can increase the risk of depression or exacerbate existing depressive tendencies (Fotti et al. 2006), particularly among girls (Paquette and Underwood 1999).

While peer victimization is associated with risk for depression, not all victimized youth experience depressive symptoms, suggesting the presence of protective factors. Supportive parenting is one potential protective factor.

Supportive parenting has been defined and assessed in many ways, including warmth and attention, provision of reassurance, guidance on how to cope with problems, and positive affirmations about self-worth (Barber and Olsen 1994). Supportive parenting also incorporates parental responsiveness, sensitivity to a child's emotional needs, and behavior that shows the child that they are cared for and valued by their parents (Morris and Age 2009). The current study emphasizes the *perception* of supportive parenting, or how accepting, empathetic, and affectionate the child feels their parents to be. The decision to focus on adolescents' perception of supportive parenting was guided by literature that suggests that the perception of support exerts a positive effect on psychological well-being and mitigate the effects of stress, regardless of whether support is actually sought or received (Haber et al. 2007; Costello et al. 2001). Furthermore, there is a well-established association between higher levels of perceived emotional support from parents and adolescent psychosocial adjustment, including higher self-esteem (Plunkett et al. 2007), better school adjustment (Yoon and Carcamo 2007), and fewer depressive symptoms (Plunkett et al. 2007; Rueger et al. 2010; Sheeber et al. 2007; Seeley et al. 2009). Perceived supportive parenting may be particularly important during the transition to adolescence when peer relations become both increasingly salient and more unstable and conflictual in nature (Evans et al. 2005). In the context of peer-related stressors, such as peer victimization, the perception of supportive parenting provides adolescents with a stable sense of belonging that promotes positive affective and cognitive states (Malecki and Demaray 2004; Sheeber et al. 2007).

The positive relation between perceived supportive parenting and adolescent psychosocial functioning reflects a main-effect model, which suggests that perceived parental support is associated with better psychological health, including less risk for depression, regardless of the level or type of stress encountered (Cohen and Wills 1985; Malecki and Demaray 2004; Rigby 2000). Consistent with a moderation effects model, perceived supportive parenting may also serve as protective factor when youth experience stressful events (Cohen and Wills 1985). In the context of higher levels of reported stress, those who perceive their parents to be more supportive regulate stress better physiologically, have fewer depressive symptoms, and have more positive adjustment compared to those with lower levels of perceived supportive parenting (Willemen et al. 2009).

In the context of peer victimization, previous research has found that victimized youth have fewer internalizing symptoms and other psychosocial difficulties when they have high levels of supportive parenting. For example, DeLay and colleagues found perceptions of supportive parenting moderated the association between peer

victimization and depressive symptoms among Brazilian 11–14 year olds (DeLay et al. 2012). Relatedly, the association between peer victimization and non-suicidal self-injury was attenuated for adolescents with higher levels of supportive parenting (Claes et al. 2015) and the association between victimization and suicidal ideation was weaker for youth with high perceived family support, including supportive parenting (Bonanno and Hymel 2010). Collectively, these findings suggest that perceived supportive parenting may protect adolescents against the effects of peer victimization, with a diminished association between victimization and depressive symptoms for youth with greater perceived supportive parenting. However, other studies have not found evidence that supportive parenting moderates the association between peer victimization and depressive symptoms. For example, perceived supportive parenting did not moderate the association between physical victimization and depressive symptoms for boys and girls aged 10–14 years (Papafratzeskakou et al. 2011).

Inconsistencies noted in the existing research may reflect the use of a global measure of victimization that collapses across physical and relational victimization. As a result, our understanding of the ways supportive parenting may offset distress related to specific victimization experiences is limited (e.g., Claes et al. 2015; Connors-Burrow et al. 2009; DeLay et al. 2012). A second limitation of previous research is that supportive parenting is often examined in general without distinguishing between mothers and fathers (e.g., DeLay et al. 2012; Papafratzeskakou et al. 2011), with most studies focusing only on the mother-adolescent relationship or using a general measure of parent-child relationship quality or perceived supportive parenting without respect to parent gender (Sheeber et al. 2007). The limited research that does examine mothers and fathers separately generally suggests that perceived supportive parenting from each parent is independently associated with fewer depressive symptoms among adolescents (e.g., Gomez and McLaren 2006; Sheeber et al. 2007), as would be predicted by the main effect model. However, less is known about whether supportive parenting moderates the association between victimization and depression differently depending on which parent provides the support. In a longitudinal study of the impact of romantic relationship stress on depressive symptoms among adolescents, the findings indicated that romantic relationship stress was associated with an increase in depressive symptoms between age 13 and 15 when perceived maternal support was low, but not when it was high (Anderson et al. 2015). No such interaction was found between paternal support and romantic relationship stress, suggesting that while support from both parents may exert a main effect on emotional adjustment for youth,

perhaps perceived supportive parenting from mothers may be more beneficial for adolescents experiencing interpersonal stress. An examination of how supportive parenting by each parent interacts with specific types of victimization could help clarify the conditions under which supportive parenting is most beneficial for preventing depressive symptoms.

The current literature clearly establishes the importance of peer relationships and the potential negative effects of peer victimization on psychosocial adjustment, particularly depression, during early adolescence (e.g., Hawker and Boulton 2000; Sweeting et al. 2006). There is also consistent evidence that supportive parenting promotes positive psychosocial adjustment among adolescents in general (e.g., Malecki and Demaray 2004; Sheeber et al. 2007). However, evidence that supportive parenting moderates the association between peer victimization and depressive symptoms is less consistent (e.g., DeLay et al. 2012; Papafratzeskakou et al. 2011), indicating a need for further research. We propose that discrepant findings in the literature may be related to differences in how both peer victimization and supportive parenting are conceptualized and measured, as well the potential role parent gender plays in whether supportive parenting serves as a protective factor against victimization.

The current study attempted to address these gaps by separately examining the association between two types of peer victimization (i.e., physical and relational) and depressive symptoms among early adolescents and to explore whether supportive parenting by each parent moderates those associations. Specifically, we hypothesized that: (1) both relational and physical victimization would be positively related to depressive symptoms among early adolescents; (2) perceived supportive parenting from both mothers and fathers would be negatively related to depressive symptoms among early adolescents; and (3) perceived supportive parenting by each parent would moderate the association between peer victimization and depressive symptoms among early adolescents, such that the expected positive relation between each type of victimization and depressive symptoms would be stronger when perceived supportive parenting was lower. By testing this moderation hypothesis separately for supportive parenting from mothers and fathers, and separately for relational and physical peer victimization, we were able to explore whether the role of perceived supportive parenting as a protective factor varied according to parent and by victimization type. Finally, because the literature indicates some gender differences in the frequency and impact of peer victimization, as well as in depressive symptoms during adolescence, adolescent gender was explored as an additional moderator of each of the hypothesized associations.

## Method

### Participants

The study data were collected as part of a larger study on factors related to peer victimization in early adolescents. The sample was drawn from seven Catholic schools in a mid-Atlantic metropolitan area selected to represent the socioeconomic and ethnic diversity of the local archdiocese. At the start of the study, 504 students were enrolled in grades 6–8, and all enrolled students were invited to participate. A total of 268 students in grades 6–8 provided parental consent and adolescent assent and attended school on the day of data collection. Of those, 17 did not have a father/father figure and were excluded from the analyses since one study aim was to compare supportive parenting from mothers and fathers. An additional 14 participants were excluded because they were missing data on at least one main study variable, resulting in a final sample of 237 middle school students.

The final sample included 118 (49.8%) boys and 119 (50.2%) girls between the ages of 11 and 14 years ( $M_{\text{age}} = 12.21$ ,  $SD_{\text{age}} = 0.95$ ). Participants were enrolled in the sixth ( $n = 85$ , 35.9%), seventh ( $n = 77$ , 32.5%), and eighth ( $n = 75$ , 31.6%) grades. The sample was ethnically diverse: 57.4% Caucasian, 24.9% African American, 8% Hispanic/Latino, 1.7% Asian/Pacific Islander, and 6.3% multiracial; four participants (1.7%) did not report an ethnicity. The parent who provided consent also provided parental demographic information; the majority of parents were currently married (71.4%), employed (80.8%), and had completed at least some college (81.4%). Parents indicated that 64.6% of the adolescents in the sample were Catholic, and 8.5% reported another form of Christianity as their primary religious affiliation.

### Procedure

Information about the study was provided via school announcements, newsletters, and parent meetings, as well as letters sent home to the parents of all students enrolled in grades 6–8 in participating schools. Parent consent forms and a demographic questionnaire (e.g., parental education, marital status) were included with the letters. About two weeks after letters were distributed, students who returned signed parental consent forms were gathered in a classroom during a class period designated by the school principal to complete the survey in a group setting. Trained graduate students obtained written assent for all participants and administered survey packets following a prepared script with instructions for students. Participants were informed that they had been assigned an identification code that allowed the researchers to link their data to their name, but

that no one but the trained research staff had access to the master list that connected their names with the identification codes. The measures in the packet were presented in a standardized order, with the demographic form presented first. Upon completion of the survey, students placed their materials in a collection envelope. Survey completion took ~40 min. All American Psychological Association guidelines for research with human subjects were followed throughout the study to ensure participant safety and well-being, and the study protocol was approved by the university Institutional Review Board (IRB).

### Measures

#### Perceived supportive parenting

The Child Report of Parental Behavior Inventory—56 (CRPBI-56; Margolies and Weintraub 1977) was used to assess perceived supportive parenting. The CRPBI-56 is a revised and shorter version of Schaefer's (1965) original scale (CRPBI). It assesses the nature and quality of parent-child interactions from the child's perspective. The revised version contains 56 items, 28 of which refer to "mothers" (or mother-figures) and 28 refer to "fathers" (or father-figures). For each item, children rate how "true" the statements are about their parent on a 3-point Likert-type scale (i.e., "not at all true", "somewhat true", or "very true"). In the current study, participants completed the CRPBI-56 first for their mothers (or mother-figure) and then for their fathers (or father-figure). About 98% of participants reported on their biological mother and the remaining 2% on a stepmother, grandmother, or a female guardian. For fathers, 89.2% reported on their biological father, 5.2% a stepfather, 2.5% their mother's friend or boyfriend, 1.7% a grandfather, 0.9% an uncle, and 0.4% a male guardian.

The CRPBI-56 includes three dimensions: rejection vs. acceptance, firm control vs. lax control, and psychological control vs. psychological autonomy. In this study, we used the rejection vs. acceptance subscale (24 items, e.g., "My mother makes me feel better after I talk over my worries.") to measure perceived supportive parenting. Responses were summed across subscale items to form a total score for each parent, with higher scores indicating higher levels of perceived supportive parenting. Internal reliability estimates for the rejection vs. acceptance subscale in the current sample ( $\alpha = 0.94$  for both mothers and fathers) are similar to estimates in other samples (e.g.,  $\alpha = 0.89$ – $0.92$ ; Margolies and Weintraub 1977).

#### Peer victimization

Crick and Grotpeter's (1996) Children's Social Experiences Questionnaire (CSEQ) is a 15 question, self-report



instrument with three 5-item subscales: overt victimization (OV), relational victimization (RV), and prosocial behaviors. OV items assess for the frequency of being hurt by a peer through physical actions or threats to one's well-being (e.g., "How often do you get hit by another kid at school?"). This subscale was used as a measure of physical victimization. RV items assess for the frequency of actual or threatened harm to one's peer relationships (e.g., "How often do other kids leave you out on purpose when it is time to play or do an activity?"). For all items, participants reported how often each experience happens at school, with responses ranging from 1 (*never*) to 5 (*all the time*). Items are summed for each subscale, with higher scores indicating higher levels of victimization. The CSEQ was developed for elementary school children but has been used with adolescents (e.g., 13 to 17 year-olds; Storch et al. 2005). In the current study, one item was modified to be more age-appropriate for adolescents by changing the word "play" to "hang out." Estimates of internal reliability for the subscales in the current sample (RV:  $\alpha = 0.87$ , OV:  $\alpha = 0.82$ ) are slightly higher than estimates from other samples (e.g., RV:  $\alpha = 0.78$ , OV:  $\alpha = 0.60$ ; Storch et al. 2005).

### Depressive symptoms

The Children's Depression Inventory (CDI; Kovacs 2001) is a 27-item self-report measure of the frequency and severity of depression symptoms. The CDI assesses five different factors of depressive symptoms (Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self Esteem) and yields a total symptom score, which was used as the measure of depressive symptoms in the current study. Each item has three statements representing different levels of a specific symptom and is scored 0, 1, or 2 with higher scores reflecting higher severity of depressive symptoms (e.g., "I am sad once in a while (0), I am sad many times (1), or I am sad all the time (2)"). Participants select the response that best describes their symptoms during the past two weeks. Responses across all items were then summed to yield a total score of depressive symptoms. Estimates of test-retest reliability over three weeks in nonclinical youth aged 8 to 16 are high ( $r = 0.83$  to  $0.89$ ; Smucker et al. 1986). The CDI has good concurrent validity with measures of self-esteem (Craighead and Green 1989). The estimate of internal consistency for the responses for the total score in the current sample ( $\alpha = 0.90$ ) is congruent with other sample estimates (e.g.,  $\alpha = 0.86$ ; Kovacs 2003).

### Data Analyses

Using Hayes' (2013) PROCESS approach, multiple regression analyses were conducted to test all hypotheses.

Because of the high correlation between relational and overt victimization and between perceived supportive parenting by mothers and supportive parenting by fathers, four separate regressions were performed using each combination of victimization type (physical vs. relational) and parent (mothers vs. fathers); this reduced the impact of multicollinearity on the prediction of variance in depressive symptoms and allowed for examination of main and interaction (moderation) effects independently for each type of victimization and perceived supportive parenting for each parent. In each regression, adolescent gender was entered as a covariate, victimization (either relational or physical) and perceived supportive parenting (either mother or father) served as predictors, and the interaction between victimization and perceived supportive parenting was used to assess moderation. All variables were entered simultaneously, and the full model was evaluated. Continuous predictors were centered prior to being analyzed, and the centered values were used to compute multiplicative interaction terms. Fourteen participants were excluded from data analysis because they were missing more than 20% of data on at least one main variable; for those who completed at least 80% of items on a scale, we used person mean substitution (PMS) to handle item level missing data (Allison 2001; Downey and King 1998). PMS was used for 6.8% of the final sample for relational victimization, 1.3% for physical victimization, 14.3% for perceived supportive parenting by mother, 10.1% for perceived supportive parenting by father, and 16.0% for depressive symptoms.

### Results

Means and standard deviations for the study variables and correlations among the primary variables are presented in Table 1. The levels of relational and physical victimization reported by the current sample were comparable to those from other studies that used the same measure with similarly aged students (e.g., Martin et al. 2008). About 19% of our sample endorsed being relationally victimized "almost all the time" or "all the time," and 13.5% endorsed being physically victimized "almost all the time" or "all the time." About 45 and 38% of participants endorsed being relationally and physically victimized at least "sometimes," respectively. Relational victimization and physical victimization were significantly and positively correlated,  $r(235) = 0.746$ ,  $p < 0.001$ . The mean for the total CDI score was similar to normative data for this age group (Kovacs 2001). Within the current sample, 7.1% of adolescents fell within the clinical depression range (i.e.,  $T$ -score  $> 70$ ). Adolescent perception of supportive parenting by mothers was significantly correlated with perception of supportive parenting by fathers,  $r(235) = 0.678$ ,  $p < 0.001$ . A paired samples

**Table 1** Correlations and descriptive statistics for study variables

		RV	PV	MSP	FSP	Dep
Relational victimization (RV)		–				
Physical victimization (PV)		0.76***	–			
Mother supportive parenting (MSP)		–0.23**	–0.20**	–		
Father supportive parenting (FSP)		–0.17*	–0.15*	0.68***	–	
Depressive symptoms (Dep)		0.29***	0.21**	–0.33***	–0.22**	–
Full sample	<i>M</i> ( <i>SD</i> )	9.11 (4.08)	8.18 (3.38)	38.74 (9.31)	36.86 (9.99)	8.78 (8.34)
Boys	<i>M</i> ( <i>SD</i> )	9.62 (4.14)	9.09 (3.85)	38.69 (9.04)	36.66 (10.22)	9.40 (8.84)
Girls	<i>M</i> ( <i>SD</i> )	8.60 (3.96)	7.29 (2.56)	38.78 (9.60)	37.06 (9.78)	8.17 (7.80)

Full sample:  $n = 237$ ; Boys:  $n = 118$ , Girls:  $n = 119$ ; RV and PV were measured with the CSEQ, maternal and paternal supportive parenting with the CRPBI-56 rejection vs. acceptance scale, and depression with the total score from the CDI

\*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , all two-tailed

$t$ -test indicated that mothers were rated by participants as higher in supportive parenting than fathers ( $M_{\text{diff}} = 1.88$ ,  $SD = 7.76$ ),  $t(236) = 3.72$ ,  $p < 0.001$ .

Independent samples  $t$ -tests were used to assess for gender and ethnicity differences in the predictor and criterion variables. There were no significant differences in depressive symptoms, perceived maternal supportive parenting, perceived paternal supportive parenting, relational victimization, or physical victimization between the two ethnic groups represented in the sample with sufficient frequency to compare statistically: Caucasian/White adolescents ( $n = 136$ ) and African-American adolescents ( $n = 59$ ; all  $ps > 0.05$ ). For adolescent gender the only significant difference was for physical victimization, with boys ( $M = 9.09$ ,  $SD = 3.85$ ) reporting more victimization than girls ( $M = 7.29$ ,  $SD = 2.56$ ),  $t(235) = 4.24$ ,  $p < 0.001$ . Adolescent age was not correlated significantly with any of the predictor or criterion variables (all  $ps > 0.05$ ). Based on these analyses, and as guided by existing research on gender differences in frequency and impact of peer victimization (e.g., Paquette and Underwood 1999), gender was entered as a covariate in the primary analyses. For clarity of presentation, the results are organized by type of victimization (i.e., relational then physical), and the results of the analysis of perceived supportive parenting by mothers are presented first for each victimization type, followed by the results of the analysis of perceived supportive parenting by fathers.

### Relational Victimization

The overall model regressing depressive symptoms on relational victimization, perceived supportive parenting by mothers, and their interaction was significant,  $F(4, 232) = 11.88$ ,  $p < 0.0001$ ,  $R^2 = 0.17$  (see Table 2 for full regression results). Relational victimization was positively associated with depressive symptoms ( $b = 0.45$ ,  $p = 0.0005$ ), and perceived maternal supportive parenting was negatively

associated with depressive symptoms ( $b = -0.20$ ,  $p = 0.0006$ ). The interaction between perceived maternal supportive parenting and relational victimization was also significant ( $b = -0.28$ ,  $p = 0.0258$ ), indicating that perceived supportive parenting by mothers significantly moderated the association between relational victimization and depressive symptoms (Fig. 1). For participants who reported levels of perceived maternal supportive parenting below +0.61 standard deviations, there was a significant positive association between relational victimization and depressive symptoms. About 33% of the sample had perceived maternal supportive parenting scores above +0.61 standard deviations from the mean, and in that range there was no significant association between levels of relational victimization and depressive symptoms.

For relational victimization and perceived supportive parenting by fathers, the overall model was significant,  $F(4, 232) = 7.95$ ,  $p < 0.0001$ ,  $R^2 = 0.12$ . Relational victimization was positively associated with depressive symptoms ( $b = 0.51$ ,  $p = 0.0001$ ), and perceived paternal supportive parenting was negatively associated with depressive symptoms ( $b = -0.14$ ,  $p = 0.0093$ ). The interaction between relational victimization and perceived paternal supportive parenting was not significant ( $b = -0.02$ ,  $p = 0.1948$ ).

### Physical Victimization

The overall model regressing depressive symptoms on physical victimization, perceived supportive parenting by mothers, and their interaction was significant,  $F(4, 232) = 9.83$ ,  $p < 0.0001$ ,  $R^2 = 0.15$ . Physical victimization was positively associated with depressive symptoms ( $b = 0.35$ ,  $p = 0.0265$ ), and perceived maternal supportive parenting was negatively associated with depressive symptoms ( $b = -0.24$ ,  $p < 0.0001$ ). The interaction between perceived maternal supportive parenting and physical victimization was also significant ( $b = -0.03$ ,  $p = 0.0275$ ), indicating that

**Table 2** Regression model tests of interactions predicting depressive symptoms

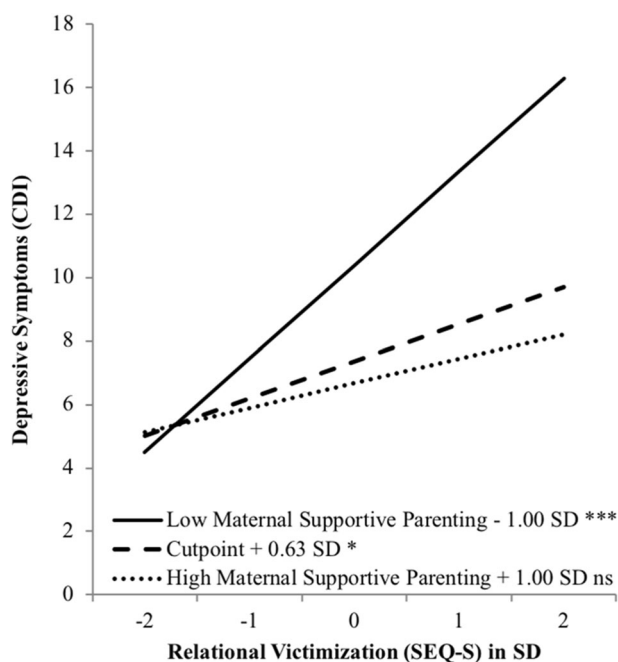
	<i>b</i> ( <i>SE</i> )	<i>t</i>	<i>p</i>	95% bootstrapped CI	
<b>Relational victimization (RV)</b>					
Mothers $F(4, 232) = 11.88, p < 0.0001, R^2 = 0.17$					
Gender	-0.570 (1.01)	-0.57	0.5713	-2.554	1.413
RV	0.446 (0.13)	3.52	0.0005	0.196	0.696
Supportive parenting (MSP)	-0.202 (0.06)	-3.49	0.0006	-0.316	-0.088
RV × MSP	-0.028 (0.01)	-2.24	0.0258	-0.053	-0.003
Fathers $F(4, 232) = 7.95, p < 0.0001, R^2 = 0.12$					
Gender	-0.587 (1.03)	-0.57	0.5709	-2.623	1.450
RV	0.514 (0.13)	3.99	0.0001	0.260	0.767
Supportive parenting (FSP)	-0.138 (0.05)	-2.62	0.0093	-0.242	-0.034
FSP × RV	-0.015 (0.01)	-1.30	0.1948	-0.039	0.008
<b>Physical victimization (PV)</b>					
Mothers $F(4, 232) = 9.83, p < 0.0001, R^2 = 0.15$					
Gender	-0.392 (1.05)	-0.37	0.7101	-2.464	1.681
PV	0.354 (0.16)	2.23	0.0265	0.042	0.666
Supportive parenting (MSP)	-0.240 (0.06)	-4.25	<0.0001	-0.351	-0.129
MSP × PV	-0.032 (0.01)	-2.22	0.0275	-0.061	-0.004
Fathers $F(4, 232) = 5.16, p = 0.0005, R^2 = 0.08$					
Gender	-0.380 (1.09)	-0.35	0.7267	-2.521	1.761
PV	0.436 (0.16)	2.68	0.0078	0.116	0.757
Supportive parenting (FSP)	-0.160 (0.05)	-2.98	0.0032	-0.264	-0.054
FSP × PV	-0.004 (0.02)	-0.24	0.8115	-0.033	0.026

Dependent variable is CDI total scores. Continuous predictor and moderator variables are centered.  $n = 237$

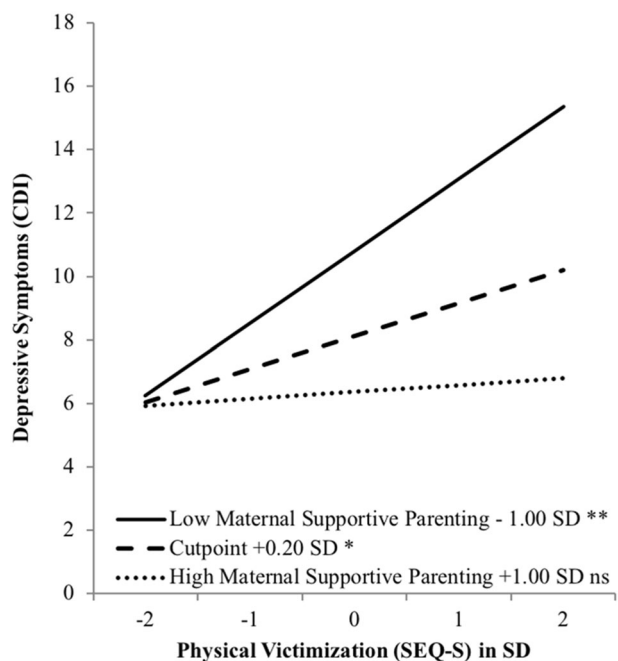
RV relational victimization, PV physical victimization

perceived supportive parenting by mothers significantly moderated the association between physical victimization and depressive symptoms (Fig. 2). For participants who reported levels of perceived maternal supportive parenting below +0.13 standard deviations, there was a significant positive association between physical victimization and depressive symptoms. About 61% of the sample had perceived maternal supportive parenting scores above +0.13 standard deviations, and in that range there was no significant association between levels of physical victimization and depressive symptoms.

For physical victimization and perceived paternal supportive parenting, the overall regression model was significant,  $F(4, 232) = 5.16, p = 0.0005, R^2 = 0.08$ . Physical victimization was significantly positively associated with depressive symptoms ( $b = 0.44, p = 0.0078$ ), and perceived supportive parenting by fathers was significantly negatively



**Fig. 1** Relational victimization by maternal supportive parenting predicting depressive symptoms. Slopes for values of maternal supportive parenting less than +0.61 SD are significant. \* $p < 0.05$ , \*\*\* $p < 0.001$ . ns:  $p > 0.05$



**Fig. 2** Physical victimization by maternal supportive parenting predicting depressive symptoms. Slopes for values of maternal supportive parenting less than +0.13 SD are significant. \* $p < 0.05$ , \*\* $p < 0.01$ . ns:  $p > 0.05$

associated with depressive symptoms ( $b = -0.16, p = 0.0032$ ). The interaction between physical victimization and perceived paternal supportive parenting was not significant ( $b = -0.00, p = 0.8115$ ).

## Gender Moderation

To determine whether the bivariate associations or moderation effects described above were consistent across boys and girls, additional regressions were conducted. We started with the same four models described above, and added the relevant two- and three-way interactions between victimization, perceived supportive parenting, and adolescent gender for each model. For example, the first model included adolescent gender (GEN), relational victimization (RV), perceived maternal supportive parenting (MSP), GEN $\times$ RV, GEN $\times$ MSP, RV $\times$ MSP, and RV $\times$ MSP $\times$ GEN, and this method was repeated for each combination of victimization type (relational or physical) and perceived supportive parenting (mother or father). Continuous variables were mean centered prior to analysis, and the centered values were used to compute multiplicative interaction terms. Across all four models, none of the two- or three-way interaction terms involving adolescent gender were significant (all  $ps > 0.05$ ), indicating that adolescent gender did not moderate any of the relations found in the initial set of analyses.

## Discussion

The present study of early adolescents examined the association between two forms of peer victimization (relational and physical) and depressive symptoms, the association between perceived supportive parenting by mothers and fathers and depressive symptoms, and whether supportive parenting from each parent independently moderated the association between specific types of victimization and depressive symptoms. Adolescent gender was also explored as a potential moderator of those relations.

As expected, our results indicated that early adolescents who reported higher levels of both relational and physical victimization endorsed more depressive symptoms, and that these associations held for both boys and girls. Such findings are consistent with research linking peer victimization to depressive symptoms (e.g., Hawker and Boulton 2000; Klomek et al. 2008; Sweeting et al. 2006). At a general level, peer victimization, particularly when it occurs repeatedly over time, is a social and psychological stressor that could significantly impact an adolescent's risk for developing adverse psychological states, such as depression (Compas 1987). Peer victimization during early adolescence may be particularly harmful given the increasing focus on peer relationships and social status during this developmental period (Evans et al. 2005). Early adolescents who are victimized by their peers may internalize the experience and use it to evaluate their own self-worth, which could contribute to the development of a negative

self-image, loneliness, and other depressive symptoms (Daniels and Leaper 2006; Hawker and Boulton 2000; Prinstein et al. 2001; Rethon et al. 2009).

Although previous research has established an association between relational victimization and depressive symptoms among both children and adolescents (e.g., Hawker and Boulton 2000; Prinstein et al. 2001), the link between physical victimization and depression has received less attention. Instead, studies have indicated that physical or overt victimization is related to greater externalizing problems, such as conduct problems (Sullivan et al. 2006) and aggression (Troop-Gordon and Ladd 2005). However, in one of the few studies that examined the prospective association between specific forms of victimization and depressive symptoms in middle school students, Loukas and Pasch (2013) found that physical, but not relational, victimization predicted increases in girls' depressive symptoms, as well as in conduct problems and social anxiety for both boys and girls, over a one-year period. The current findings underscore that physical victimization, like relational victimization, is also concurrently related to depressive symptoms in both boys and girls, and caution against overlooking the possible link between physical victimization and internalizing symptoms.

Additionally, we hypothesized that perceived supportive parenting from both mothers and fathers would be associated with fewer depressive symptoms, and the results supported this hypothesis for both boys and girls. Such findings are consistent with the main effect model of social support that argues that perceived support, here in the form of perceived supportive parenting, is associated with more positive psychological functioning and less distress, regardless of the presence, nature, or severity of stress (Cohen and Wills 1985; Rigby 2000). In addition, our findings are consistent with several studies that found that perceived supportive parenting is associated with fewer depressive symptoms among adolescents (e.g., Plunkett et al. 2007; Rueger et al. 2010; Sheeber et al. 2007). It is believed that the perception of support, particularly from one's parents, improves one's overall sense of worth, belonging, security, and stability, which then relates to positive psychological states and reduced risk of depression (Cohen et al. 2000). This finding also clearly indicates that despite the salience of peer relationships and a growing emphasis on independence and separation from one's parents during the transition to adolescence (Crick and Grotpeter 1996; Furman and Buhrmester 1992; Prinstein et al. 2001), the perception of supportive parenting by parents remains relevant and important for positive psychosocial adjustment during this developmental period.

The final primary aim of the current study was to examine whether perceived supportive parenting from each parent protected early adolescents from the risk of



depressive symptoms related to the experience of peer victimization. A significant interaction between perceived maternal supportive parenting and each form of victimization was found, such that for both relational and physical victimization, the association between victimization and depressive symptoms was significant when maternal supportive parenting was lower but not when it was at average or higher levels. These findings for maternal supportive parenting are consistent with a moderation effects model of social support, which states that perceived support is especially beneficial under conditions of greater stress (Cohen and Wills 1985). These findings build on previous research that established that the association between peer victimization, broadly defined, and depressive symptoms is diminished when adolescents perceive their parents (in general) to be more supportive (e.g., Bonanno and Hymel 2010; Claes et al. 2015; Conners-Burrow et al. 2009; DeLay et al. 2012; Sapouna and Wolke 2013).

Interestingly, this protective effect was not observed for perceived supportive parenting by fathers. This finding is consistent with those of Anderson et al. (2015) who found that perceived maternal support, but not perceived paternal support, moderated the association between romantic relationship stress depressive symptoms among adolescents. In both studies, the different results for mothers and fathers could perhaps reflect gender differences in social goals and expectations. Female social goals are traditionally more focused on intimacy and nurturance than are male social goals (Block 1983). Perhaps a greater focus on relationships, in general, means that mothers behave in ways that convey their supportiveness more clearly than fathers, which is also consistent with the finding that mothers were perceived as displaying more supportive parenting than fathers within the current sample. If adolescents are socialized into expecting their mothers to engage in more supportive parenting due to these gendered social roles, then this may predispose adolescents not only to recognize maternal supportive parenting more readily than paternal supportive parenting, but to also be more welcoming of it, which may enhance the effectiveness of perceived maternal supportive parenting as a protective buffer against stress in general. By examining these moderation effects separately for mothers and fathers, the current findings add clarity to the existing literature by establishing that perceived supportive parenting by mothers is particularly protective against the risk for depression in the face of both relational and physical peer victimization.

It is important to note that perceived supportive parenting was measured broadly in the current study and that we did not consider parental responses specifically to victimization experiences. Although it is likely that supportive parenting by mothers may protect against depressive symptoms by providing positive affirmations about adolescent self-worth

and belongingness damaged by peer victimization experiences, further research is needed to identify the specific responses that are the most helpful in protecting victimized adolescents from depression. Moreover, the findings of the current study cannot establish that perceived maternal supportive parenting decreases early adolescents' depressive symptoms in response to peer victimization specifically, or whether it increases early adolescents' resilience to interpersonal stress in general. Because the study is a cross-sectional design, it is also not possible to establish that supportive parenting leads to fewer depressive symptoms; it is possible that youth who are more depressed withdraw from family relationships, and thus experience or perceive less supportive parenting, than those who are not depressed (Hammen 2012).

Also noteworthy is the finding that perceived supportive parenting by both parents was negatively correlated with physical and relational victimization, suggesting that parental support may also serve as a protective factor against victimization itself. A meta-analysis examining the association between parenting and bullying and victimization among children and adolescents found that negative or maladaptive parenting has small to moderate positive associations with being bullied, while parental involvement and support protect children and adolescents against peer victimization (Lereya et al. 2013). A positive relationship between parents and adolescents characterized by warmth and support may bolster self-concept and help children and adolescents to acquire social skills and develop adaptive coping strategies that reduce the chance of peer victimization (Kochenderfer-Ladd and Skinner 2002), as well as improve resilience when victimization occurs (Lereya et al. 2013).

Because the literature indicates that girls have higher rates of depressive symptoms during adolescence than boys (Twenge and Nolen-Hoeksema 2002; Wade et al. 2002), and previous research has found that girls report greater distress and perceived harm from peer victimization than boys (Paquette and Underwood 1999), adolescent gender was tested as a moderator of the relations among perceived supportive parenting, peer victimization, and depressive symptoms. However, adolescent gender did not moderate any main effect or moderation results, indicating that all of the significant results in this study were consistent across both male and female adolescents. Consistent with previous studies (e.g. Crick and Grotpeter 1996; Paquette and Underwood 1999; Peskin et al. 2006; Storch et al. 2003), boys did report higher levels of physical victimization than girls, but there was no gender difference in relational victimization. There was also no significant gender difference in depressive symptoms, which is somewhat inconsistent with previous findings that girls begin to show more depressive symptoms than boys starting in early

adolescence. Given that the mean age of the current sample was just over 12 years, and most studies indicate that the gender difference in depressive symptoms emerges by age 13 or 14 (Twenge and Nolen-Hoeksema 2002; Wade et al. 2002), it is likely that our study caught youth before the onset of gender differences in depression emerged.

### Limitations and Suggestions for Future Research

Several methodological limitations warrant caution when drawing inferences from the findings of the current study. All data were collected solely from the adolescent's perspective, creating common method variance that may result in an overestimation of the associations among variables. As previously noted, the cross-sectional design prohibits conclusions about causality or temporal precedence in the relations detected between variables.

Characteristics of the sample may also limit the generalizability of the results to a broad early adolescent population. First, the sample was comprised of students attending parochial schools, which are generally smaller than public schools and have a religious orientation, characteristics which may affect perceptions and effects of victimization, as well as parenting. Second, participants were predominately Caucasian and Catholic, so the ability to apply the results to youth of other ethnic and religious backgrounds is limited. Lastly, because we used a community sample and assessed only depressive symptoms and not diagnoses of major depressive disorder, the current findings only indicate that peer victimization is related to elevated self-reported symptoms of depression, not to higher rates of clinically diagnosable depressive disorders.

Keeping these limitations in mind, the current study makes a meaningful contribution to the existing literature on peer victimization, parenting, and adolescence by emphasizing the link between both relational and physical peer victimization and increased depressive symptoms, reinforcing the importance of the perception of supportive parenting during the transition to adolescence, and clarifying some of the mixed results from previous research on the ability of perceived supportive parenting to act as a buffer against the deleterious effects of peer victimization. The current results highlight that perceived supportive parenting from mothers, in particular, may play an important role in protecting early adolescents against depressive symptoms following both physical and relational victimization.

Replication of the current findings is needed and should include both a more diverse sample and the use of multiple reporters to assess supportive parenting and victimization. Additional research is also needed to determine the specific mechanisms by which supportive parenting can buffer youth against the negative emotional effects of peer

aggression, including an identification of which parental behaviors may be most effective in response to specific instances of adolescent peer victimization. Future research should also investigate whether perceived supportive parenting may be particularly beneficial for early adolescents as compared to older adolescents, as younger adolescents are generally more receptive to parent input regarding social relationships and peer conflict (Gregson et al. 2015). As such, further study concerning how the timing of both peer victimization and the perception of supportive parenting are associated with more, or less, impact on depressive symptoms among victimized youth would be helpful.

**Author Contributions** B.A.K.: Co-designed and executed the larger project from which this study was derived, conducted the data analyses, and wrote the initial draft of the paper. A.A.P.: Co-designed the larger study, assisted with data analysis and writing of the paper. C.N.: Assisted with data collection, conducted more limited but similar analyses with a subset of the current dataset for her master's thesis which served as the foundation for the conceptualization of the manuscript. S.L.J.: Conducted literature searches, contributed to editing and formatting of the final manuscript.

### Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Ethical Approval** American Psychological Association guidelines for research with human subjects were followed throughout the study to ensure participant safety and well-being, and the study protocol was approved by the Loyola University Maryland Institutional Review Board (IRB).

**Informed Consent** Active informed consent was obtained from parents/guardians of all individual participants included in the study.

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