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Emotional Maltreatment, Peer Victimization, and Depressive versus Anxiety Symptoms During Adolescence: Hopelessness as a Mediator

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Abstract

Objective—Extensive comorbidity between depression and anxiety has driven research to identify unique and shared risk factors. This study prospectively examined the specificity of three interpersonal stressors (emotional abuse, emotional neglect, and relationally-oriented peer victimization) as predictors of depressive versus anxiety symptoms in a racially-diverse community sample of adolescents. We expanded on past research by examining hopelessness as a mediator of the relationships between these interpersonal stressors and symptoms.

Method—Participants included 225 adolescents (55% African-American; 59% female; Mean age = 12.84 years) who completed measures at baseline (Time 1) and two follow-up assessments (Times 2 and 3). Symptoms of depression and anxiety (social, physical, total) were assessed at Time 1 and Time 3, while intervening emotional maltreatment, peer victimization, and hopelessness were assessed at Time 2.

Results—Hierarchical linear regressions indicated that emotional abuse was a nonspecific predictor of increases in both depressive symptoms and symptoms of social, physical, and total anxiety, whereas relationally-oriented peer victimization predicted depressive symptoms specifically. Emotional neglect did not predict increases in depressive or anxiety symptoms. In addition, hopelessness mediated the relationships between emotional abuse and increases in symptoms of depression and social anxiety.

Conclusions—These findings suggest that emotional abuse and relationally-oriented peer victimization are interpersonal stressors that are relevant to the development of internalizing symptoms in adolescence, and that hopelessness may be one mechanism through which emotional abuse contributes to an increased risk of depression and social anxiety.

Keywords

Emotional Maltreatment; Peer Victimization; Depression; Anxiety; Hopelessness

Adolescence is an important transitional period during which adolescents are at increased vulnerability for developing depressive and anxiety disorders. By age 18, twenty percent of adolescents experience the first onset of major depressive disorder and nearly one-third report having an anxiety disorder (Hankin et al., 1998; Kessler, Avenevoli, & Merikangas,

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2001; Merikangas et al., 2010). In early adolescence, depressive and anxiety symptoms begin to dramatically increase and continue to rise throughout adolescence (Ge, Lorenz, Conger, Elder, & Simons, 1994; Letcher, Sanson, Smart, & Toumbourou, 2012). Even at the subclinical level, depressive and anxiety symptoms are associated with impaired functioning (Gotlib, Lewinsohn, & Seeley, 1995) and may be precursors to the development of major depressive and anxiety disorders in later adolescence and adulthood (Pine, Cohen, Cohen, & Brook, 1999; van Lang et al., 2007).

Research has consistently documented extensive comorbidity between depression and anxiety at both diagnostic and symptom levels (Brady & Kendall, 1992; Garber & Weersing, 2010). Given this finding, it is important to consider symptom overlap in the examination of risk factors for depression and anxiety. Identifying whether risk factors are unique or common to depression and anxiety has significant implications for understanding the etiology of each disorder, and may provide insight into the most appropriate intervention for individuals with and without comorbid symptoms of depression and anxiety. This is particularly crucial to investigate during the age of greatest risk for first onset of these disorders (Hankin et al., 1998).

Stressful life events, which increase during adolescence (Ge et al., 1994; Larson & Ham, 1993), have consistently been implicated as a nonspecific risk factor for both depression and anxiety (Hankin, Abramson, Miller, & Haeffel, 2004). However, certain types of stressors may be specifically related to depressive versus anxiety symptoms (Brown, Harris, & Eales, 1993; Kendler, Hettema, Butera, Gardner, & Prescott, 2003; Williamson, Birmaher, Dahl, & Ryan, 2005). For example, stressors related to loss or humiliation have been found to contribute unique risk to depressive symptoms (Kendler et al., 2003; Williamson et al., 2005), whereas threat-related stressors predict anxiety symptoms (Eley & Stevenson, 2000; Finlay-Jones & Brown, 1981). Few studies, however, have examined interpersonal stressors as unique or shared risk factors for depressive and anxiety symptoms. Particularly during adolescence, interpersonal stressors may be more damaging as adolescents place more emphasis on interpersonal relationships and become more sensitive to disruptions in both peer and family relationships (Bradford, Vaughn, & Barber, 2008; Rudolph & Hammen, 1999). Thus, it is important to examine whether specific types of familial and peer stressors provide risk for symptoms of depression and anxiety during this vulnerable period.

Familial Emotional Abuse and Neglect

Childhood emotional maltreatment, conceptualized as emotional abuse (i.e., verbal assaults on self-worth by parent/caretaker) and emotional neglect (i.e., parental/caretaker emotional unresponsiveness), was hypothesized to specifically provide vulnerability for depression because the depressogenic cognitions are directly supplied to the child (Rose & Abramson, 1992). Supporting this hypothesis, research has consistently found childhood emotional maltreatment to be a distal predictor of depressive symptoms and diagnoses in both adult (Bernet & Stein, 1999; Kaplan, Pelcovitz, & Labruna, 1999; Spasojevic & Alloy, 2002; Spinhoven et al., 2010) and adolescent samples (Courtney, Johnson, & Alloy, 2008; Lumley & Harkness, 2007). This relationship has been found even controlling for overlap with physical and sexual abuse, demonstrating the unique contribution of childhood emotional maltreatment to depression (Hankin, 2005; Gibb, Chelminski, & Zimmerman, 2007; Gibb et al., 2001; Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003; Wright, Crawford, & Del Castillo, 2009).

Despite the specificity of Rose and Abramson's (1992) original hypothesis to depressive symptoms, there is some evidence that childhood emotional maltreatment is also associated with anxiety (Gibb, Butler, & Beck, 2003; Lumley & Harkness, 2007; Simon et al., 2009;

Spertus et al., 2003; Wright et al., 2009). More specifically, research has found a significant association between childhood emotional maltreatment and both social anxiety (Spinhoven et al., 2010; Gibb et al., 2007; Simon et al., 2009) and physiological anxious arousal symptoms (Lumley & Harkness, 2007). However, a prospective study of young adults found that childhood emotional abuse did not predict increases in general anxiety symptoms (Hankin, 2005). Thus, the relationship between emotional maltreatment and anxiety symptoms remains unclear.

One limitation of prior research is the reliance on retrospective recall of childhood emotional abuse and neglect. To date, only two studies have prospectively examined the effects of current emotional maltreatment on depressive symptoms in children, finding that higher levels predicted increases in depressive symptoms (Gibb & Abela, 2008; Gibb & Alloy, 2006). A recent study of undergraduate students found that current emotional maltreatment predicted shorter time to first onset of major depressive disorder (Liu, Alloy, Abramson, Iacoviello, & Whitehouse, 2009). These findings suggest that emotional maltreatment may have damaging effects beyond childhood. However, no study has examined emotional maltreatment in adolescence, a time of particular vulnerability to interpersonal stressors and internalizing symptoms.

Relationally-Oriented Peer Victimization

Maltreatment by peers is also a salient interpersonal stressor among adolescents. Peer victimization, defined as being the target of direct or indirect aggression by peers, has received considerable attention during adolescence. Although overt victimization (i.e. targeted physical threats or bodily harm) predicts psychological maladjustment in youth (for reviews, see Hawker & Boulton, 2000; Reijntjes, Kamphius, Prinzie, & Telch, 2010), relationally-oriented victimization may be particularly relevant during the adolescent years. Relationally-oriented peer victimization, encompassing both relational and reputational victimization, is a type of victimization intended to harm a peer's relationships or reputation. Specifically, relational victimization involves using one's relationship as a weapon to harm others through friendship manipulation or social exclusion, whereas reputational threat is aimed at damaging an individual's reputation or status within the social hierarchy by spreading rumors or social gossiping (Crick & Bigbee, 1998; Prinstein & Cillessen, 2003). Adolescents may be particularly sensitive to relationally-oriented victimization as they begin to place more emphasis on crowd affiliations and reliance on peers for social support during this time (Furman & Buhrmester, 1992). Thus, adolescence may be a unique period of risk for victimization that threatens or disrupts an individual's peer relationships and/or social standing.

Indeed, both cross-sectional and longitudinal research has consistently demonstrated that relationally-oriented peer victimization is associated with symptoms of anxiety, specifically social and physiological anxiety symptoms, among adolescents (La Greca & Harrison, 2005; Siegel et al., 2009; Storch, Brassard, & Masia-Warner, 2003a; Storch, Masia-Warner, Crisp, & Klein, 2005; Vernberg et al., 1992). For example, Siegel and colleagues (2009) found that although overt, relational, and reputational victimization were concurrently associated with social anxiety, only relational victimization prospectively predicted increases in social anxiety across a two-month follow-up. Similarly, Storch and colleagues (2005) found that relational, but not overt victimization, predicted increases in social anxiety symptoms over a one-year follow-up period.

Further, research on relationally-oriented victimization and depression has yielded mixed findings. Although some studies have supported a concurrent association between relationally-oriented victimization and depression (e.g. Cole, Maxwell, Dukewich, &

Yosick, 2010; Desjardins & Leadbeater, 2011; Ellis, Crooks, & Wolfe, 2009; Prinstein, Boegers, & Vernberg, 2001; Storch, Nock, Masia-Warner, & Barlas, 2003b), two longitudinal studies have not found a prospective relationship with depressive symptoms (Desjardins & Leadbeater, 2011; Tran et al., 2012). However, neither longitudinal study included a sample of early adolescents (ages 12–13) attending middle school, which may be a particularly vulnerable period for relationally-oriented victimization, as adolescents begin to navigate new peer group formations and have greater concerns about social status and identity (Damon & Hart, 1988). To our knowledge, no prospective study has examined whether relationally-oriented victimization provides vulnerability specific to symptoms of depression versus anxiety symptoms in adolescents.

Hopelessness as a Mediator of Interpersonal Stress and Depressive and Anxiety Symptoms

Relatively less research has focused on potential mechanisms linking emotional maltreatment and peer victimization to subsequent internalizing symptoms. Identifying mechanisms through which these stressors confer risk has significant implications for the development of interventions aimed at reducing the impact of these events. One potential mechanism warranting examination is hopelessness, which consists of two components: 1) the expectation of negative future outcomes, and 2) beliefs in one's helplessness to affect these outcomes. According to Rose and Abramson's (1992) conceptual model, emotional maltreatment, particularly when chronic, contributes to the development of hopelessness, which in turn leads to depressive symptoms. Consistent with this theory, Courtney and colleagues (2008) found that hopelessness mediated the relationship between retrospectively-reported childhood emotional maltreatment and depressive symptoms in adolescents. However, despite evidence that emotional verbal victimization by parents and peers predicts increases in hopelessness among youth (Hanley & Gibb, 2010), no study has examined whether hopelessness following current experiences of emotional maltreatment or peer victimization contributes to increases in depressive or anxiety symptoms.

Although hopelessness primarily has been considered specific to the development of depression (Alloy et al., 2012; Alloy & Clements, 1998; Hankin et al., 2004), some evidence suggests that hopelessness may also be associated with anxiety (Alloy, Kelly, Mineka, & Clements, 1990; Marai, 2004; Miranda, Fontes, & Marroquin, 2008). According to the helplessness-hopelessness model of depression and anxiety (Alloy et al., 1990; Chorpita & Barlow, 1998), depression emerges from hopelessness, which includes both expectations of helplessness and the certainty that negative events will occur in the future, whereas anxiety arises only from initial expectations of helplessness. Inconsistent with this theory, however, a recent study by Miranda and colleagues (2008) found that anxiety was also related to the other component of hopelessness, the certainty about the occurrence of negative future events. This suggests that anxiety may be associated with both components of hopelessness; however, the relationship between hopelessness and anxiety symptoms remains unclear.

In particular, hopelessness may serve as a pathway through which interpersonal stressors contribute to symptoms of social anxiety. Given the interpersonal nature of emotional maltreatment and relationally-oriented victimization, adolescents may experience feelings of helplessness and/or hopelessness specific to social interactions, which may lead specifically to social anxiety symptoms (Gazelle & Druhen, 2009; Fincham & Hokoda, 1987). Additionally, social anxiety has been found to overlap more with depression than other types of anxiety (Lahey et al., 2004). Thus, it is possible that depression and social anxiety not only have shared risk factors, but may also have common mechanisms through which these risk factors contribute to symptoms of depression and social anxiety. However, no study has investigated hopelessness as a mechanism through which interpersonal stress, such as

emotional maltreatment and relationally-oriented peer victimization, contributes to symptoms of anxiety, particularly social anxiety.

The Present Study

The current study expands on previous research by examining the specificity of emotional abuse, emotional neglect, and relationally-oriented peer victimization as predictors of symptoms of depression versus anxiety. To our knowledge, this is the first study to prospectively investigate the effects of current emotional abuse, emotional neglect, and relationally-oriented victimization on symptoms of depression and anxiety among early adolescents. More specifically, it is the first to examine these stressors in relation to subtypes of anxiety, namely social and physical anxiety symptoms. Additionally, given prior research documenting girls' higher levels of depressive and anxiety symptoms than boys during early adolescence (Hankin & Abramson, 2001), and greater reactivity to the occurrence of stress (Hankin, Mermelstein, & Roesch, 2007), sex was examined as a moderator of all relationships. Based on past research, we hypothesized that emotional abuse would predict prospective increases in depressive symptoms, as well as symptoms of social anxiety. We also hypothesized that emotional neglect would specifically predict depressive symptoms, but not any type of anxiety symptoms.

Based on past research on relational and reputational peer victimization, we also hypothesized that relationally-oriented victimization would be a nonspecific risk factor and predict increases in depressive and anxiety symptoms (physical, social, and total). Further, it was expected that sex would moderate the effects of peer victimization on both depressive and anxiety symptoms, such that girls who experienced relationally-oriented victimization would have greater increases in internalizing symptoms.

A secondary goal of the current study was to examine whether hopelessness mediated the relationships between all three interpersonal stressors (emotional abuse, emotional neglect, and relationally-oriented victimization) and subsequent depressive and anxiety symptomatology. Consistent with Rose and Abramson (1992), we predicted that hopelessness would mediate the relationships between all three interpersonal stressors and increases in depressive symptoms. Further, consistent with previous research suggesting that hopelessness is relevant to social anxiety (Gazelle & Druhen, 2009), we expected that hopelessness would mediate the relationships between relationally-oriented victimization and emotional abuse and symptoms of social anxiety, but not physical or total anxiety symptoms.

Method

Sample Recruitment

As part of the Temple University Adolescent Cognition and Emotion Project, an ongoing prospective longitudinal study investigating the emergence of depressive and anxiety disorders in adolescence, 12- or 13-year old adolescents were recruited from Philadelphia-area public and private middle schools. Caucasian and African American adolescents were recruited through school mailings and follow-up phone calls inviting participation (approximately 68% of the sample) and through advertisements placed in Philadelphia-area newspapers (approximately 32% of the sample). To be eligible, participants had to be 12 or 13 years old, self-identify as Caucasian/White, African-American/Black, or Biracial (Hispanic adolescents were eligible if they also identified as White or Black), and have a mother/primary female caretaker willing to participate in the study. Exclusion criteria included: 1) the absence of a mother/primary female caretaker; 2) the mother or adolescent was psychotic, mentally retarded, had a severe developmental disorder, or a severe learning

disability; and 3) the inability to complete study measures by the mother or adolescent due to the inability to read or speak English or for any other reason (see Alloy et al., 2012 for further details regarding recruitment).

Study Sample

The sample for the current study consisted of 225 adolescents (Mean age = 12.84, SD = .60) who completed the baseline assessment (Time 1) and two follow-up assessments (Times 2 and 3). The study sample was 55% African-American and 59% female. There was wide variability in socioeconomic status, with 23% of participants falling below $30,000 annual family income, 35% falling between $30,000 – $59,999, 17% falling between $60,000 – $89,999, and 25% falling above $90,000. Overall, 45% of participants were eligible for free school lunch.

An original sample of 342 adolescents completed the Time 1 assessment. However, 36 families declined further participation (89.5% retention rate) and did not complete a Time 2 assessment. Of the 306 families at Time 2, 225 families also completed a Time 3 assessment (N = 225; 73.5% retention rate). Only adolescents with complete data on all study measures at the three time points were included in the present study; thus, list-wise deletion was used for the final sample of 225 at Time 3. Analyses comparing participants with and without longitudinal data on all Time 1 measures revealed that compared to adolescents who completed only the Time 1 assessment, adolescents who completed the Times 2 and 3 assessments were significantly more likely to be female (χ^2 = 6.46, df = 1, p = .01) and African American (χ^2 = 4.43, df = 1, p = .04). However, there were no differences on any demographic characteristics or study variables between adolescents who completed assessments at Times 2 and 3 compared to those who completed only the Time 2 assessment.

Procedures

Three assessments spaced nine months apart were utilized in the current study to provide a fully prospective design. At Time 1, adolescents completed self-report questionnaires evaluating current depressive and anxiety symptoms. Also at Time 1, mothers completed a questionnaire about stressful events that occurred in the child's life from birth until Time 1. Approximately nine months later (M = 281.01 days; SD = 119.46 days), participants completed the Time 2 assessment, which included self-report questionnaires assessing experiences of emotional abuse, emotional neglect, and relationally-oriented peer victimization that occurred between the Time 1 and Time 2 assessments. The participants also reported on current hopelessness. Approximately nine months later (M = 284.22 days; SD = 148.65 days), adolescents returned for the Time 3 assessment in which they completed self-report questionnaires assessing current symptoms of depression and anxiety. Adolescents and mothers were each compensated for their participation at each study visit.

Measures

Depressive symptoms—The Children's Depression Inventory (CDI; Kovacs, 1985) is a self-report measure designed to assess affective, behavioral, and cognitive symptoms of depression in youth. Each of the 27 items is rated on a 0 to 2 scale and total scores range from 0 to 54, with higher scores indicating more depressive symptoms. The CDI has good reliability and validity (Klein, Dougherty, & Olino, 2005). Internal consistency in this sample was α = .86 at Time 1 and α = .87 Time 3.

Anxiety symptoms—The Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997) is a 39-item self-report questionnaire assessing anxiety symptoms in youth. It includes physical symptoms (PHYS; tense/restless and

somatic/ autonomic symptoms), social anxiety (SOC; humiliation/rejection and public performance fears), harm avoidance (perfectionism and anxious coping), and separation anxiety (fear of separation from parents). Adolescents responded to each item on 4-point Likert scales with response options of *never, rarely, sometimes*, or *often*. Higher scores on each subscale indicated greater symptom levels. The MASC and its subscales have been demonstrated to have excellent retest and internal reliability, and good convergent and discriminant validity (Baldwin & Dadds, 2007; March et al., 1997; March & Albano, 1998). Subscales of the MASC have reliably differentiated children with different anxiety disorders (Villabø, Gere, Torgersen, March, & Kendall, 2012). Based on past research, the current study only included the MASC total score, and the physical and social anxiety subscales. There was adequate internal consistency in this sample at Time 1 and Time 3 for the MASC Total (α = .86 – .87), MASC SOC (.83 – .84), and MASC PHYS (α = .78 – .81).

Hopelessness—The Hopelessness Scale for Children (HSC; Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983) is a self-report questionnaire that assesses hopelessness in the past two weeks. Adolescents answer true or false to each of the 17 items, with higher scores indicating greater hopelessness. The HSC has good construct validity (Abela, Brozina, & Haigh, 2002; Kazdin, Rodgers, & Colbus, 1986) and internal consistency ranging from .45 – .97 (e.g., Abela, 2001; Guerra, Huesmann, Tolan, Van Acker, & Eron, 1995), with a = .64 in a sample of African American adolescents (DuRant, Cadenhead, Pendergrast, Slavens, & Linder, 1994). Internal consistency in this sample was α = .60 at the Time 2 assessment.

Relationally-oriented Peer Victimization—The Social Experience Questionnaire - Self Report (SEQ-S; Crick & Grotpeter, 1996) measures youths' reports of being the target of aggressive acts committed by their peers. The original SEQ-S consists of three subscales: relational peer victimization, overt peer victimization, and receipt of prosocial acts from peers. In the current study, only the relational victimization subscale was used. However, based on more recent conceptualizations of victimization subtypes, the relational victimization scale was found to include items that are both relational (i.e. others left you out) and reputational (i.e. other teens told lies about you to make other teens not like you anymore).[1] Thus, this scale is referred to as relationally-oriented victimization. Possible responses to the items range from 0 (*"Never"*) to 5 (*"daily or almost daily"*). The SEQ-S has demonstrated favorable psychometric properties in previous studies (Crick & Grotpeter, 1996). Internal consistency in this sample was α = .69 at Time 2.

Emotional Abuse (EA) and Emotional Neglect (EN)—The EA and EN subscales of the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 2003) were used to measure adolescents' self-reports of familial EA and EN that occurred since the initial assessment. Each subscale consists of five items and each item is rated on a 5-point Likert scale ranging from 1 (*"Never true"*) to 5 (*"Very often true"*). The total score of each subscale is obtained by summing all five items after reverse-scoring some of the items, with higher scores indicating more EA or EN. The CTQ-EA and CTQ-EN have excellent reliability (Bernstein et al., 2003). Internal consistency in this sample was α = .73 for emotional abuse and α = .76 for emotional neglect at Time 2.

Childhood Stressful Life Events—The Children's Life Events Scale (CLES; Crossfield, Alloy, Gibb, & Abramson, 2002) is a checklist of 50 moderate to major negative events that children may experience in their lifetime. Crossfield and colleagues (2002)

[1]It was not possible to isolate the items of relational and reputational victimization to separately examine the effects of these victimization types.

expanded upon the previously established Source of Stress Inventory (Chandler, 1981) to create the CLES. Mothers' reports were used because children may have been too young to recall all events independently. CLES items include events in the following domains: negative emotional feedback, achievement failures, family difficulties, death of close family or friends, maltreatment (i.e., sexual, physical, emotional), and events suggesting inadequacy (e.g., acquired a physical deformity). Mothers were asked whether or not their child experienced each event in their lifetime and, if so, at what age the event occurred. Scores on the CLES range from 0–50, with higher scores indicating a greater number of negative events. There is limited information regarding the psychometric properties of the CLES; however, Crossfield and colleagues (2002) demonstrated its predictive validity. Internal consistency in this sample was α = .75. Because we did not evaluate emotional abuse, emotional neglect, or peer victimization specifically at Time 1, the CLES was used in the current study to control for the effects of previous life stressors on depressive and anxiety symptoms.

Data Analysis Approach

To examine the specificity of emotional abuse, emotional neglect, and relationally-oriented peer victimization to depressive versus anxiety symptoms, we conducted multiple hierarchical linear regressions predicting depressive or anxiety symptoms while statistically controlling for overlap with the other type of symptoms (Alloy et al., 2012; Starr & Davila, 2008). Thus, we controlled for initial levels of depressive and overall anxiety symptoms while predicting depressive symptoms, and we controlled for initial levels of depressive symptoms and the anxiety symptoms counterpart when predicting anxiety symptoms. To explore the relationships of these stressors to specific symptoms of anxiety, we examined emotional abuse, emotional neglect, and relationally-oriented victimization as predictors of increases in social anxiety, physical anxiety, and total anxiety.

To test our hypotheses using a fully prospective design, we utilized three time points, including Time 1 depressive and anxiety symptoms, Time 2 stressors, and Time 3 depressive or anxiety symptoms. Thus, Time 3 symptoms of depression or anxiety (each subscale) served as the dependent variable. In the first step of each regression, the Time 1 symptoms counterpart (e.g., Time 1 depressive symptoms when predicting to Time 3 depressive symptoms or Time 1 social anxiety symptoms when predicting to Time 3 social anxiety symptoms) was entered along with any demographic variables significantly associated with the dependent variable, sex, history of stressful life events, and time elapsed between Time 1 and Time 3. As discussed above, the other symptoms (e.g., initial overall anxiety when predicting to depressive symptoms or depressive symptoms when predicting to any anxiety symptom scale) were entered in Step 2, and emotional abuse, emotional neglect, and peer victimization were simultaneously entered in Step 3. By entering all three stressors in one regression model, we were able to parsimoniously examine the unique effects of emotional abuse, emotional neglect, and peer victimization on changes in depressive or anxiety symptoms (e.g., Gibb & Abela, 2008). Further, the interaction term between each stressor and sex (i.e. sex and emotional abuse) was included in Step 4 of the regression model. Thus, a total of four regressions were used to analyze the unique effects of all three stressors on symptoms of depression and total, social, and physical anxiety symptoms.

To examine hopelessness as a potential mediator of the association between interpersonal stress (emotional abuse, emotional neglect, and peer victimization) and changes in depressive symptoms and each subscale of anxiety symptoms, we conducted mediational analyses using a bootstrapping approach. Bootstrapping is a nonparametric resampling procedure that approximates the sampling distribution of a statistic from the available data. We employed an SPSS macro (PROCESS) to test the significance of the indirect effects of these interpersonal stressors on depressive or anxiety symptoms via hopelessness, with N =

10,000 bootstrap resamples and a 95% confidence interval (Preacher & Hayes, 2008). Sampling distributions of indirect effects are generated by taking a sample, with replacement, of size N from the full data set and calculating the indirect effects in the resamples (Preacher & Hayes, 2008). Hopelessness was only investigated as a mediator when there was evidence of a significant direct relationship between emotional abuse, emotional neglect, or relationally-oriented victimization and depressive or anxiety symptoms.

Results

Descriptive Analyses

Descriptive statistics for each time point by sex are presented in Table 1. Analyses were also conducted to determine if there were any significant demographic differences on primary outcome variables (sex, race, and age; *t*-statistics and effect sizes for sex differences presented in Table 1). The means in this study for emotional abuse and neglect were similar to those found in other community samples (Baker & Festinger, 2011; Gibb & Abela, 2008). Additionally, 46% of the current sample reported at least one occurrence of relationally-oriented victimization during the follow-up period, consistent with several studies of relational victimization among adolescents (e.g., Bond, Carlin, Thomas, Rubin, & Patton, 2001), but slightly lower than others (e.g., Ellis et al., 2009). There were no significant sex differences in emotional abuse, emotional neglect, or peer victimization.

Means for depressive and anxiety symptoms were slightly lower, but in the average range, of means reported in other studies conducted with early adolescents (Gibb & Alloy, 2006; Grills-Taquechel, Norton, & Ollendick, 2009; McLaughlin, Hatzenbeuhler, & Hilt, 2009). Scores for hopelessness in the current sample were consistent with those reported in other studies (Hanley & Gibb, 2011). Unexpectedly, for both boys and girls, means of depressive and anxiety symptoms decreased slightly from Time 1 to Time 3. At Time 1, there were no significant sex differences in depressive symptoms. However, sex differences emerged at Time 3, with girls reporting significantly more depressive symptoms than boys. Sex differences in anxiety symptoms were evident at Time 1, with girls reporting significantly more overall anxiety, as well as social anxiety. At Time 3, these sex differences remained, with girls reporting more symptoms of overall, social, and physical anxiety. Additionally, girls reported significantly higher levels of hopelessness at Time 2.

There were no significant racial differences on any Time 1 variables. However, there were racial differences on anxiety symptoms at Time 3, with Caucasian adolescents reporting greater total anxiety ($t = 2.39$, $p < .05$) and social anxiety symptoms ($t = 2.91$, $p < .01$). Thus, race served as a covariate for all analyses in which Time 3 total and social anxiety symptoms were the dependent variable (Miller & Chapman, 2001). There were also racial differences in emotional neglect, with Caucasian adolescents reporting significantly more occurrences of emotional neglect ($t = 2.14$, $p = .03$).

Table 2 displays correlations among primary study variables. As expected, emotional abuse and emotional neglect were highly correlated, and both were significantly correlated with relationally-oriented victimization. Further, all three stressors were positively correlated with Time 3 depressive and social anxiety symptoms, but only emotional abuse and peer victimization were correlated with physical anxiety and total anxiety symptoms.

Prospective Analyses

As hypothesized, emotional abuse and relationally-oriented peer victimization significantly predicted increases in depressive symptoms, controlling for initial depressive and total anxiety symptoms (Table 3). Contrary to hypotheses, emotional neglect did not significantly

predict increases in depressive symptoms (Table 3).[2] The effects of emotional abuse and relationally-oriented victimization were consistent with a small to medium effect size (f^2 = .13).

Consistent with hypotheses, emotional abuse significantly predicted prospective increases in social anxiety and physical anxiety symptoms, controlling for initial anxiety and depressive symptoms (Table 4). However, contrary to our original hypothesis, relationally-oriented victimization did not predict prospective increases in social or physical anxiety (Table 4).[3] The effects of emotional abuse on social and physical anxiety symptoms were small to medium (f^2s = .05 – .08; (see Table 4).

In summary, emotional abuse predicted increases in depressive symptoms, as well as social and physical anxiety symptoms, whereas relationally-oriented victimization predicted increases in depressive symptoms specifically. Contrary to study hypotheses, sex did not significantly moderate any of the relationships between emotional abuse, emotional neglect, or peer victimization and depressive or anxiety symptoms (Table 4).

Mediation Analyses

First, we examined whether hopelessness mediated the relationships between emotional abuse and peer victimization and symptoms of depression (Table 5). Emotional abuse that occurred between Time 1 and Time 2 significantly predicted hopelessness at Time 2, and hopelessness at Time 2 significantly predicted symptoms of depression at Time 3. The indirect effect of emotional abuse on symptoms of depression at Time 3 via hopelessness was significant. Thus, consistent with the developmental extension of the hopelessness theory of depression (Rose & Abramson, 1992), hopelessness significantly mediated the relationship between emotional abuse and depressive symptoms, while controlling for initial depressive and anxiety symptoms. However, relationally-oriented victimization between Time 1 and Time 2 did not significantly predict hopelessness at Time 2, and the indirect effect of relationally-oriented victimization on depressive symptoms at Time 3 via hopelessness was not significant. Thus, contrary to our hypotheses, hopelessness did not significantly mediate the relationship between relationally-oriented victimization and depressive symptoms.

Next, we examined whether hopelessness mediated the relationship between emotional abuse and symptoms of social anxiety (Table 6). Emotional abuse between Time 1 and Time 2 significantly predicted hopelessness at Time 2, and hopelessness at Time 2 significantly predicted symptoms of social anxiety at Time 3. The indirect effect of emotional abuse on symptoms of social anxiety at Time 3 via hopelessness was significant, indicating that hopelessness significantly mediated the relationship between emotional abuse and prospective increases in social anxiety symptoms, controlling for initial social anxiety and depressive symptoms.

Finally, we examined whether hopelessness mediated the relationship between emotional abuse and both physical anxiety and total anxiety symptoms. Emotional abuse did not significantly predict hopelessness at Time 2, and, consistent with hypotheses, the indirect effect of emotional abuse on symptoms of physical anxiety and total anxiety at Time 3 via hopelessness at Time 2 was not significant (results available upon request).

[2]When emotional abuse, emotional neglect, and relationally-oriented victimization were entered independently in the regression model (without the other two stressors), all three stressors significantly predicted prospective increases in depressive symptoms.
[3]When all three stressors were entered independently in the regression models, relationally-oriented victimization significantly predicted increases in symptoms of social and physical anxiety, whereas emotional neglect also predicted increases in social anxiety symptoms.

Discussion

To our knowledge, this is the first study to prospectively examine emotional abuse, emotional neglect, and relationally-oriented peer victimization as predictors of internalizing symptoms, and to test the specificity of these interpersonal stressors as predictors of depressive versus anxiety symptoms in a sample of early adolescents. In partial support of our hypotheses, emotional abuse and peer victimization predicted increases in depressive symptoms, but only emotional abuse predicted increases in symptoms of anxiety, including total anxiety, social anxiety, and physical anxiety. Taken together, these findings suggest that emotional abuse is a shared risk factor for symptoms of depression and anxiety, specifically social and physical anxiety, whereas relationally-oriented victimization appears to be a specific risk factor for depressive symptoms. Additionally, the current study is also the first study to find that hopelessness may mediate the relationships between emotional abuse and increases in both depressive and social anxiety symptoms, suggesting that hopelessness may help to explain why adolescents who experience emotional abuse subsequently experience symptoms of depression and social anxiety.

Overall, emotional abuse emerged as a common risk factor for both symptoms of depression and anxiety, including total, physical, and social anxiety. These findings are consistent with prior research documenting a relationship between retrospective and current experiences of childhood emotional abuse and depressive symptoms (Gibb & Abela, 2008; Gibb & Alloy, 2006; Hankin, 2005), but extends past findings to an adolescent sample. Thus, our study indicates that emotional abuse that occurs during adolescence also contributes to depressive symptoms during this period. Further, our finding that emotional abuse predicted increases in total anxiety, as well as social and physical anxiety symptoms, highlights the need to examine subtypes of anxiety in relation to stressors. These findings are consistent with prior research that has evaluated specific subtypes of anxiety, such as physiological anxious arousal symptoms (Lumley & Harkness, 2007) and social anxiety (e.g. Gibb et al., 2007). However, our results are contradictory with a prospective study by Hankin (2005) that found childhood emotional abuse was a significant predictor of symptoms of depression, but not overall anxiety. A possible explanation for the discrepancy in these studies may be differences in age between study samples, such that emotional abuse may be more threatening to an individual's identity and self-concept during early adolescence, but not during later adolescence when a sense of self is more established (Damon & Hart, 1988). Further, another possible reason for discrepant findings may be the evaluation of current emotional abuse versus retrospectively- reported childhood emotional abuse. Specifically, our study evaluated the effects of current reports of emotional abuse in adolescence on anxiety symptoms, which resulted in a shorter elapsed period between the occurrence of the abuse and assessment of anxiety. However, Hankin (2005) evaluated history of childhood emotional abuse, which may have occurred at any point prior to age 14, and anxiety symptoms in a sample of young adults. Thus, it is possible that emotional abuse may have a specific depressogenic effect over a longer period of time (Hankin, 2005), but may contribute to anxiety symptoms in the more immediate follow-up.

Additionally, our finding that relationally-oriented victimization provided specific risk for depressive symptoms is surprising given much research documenting a relationship between relationally-oriented victimization and symptoms of depression and anxiety (e.g. Prinstein et al., 2001; Storch et al. 2003b). This is particularly surprising in regard to social anxiety given longitudinal studies that have found relational victimization to predict increases in social anxiety symptoms among adolescents (e.g. Siegel et al., 2009; Storch et al. 2005). However, one possible reason why relationally-oriented victimization may have predicted depressive, but not any anxiety symptoms, could be differences in the nature of the peer victimization assessed in the current study compared to past research. Relationally-oriented

victimization encompasses both relational and reputational types of victimization. However, past research has only found a strong relationship between relational victimization and social anxiety (e.g. Storch et al., 2005), but not reputational victimization (Siegel et al., 2009). Thus, it is possible that the content of the victimization assessed in the current sample was more depressogenic than anxiety-provoking, and the joint examination of reputational and relational victimization may have diluted the effects of relational victimization on anxiety symptoms. Interestingly, contrary to previous research on relationally-oriented victimization that has found a particularly strong effect for girls (e.g. Prinstein et al., 2001), sex did not moderate the relationship between relationally-oriented victimization and symptoms of depression or anxiety in the current study. However, our finding is consistent with other studies of early adolescents (Desjardins & Leadbeater, 2011), which suggest that the detrimental effects of relationally-oriented victimization may not be exclusive to girls during this period.

One unexpected finding that emerged in our study was the differential effect of emotional abuse and emotional neglect on depressive and anxiety symptoms. Contrary to hypotheses, emotional neglect did not predict increases in depressive symptoms, whereas emotional abuse was a common risk factor for both depressive and anxiety symptoms. This finding is consistent with several recent studies that have identified emotional abuse and emotional neglect as related, but distinct, forms of emotional maltreatment (Baker & Festinger, 2011; Soffer, Gilboa-Schechtman, & Shahar, 2008). Given that emotional abuse and neglect are highly correlated, it could be that emotional neglect may contribute to depressive and anxiety symptoms because of its shared variance with emotional abuse. Additionally, although emotional neglect may lead to immediate increases in negative affect or depressed mood, our results suggest that it may not have implications for increases in depressive symptoms over a longer time frame. Thus, our study demonstrates the necessity of examining emotional abuse and neglect as unique constructs that may differentially predict depression and anxiety.

Our results also indicate that hopelessness significantly mediated the relationship between emotional abuse and increases in depressive symptoms during adolescence, but not between relationally-oriented victimization and depressive symptoms. This finding is consistent with Rose and Abramson's (1992) conceptual model that emotional abuse, especially when chronic, induces hopelessness. Rose and Abramson suggest that although individuals may initially make benign attributions in relation to these experiences (e.g., "she was just in a bad mood that day"), the continued occurrence of these experiences is inconsistent with these attributions and may lead to more stable and global attributions for the maltreatment and a more general state of hopelessness (e.g., "I am a worthless person and no one will ever love me"), which, in turn, leads to depressive symptoms (Rose & Abramson, 1992). However, our findings suggest that relationally-oriented victimization may not be hopelessness-inducing. Whereas adolescents who experience emotional abuse may internalize the message, "If my family doesn't love me, then no one will," adolescents who experience relationally-oriented victimization may still receive love and support from family and maintain a hopeful outlook towards the future. Although peer relationships could potentially buffer the effects of relationally-oriented victimization as well, emotional abuse may be more persistent or pervasive than peer victimization and result in greater hopelessness. These findings suggest that other cognitive or emotional processes may be responsible for the link between relationally-oriented victimization and depression. For example, McLaughlin and colleagues (2009) identified emotion dysregulation as a mechanism linking relational victimization to symptoms of depression and anxiety in adolescents. Thus, it is possible that emotion dysregulation, rather than hopelessness, may serve as the process through which relationally-oriented victimization leads to depressive symptoms in adolescents.

Additionally, our finding that hopelessness mediates the relationship between emotional abuse and social anxiety, but not between emotional abuse and physical or total anxiety, adds a novel contribution to the emotional maltreatment and anxiety literature. Although this finding is inconsistent with prior research that has found hopelessness to be a vulnerability specific to depression (Alloy et al., 2012; Alloy & Clements, 1998), most research has not investigated hopelessness as a mediator between specific stressors and subtypes of anxiety. These results suggest that depression and social anxiety may develop from similar risk factors and processes, but that physical or total anxiety may function through a different pathway than depression or social anxiety. In fact, Epkins and Heckler (2011) proposed a Cumulative Interpersonal Risk Model focusing on the similar etiological factors underpinning depression and social anxiety at both the diagnostic and symptom-level. Thus, the current findings suggest that hopelessness may not be specific to depressive symptoms in early adolescence, but may also act as a mediator between emotional abuse and social anxiety symptoms. It is possible that greater specificity of hopelessness to depressive symptoms may arise in later adolescence.

Although this study included hopelessness as one mechanism through which stress leads to depressive and social anxiety symptoms, it did not examine other mechanisms hypothesized to provide specific vulnerability to anxiety or depressive symptoms. For instance, McLaughlin and Hatzenbeuhler (2009) found that anxiety sensitivity acted as an anxiety-specific mechanism linking stressful life events to anxiety symptoms in adolescence. Thus, it is possible that anxiety sensitivity may also mediate the relationship between emotional abuse and other types of anxiety symptoms, such as physiological or total anxiety. Therefore, future research would benefit from including other vulnerability factors for anxiety and depression in hopes of further elucidating processes that mediate the risk for dysfunction associated with emotional abuse experiences.

Our study has a number of methodological strengths that allowed us to build on prior research. First, the current study examined experiences of emotional abuse, emotional neglect, and peer victimization in a fully prospective study in adolescence, a period of high risk for depression, anxiety, and stressful life events (Hankin & Abramson, 2001). In particular, the longitudinal design of our study enabled us to assess the occurrence of stressors and symptoms at separate time points, and allowed us to conduct a more stringent mediational test than would be possible with a two time point or retrospective study. Additionally, this study examined a large community sample of demographically diverse adolescents, which strengthens the generalizability of our findings.

Although this study had many strengths, several limitations should be addressed as well. As with many studies examining depressive and anxiety symptoms, we used self-report measures that could be subject to reporter bias. Future studies would benefit from utilizing a multi-informant approach to gather information on emotional maltreatment and peer victimization, as well as using interviewer based assessments of depression and anxiety symptoms to combat potential reporter bias. The current study also assessed only symptoms of depression and anxiety. Therefore, future research is needed to determine whether these findings generalize to adolescents with depression and anxiety disorders. Additionally, the current study assessed relationally-oriented victimization, but did not test the independent effects of relational and reputational victimization. Therefore, future research should examine these types of peer victimization separately to clarify the prospective relationship with depressive and anxiety symptoms. Further, the low internal consistency of the hopelessness scale in the current study may have limited our ability to detect other mediational effects of hopelessness. Thus, future research would benefit from using a similar measure of hopelessness with higher levels of reliability.

Additionally, variability in the length of follow-up could have impacted our findings. Although the mean interval across assessment waves was nine months, individual variation in follow-up length could have influenced the number of reported stressors. However, our statistical models controlled for length of time elapsed between assessments, which may have tempered the impact of this variability on study findings. Additionally, the nine-month interval between assessments is unique among studies evaluating peer victimization and emotional maltreatment with subsequent symptomatology. However, there has been little consistency among research investigating these stressors as predictors of subsequent internalizing symptoms, with some studies evaluating stressors and symptoms with follow-up periods of 2 months (Siegel et al., 2009), 7 months (McLaughlin et al. 2009), 12 months (Gibb & Abela, 2008; Tran et al., 2012) and 24 months (Desjardins et al., 2011). Thus, future research that systematically evaluates risk factors across varying time periods would be beneficial among youth (Hankin, 2012).

Implications for Research, Policy, and Practice

Our study adds an important contribution to the existing literature on emotional abuse, emotional neglect, and peer victimization. First, our study coalesces research on emotional maltreatment and relationally-oriented victimization that has largely been conducted independently. Our findings indicate that emotional abuse and relationally-oriented victimization are both salient and particularly damaging stressors, and warrant greater attention during the early adolescent years. Second, few studies of emotional maltreatment and peer victimization have simultaneously examined these stressors as predictors of anxiety symptom subtypes, including social and physical anxiety. Thus, our findings provide a more nuanced understanding of how these stressors relate to specific symptoms of anxiety. Third, our study provides novel evidence that hopelessness may not only be a mechanism linking emotional abuse and depressive symptoms, but may also serve as a mechanism through which emotional abuse contributes to social anxiety symptoms. These findings have significant implications for research and clinical practice, highlighting the need to evaluate the occurrence of emotional abuse and relationally-oriented peer victimization in adolescence and to carefully monitor symptoms of depression and anxiety among these individuals. Further, early intervention or targeted youth programming may be able to identify emotional abuse or relationally-oriented peer victimization and provide appropriate support and training for age-appropriate coping strategies, particularly by targeting hopelessness in adolescents. Thus, although anxiety and depression are highly comorbid disorders with shared risk factors, this study highlights the need to further our understanding of convergent and divergent risk factors and the mechanisms through which they contribute to these disorders.

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Table 1

Descriptive Statistics and Gender Differences in Study Variables

Measure	Overall Sample		Boys		Girls		Gender Difference	Cohen's d
	M	*SD*	*M*	*SD*	*M*	*SD*	*t*	*d*
Time 1								
CDI	6.93	5.78	6.08	4.89	7.52	6.28	1.93	.26
MASC Phys	7.73	5.33	7.30	4.69	8.03	5.73	1.05	.14
MASC Soc	9.18	5.69	8.09	5.44	9.93	5.76	2.42*	.33
MASC Total	40.49	14.30	37.89	13.70	42.30	14.48	2.30*	.31
Time 2								
EA	7.69	3.37	7.20	2.82	8.03	3.68	1.90	.28
EN	8.09	3.23	7.79	2.97	8.30	3.40	1.17	.16
PV	2.16	3.47	1.79	3.16	2.41	3.66	1.34	.18
HSC	2.75	1.96	2.30	1.92	3.05	1.94	2.86**	.39
Time 3								
CDI	5.76	5.90	4.14	3.51	6.89	6.90	3.92***	.50
MASC Phys	6.13	5.48	4.95	4.60	6.96	5.90	2.87**	.38
MASC Soc	7.59	5.23	6.54	5.07	8.31	5.25	2.52*	.34
MASC Total	35.30	13.98	31.61	13.88	37.85	13.51	3.37**	.46

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; Phys= Physical anxiety; Soc= Social Anxiety; EA = Emotional Abuse; EN = Emotional Neglect; PV = Peer Victimization; HSC = Hopelessness Scale for Children.

Table 2

Bivariate Correlations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. T1 CDI	---											
2. T1 MASC Phys	.50***	---										
3. T1 MASC Soc	.34***	.43***	---									
4. T1 MASC Total	.28***	.73***	.77***	---								
5. T2 EA	.30***	.20**	.15*	.08	---							
6. T2 EN	.30***	.16*	.14*	.04	.46***	---						
7. T2 PV	.17**	.11	.11	.06	.33***	.29***	---					
8. T2 HSC	.22**	.09	.18**	.04	.23**	.30***	.09	---				
9. T3 CDI	.39***	.22**	.20**	.10	.38***	.23**	.27***	.32***	---			
10. T3 MASC Phys	.18**	.38***	.19**	.28***	.26***	.11	.18**	.12	.61***	---		
11. T3 MASC Soc	.14*	.27***	.51***	.42***	.29***	.19**	.19**	.28***	.42***	.53***	---	
12. T3 MASC Total	0.09	.35***	.40***	.50***	.18**	.01	.15*	.09	.36***	.77***	.78***	---

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

T1 = Time 1 (baseline); T2 = Time 2; T3= Time 3; CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; Phys= Physical anxiety; Soc= Social Anxiety; EA = Emotional Abuse; EN = Emotional Neglect; PV = Peer Victimization; HSC = Hopelessness Scale for Children.

Table 3

Emotional Abuse, Emotional Neglect, and Peer Victimization as Predictors of Depressive Symptoms at Time 3

Regression Step	Variable	β	F	ΔR^2	Δf^2
Step 1	CLES	−.07	1.45	.19***	.23
	Time in Study	.10	2.10		
	T1 CDI	.28	18.21***		
	Sex	.17	7.95**		
Step 2	T1 MASC	−.04	.36	<.01	<.01
Step 3	EA	.25	13.36***	.09***	.13
	EN	<.01	<.01		
	PV	.13	4.22*		
Step 4	EA x Sex	.06	.26	<.01	<.01
	EN x Sex	−.06	.34		
	PV x Sex	−.05	.22		

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

T1 = Time 1 (baseline); CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; CLES = Children's Life Event Scale; Time in Study = Days between Time 1 and Time 3 assessments; EA = Emotional Abuse; EN = Emotional Neglect; PV = Peer Victimization. F^2 is the incremental effect size of the final step in each analysis.

J Clin Child Adolesc Psychol. Author manuscript; available in PMC 2014 March 27.

Table 4

Emotional Abuse, Emotional Neglect, and Peer Victimization as Predictors of Subtypes of Anxiety Symptoms at Time 3

Anxiety Symptom Type	Regression Step	Variable	*β*	*F*	ΔR^2	Δf^2
Social Anxiety	Step 1	CLES	<.01	<.01	.29***	.41
		Time in Study	.07	1.47		
		T1 MASC Soc	.48	62.84***		
		Sex	.07	1.63		
		Race	.13	5.03*		
	Step 2	T1 CDI	−.12	3.41	<.01	<.01
	Step 3	EA	.21	9.98**	.05**	.08
		EN	.02	.05		
		PV	.06	1.16		
	Step 4	EA x Sex	.14	1.44	<.01	<.01
		EN x Sex	−.09	.64		
		PV x Sex	−.03	.10		
Physical Anxiety	Step 1	CLES	−.06	1.00	.18***	.22
		Time in Study	−.03	.22		
		T1 MASC Phys	.36	26.84***		
		Sex	.14	5.17*		
	Step 2	T1 CDI	−.07	.95	<.01	<.01
	Step 3	EA	.20	7.52**	.04**	.05
		EN	.03	.23		
		PV	.08	1.64		
	Step 4	EA x Sex	−.07	.31	<.01	<.01
		EN x Sex	−.14	1.6		
		PV x Sex	−.12	1.21		
Total Anxiety	Step 1	CLES	.02	0.4	.32***	.47
		Time in Study	.04	.66		
		T1 MASC Total	.48	7.92***		
		Sex	.14	2.39*		

Anxiety Symptom Type	Regression Step	Variable	β	F	ΔR^2	Δf^2
		Race	.12	1.94		
	Step 2	T1 CDI	−.10	−1.52	<.01	<.01
	Step 3	EA	.17	2.49*	.02	.03
		EN	−.11	−1.69		
		PV	.09	1.46		
	Step 4	EA x Sex	.06	.52	<.01	<.01
		EN x Sex	−.07	−.72		
		PV x Sex	.06	−.54		

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

T1 = Time 1 (baseline); CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; Phys= Physical anxiety; Soc= Social Anxiety; CLES = Children's Life Event Scale; Time in Study = Days between Time 1 and T3 assessment; EA = Emotional Abuse; EN = Emotional Neglect; PV = Peer Victimization. Race is coded with 0= African American, 1= Caucasian. F^2 is the incremental effect size of the final step in each analysis.

Table 5

Hopelessness as a Mediator of Relationships between Emotional Abuse, Peer Victimization, and Changes in Depressive Symptoms (10,000 bootstrap samples).

Emotional Abuse and Peer Victimization as Predictors of Hopelessness at Time 2

Predictor	*B*	*t*
EA	0.09	2.18*
PV	<0.01	<0.01
Sex	0.62	2.35*
CLES	0.01	0.36
Time in Study	<0.01	0.88
T1 CDI	0.05	2.13*
T1 MASC Total	−0.01	−0.52

Model *R-sq* = .10, *F* = 3.51, *p* < .01.

Emotional Abuse, Peer Victimization, and Hopelessness as Predictors of Depressive Symptoms at Time 3

Predictor	*B*	*t*
EA	0.38	3.38***
PV	0.22	2.17*
T2 HSC	0.54	3.02**
Sex	1.76	2.50*
CLES	−0.09	−1.30
Time in Study	<0.01	1.39
T1 CDI	0.25	3.93***
T1 MASC Total	−0.02	−0.62

Model *R-sq* = .31, *F* = 11.98, *p* < .0001.

Emotional Abuse, Peer Victimization, and Hopelessness as Predictors of Depressive Symptoms at Time 3 (Total Effect Model)

Predictor	*B*	*t*
EA	0.43	3.79***
PV	0.22	2.13*
Sex	2.09	2.96**
CLES	−0.09	−1.21
Time in Study	<0.01	1.54
T1 CDI	0.28	4.32***
T1 MASC Total	−0.02	−0.71

Model *R-sq* = .28, *F* = 11.93, *p* < .0001.

Indirect Effects of Emotional Abuse and Peer Victimization on Depressive Symptoms at Time 3 via Hopelessness at Time 2

Focal Predictor	Effect	SE	CI (lower)	CI (upper)
EA	0.05	0.03	0.01	0.14

Indirect Effects of Emotional Abuse and Peer Victimization on Depressive Symptoms at Time 3 via Hopelessness at Time 2

Focal Predictor	Effect	SE	CI (lower)	CI (upper)
PV	0.00	0.02	−0.04	0.05

Note.

* $p < .05$,

** $p < .01$,

*** $p < .001$.

Confidence intervals that do not contain 0 are statistically significant, implying mediation. T1 = Time 1 (baseline); T2 = Time 2; CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; CLES = Children's Life Event Scale; Time in Study = Days between Time 1 and Time 3 assessments; EA = Emotional Abuse; PV = Peer Victimization.

Table 6

Hopelessness as a Mediator of the Relationship between Emotional Abuse and Social Anxiety Symptoms (10,000 bootstrap samples).

Emotional Abuse as a Predictor of Hopelessness at Time 2

Predictor	*B*	*t*
EA	0.08	2.12*
Sex	0.56	2.16*
Race	0.37	1.37
CLES	0.02	0.57
Time in Study	<0.01	1.20
T1 CDI	0.04	1.59
T1 MASC Soc	0.03	1.15

Model *R-sq* = .12, *F* = *4.05* , *p* < .001.

Emotional Abuse and Hopelessness as Predictors of Social Anxiety Symptoms at Time 3

Predictor	*B*	*t*
EA	0.32	3.51***
T2 HSC	0.40	2.59**
Sex	0.65	1.09
Race	1.36	2.24*
CLES	<.01	0.06
Time in Study	<0.01	0.87
T1 CDI	−0.12	−2.12*
T1 MASC Soc	0.43	7.88***

Model *R-sq* = .36, *F* = 15.18, *p* < .0001.

Emotional Abuse and Hopelessness as Predictors of Social Anxiety Symptoms at Time 3 (Total Effect Model)

Predictor	*B*	*t*
EA	0.35	3.86***
Sex	0.88	1.47
Race	1.51	2.46*
CLES	<.01	0.04
Time in Study	<.01	1.07
T1 CDI	−.10	−1.83
T1 MASC Soc	0.44	8.00***

Model *R-sq* = .34, *F* = 15.97, *p* < .0001.

Indirect Effect of Emotional Abuse on Social Anxiety Symptoms at Time 3 via Hopelessness at Time 2

Focal Predictor	Effect	SE	CI (lower)	CI (upper)
EA	0.03	0.03	0.01	0.11

Note.

*$p < .05$,

**$p < .01$,

***$p < .001$.

Confidence intervals that do not contain 0 are statistically significant, implying mediation. T1 = Time 1 (baseline); CDI = Children's Depression Inventory; MASC = Multidimensional Anxiety Scale for Children; Soc= Social Anxiety; CLES = Children's Life Event Scale; Time in Study = Days between Time 1 and Time 3 assessments; EA = Emotional Abuse. Race: 0= African American, 1= Caucasian.