

Predictors of Attributional Style Change in Children

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A number of studies have supported the hypothesis that negative attributional styles may confer vulnerability to the development of depression. The goal of this study was to explore factors that may contribute to the development of negative attributional styles in children. As hypothesized, elevated levels of depressive symptoms and hopelessness at the initial assessment predicted negative changes in children's attributional styles over the 6-month follow-up period. In addition, elevated levels of verbal victimization occurring between the 2 assessments, as well as that occurring in the 6 months preceding the initial assessment, prospectively predicted negative changes in children's attributional styles over the follow-up. Further, initial depressive symptoms and verbal victimization during the follow-up continued to significantly predict attributional style change even when the overlap among the predictors was statistically controlled. Contrary to the hypotheses, however, neither parent-reported levels of overall negative life events nor parents' attributions for their children's events predicted changes in children's attributional styles.

KEY WORDS: attribution; depression; hopelessness; victimization.

Both the reformulated learned helplessness theory (Abramson, Seligman, & Teasdale, 1978) and its more recent incarnation, the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989), propose that individuals' cognitive styles (i.e., their characteristic ways of explaining negative events in their lives) may contribute vulnerability to both symptoms and diagnoses of depression. Specifically, according to the reformulated learned helplessness theory, individuals who tend to make internal, stable, and global attributions for the causes of negative life events are hypothesized to be vulnerable to depression. Similarly, the hopelessness theory includes the hypothesis that individuals who tend to make stable and global attributions, and infer negative consequences and negative characteristics about themselves following negative life events, are vulnerable to a cognitively mediated subtype of depression, hopelessness depression. Both

theories, therefore, propose that individuals with negative attributional styles are vulnerable to depression. A number of studies have supported the concurrent and predictive validity of negative attributional styles for both symptoms and diagnoses of depression (for reviews see Abramson et al., 2002; Alloy et al., 1999; Gladstone & Kaslow, 1995; Joiner & Wagner, 1995; Peterson & Seligman, 1984).

Theorists and researchers have suggested that these cognitive styles may develop and stabilize throughout the course of childhood. For example, Crick and Dodge (1994) suggested that children's cognitive styles develop early in life and become more ingrained, automatic, and rigid as the child ages. In addition, studies have suggested that although toddlers may make causal attributions, children do not develop the ability to make stable and global causal attributions until they move into the concrete period of cognitive development starting around age 7 (for a review, see Rose & Abramson, 1992). Researchers have also suggested that, in normal development, children's attributional styles appear to stabilize around age 12. For example, one study found that children's attributional styles became significantly more stable over the course of a 5-year follow-up period, with the

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greatest instability occurring between the third and fifth grades (Nolen-Hoeksema, Girgus, & Seligman, 1992). In addition, studies of third, fourth, and fifth graders' attributional styles have found relatively low 1-year retest correlations ($r_s = .29-.35$; Nolen-Hoeksema, Girgus, & Seligman, 1986, 1992). In contrast, studies of sixth graders (Garber & Flynn, 2001) and high school students (Gotlib, Lewinsohn, Seeley, Rohde, & Redner, 1993) have yielded 1-year retest correlations ($r_s = .50$ and $.55$, respectively) almost identical to the 52-year retest correlation reported for adults ($r = .51$; Burns & Seligman, 1989).

Given evidence that attributional styles contribute vulnerability to depression and that they demonstrate the greatest flexibility before approximately age 12, it becomes important to understand the developmental origins of these styles to create preventive interventions for depression. Studies have suggested a number of factors that may contribute to the development of negative attributional styles in children (for reviews, see Garber & Flynn, 1998; Haines, Metalsky, Cardamone, & Joiner, 1999). These factors include negative life events, verbal victimization, parents' attributions for events in their children's lives, depressive symptoms, and hopelessness.

In extending the etiological chain of the hopelessness theory, Rose and Abramson (1992) proposed a developmental pathway by which negative events in childhood may contribute to the development of a negative attributional style. Specifically, they suggested that when negative events occur, individuals attempt to understand the causes, consequences, and meanings of the events so that future negative events may be avoided and hopefulness may be maintained. Thus, after the occurrence of a negative event, children may initially make hopefulness-inducing attributions about its occurrence. For example, a child may initially explain a bad test grade by saying, "That test was unfair," an external, unstable, and specific explanation. With the repeated occurrence of negative events, however, these hopefulness-inducing attributions may be disconfirmed, leading the child to begin making hopelessness-inducing attributions about their occurrence. The child may explain repeated bad grades by thinking, "I'm stupid," an internal, stable, and global attribution. Over time, the child's hopelessness-inducing attributions may generalize to initially unrelated negative life events. In this way, a relatively stable negative attributional style may develop. Supporting Rose and Abramson's model, studies have found that elevated levels of negative life events do, indeed, contribute to the development of negative attributional styles (e.g., Garber & Flynn, 2001; Nolen-Hoeksema et al., 1992; Tiggemann, Winefield, Winefield, & Goldney, 1991).

Rose and Abramson (1992) hypothesized that events such as teasing, rejection, and humiliation (i.e., verbal victimization) would be more likely to contribute to the development of negative attributional styles than would other types of life events. According to Rose and Abramson's hypothesis, this is because, with verbal victimization, the hopelessness-inducing cognitions are directly supplied to the child by the abuser. For example, a child may be told that he or she did not do well in a class because he or she is "stupid." Thus, the child has been given an internal, stable, and global attribution for his or her lack of success in a given class. In contrast, a child who experiences other forms of negative life events may not be told the reason for the event's occurrence, and, therefore, may have more opportunity to explain the event in a way that will maintain his or her hopefulness. Although studies have supported the relation between a history of verbal victimization (by parents and/or peers) and the presence of a negative attributional style (for a review, see Gibb, 2002), each of these studies has been cross-sectional.⁴ Therefore, although there appears to be a relation between verbal victimization and individuals' attributional styles, it is unclear whether levels of verbal victimization actually contribute to the development of negative attributional styles. Despite this, there is evidence that messages conveyed in interpersonal relationships can affect the development of depressive cognitions. For example, studies have found that peer rejection, a key component of verbal victimization, prospectively predicts the development of low self-esteem (for a review, see McDougall, Hymel, Vaillancourt, & Mercer, 2001). In addition, there is evidence that children's self-perceived competence in a variety of domains develops, in part, based upon evaluations from others (i.e., parents, teachers, and peers; Cole, Jacquez, & Maschman, 2001).

Another factor that may contribute to the development of negative attributional styles is the attributional feedback parents give their children for negative events in the children's lives. Consistent with this hypothesis, a number of studies have shown a cross-sectional relation between parents' attributional feedback and children's attributional styles (e.g., Alloy et al., 2001; Garber & Flynn, 2001; Turk & Bry, 1992). Despite these supportive cross-sectional results, however, only one study has examined whether parents' attributions for their children's events

⁴ Both emotional maltreatment by parents and verbal peer victimization include the same behaviors (i.e., rejecting, humiliating, demeaning, and teasing). The key difference between these two forms of victimization lies in the child's relation to the perpetrator rather than in the type of behavior experienced. In this article, we use the term "verbal victimization" to refer generally to teasing, rejection, etc., committed by parents and peers.

actually predict changes in children's attributional styles. In this study, mothers' attributional styles for events in their children's lives did not significantly predict changes in children's attributional styles over a 1-year follow-up, statistically controlling for mothers' histories of depression (Garber & Flynn, 2001). Given that children's attributional styles tend to become more stable over time, it is possible that this result was due, in part, to the age of the children included (mean age = 12 years at the initial assessment). In the current study, we examined whether parents' attributions for child-relevant events predicted their children's attributions in a sample of younger children.

There is also evidence that levels of depression in childhood may contribute to the development of negative attributional styles. According to the "scar hypothesis" (Lewinsohn, Steinmertz, Larson, & Franklin, 1981), episodes of depression may lead to lasting psychological changes, such as increasingly negative attributional styles. Although studies examining the scar hypothesis in adults have, for the most part, yielded nonsignificant results (e.g., Berrebbi, Alloy, & Abramson, 2005; Lewinsohn et al., 1981; Rohde, Lewinsohn, & Seeley, 1990; Shea et al., 1996; Zeiss & Lewinsohn, 1988), studies with younger participants have been more supportive of depressive symptoms as a predictor of changes in negative attributional styles (e.g., Bennett & Bates, 1995; Johnson & Miller, 1990; Nolen-Hoeksema et al., 1986, 1992; but see also Tigge-mann et al., 1991). Given the strong relation between depression and hopelessness (e.g., Kazdin, French, Unis, Esveldt-Dawson, & Sherick, 1983; Kazdin, Rodgers, & Colbus, 1986; Spirito, Williams, Stark, & Hart, 1988), it is possible that elevations in hopelessness may also "scar" children's attributional styles. That is, other depression-relevant states such as hopelessness also may contribute to the development of negative attributional styles. Moreover, just as stable, global attributions for negative events are hypothesized to increase hopelessness (Abramson et al., 1989), the belief in a bleak future could, in turn, increase the likelihood of attributing further negative events to stable, global causes in a negative feedback loop. Thus, hopelessness could contribute to the development of negative attributional styles. Only one study has examined the potential scarring effects of hopelessness on attributional styles. In this study, initial levels of hopelessness did not predict changes in young adults' attributional styles over a 3-year follow-up (Tigge-mann et al., 1991). This could have been due, however, to the significant amount of time between the two assessment points as well as the relatively older age of the participants (mean age = 19 years at the initial assessment). In the current study, we hypothesized that levels of both depres-

sive symptoms and hopelessness would predict changes in children's attributional styles over a shorter follow-up.

Given the central role of attributional styles in both the reformulated learned helplessness theory and the hopelessness theory as well as studies suggesting that negative attributional styles confer vulnerability to future depression (for reviews, see Abramson et al., 2002; Gibb & Coles, 2005), the current study was designed to examine factors that may predict changes in children's attributional styles. Using a 6-month prospective design, we examined the influence of depressive symptoms, hopelessness, verbal victimization, negative life events, and parents' attributions for their children's events on changes in children's attributional styles. We sought to replicate previous findings (e.g., Garber & Flynn, 2001; Nolen-Hoeksema et al., 1986, 1992) suggesting that depressive symptoms and negative life events contribute to the increasing negativity of children's attributional styles. In addition, we sought to extend previous findings (e.g., Garber & Flynn, 2001; Gibb et al., 2001) by also examining the potential roles of verbal victimization, hopelessness, and parents' attributions for their children's events in predicting changes in children's attributional styles. We hypothesized that initial levels of depressive symptoms, hopelessness, and parents' attributions for their children's events, as well as levels of negative life events and verbal victimization occurring during the follow-up, would predict changes in children's attributional styles such that higher levels of these variables would predict increased negativity in children's attributional styles over time. In addition to examining the predictive ability of each variable individually, we also examined each variable's unique influence on attributional style change, while statistically controlling for the influence of the other predictors.

METHOD

Participants

Fourth and fifth grade children from Philadelphia-area public and private schools ($n = 24$) as well as their parents were recruited for participation in this study. Of the approximately 3,218 parents contacted, 507 (15.8%) gave consent for themselves and their children to participate, 71 parents (2.2%) explicitly declined participation, and the remaining 2,640 (82.0%) did not respond. Of those consenting, 448 children and 225 parents participated in the Time 1 assessment (with no more than one parent participating for each child). Four hundred seventeen children (all of whom had also completed Time 1) and 211 parents (141 of whom had also completed Time 1)

Table I. Participant Demographic Characteristics

Variable	Time 1	Time 2
Number of children	448	417
Child sex (% girls)	58.0	57.8
Child ethnicity (%)	50.8	50.5
African American)		
Child age (<i>SD</i>)	9.77 (0.72)	10.27 (0.72)
Number of parents	225	211
Parent sex (% women)	88.9	90.5
Parent ethnicity (%)	50.7	48.8
African American)		
Parent age (<i>SD</i>)	36.90 (7.58)	38.20 (7.69)
Parent marital status (% married)	51.6	53.1
Parent education (% graduating college)	25.4	21.4
Family income (median)	\$30,001–\$35,000	\$30,001–\$35,000

participated at Time 2. The demographic characteristics of the participants are listed in Table I. At Time 1, 227 (50.8%) of the children were African American, 106 (23.7%) were Caucasian, 44 (9.9%) were Hispanic, 5 (1.1%) were Asian, and the remaining 66 (14.7%) were either from other racial/ethnic groups or were of mixed race/ethnicity. Of the Time 1 parents, 114 (50.7%) were African American, 83 (36.9%) were Caucasian, 20 (8.8%) were Hispanic, 3 (1.3%) were Asian, and the remaining 5 (2.2%) were either from other racial/ethnic groups or were of mixed race/ethnicity.

Given the low consent rate, the demographics of this sample were compared to those of the communities from which the sample was drawn to determine the representativeness of the sample.⁵ In terms of racial/ethnic composition, the current sample contained a higher percentage of African Americans (50.8%) and lower percentages of Caucasians (23.7%) and Asians (1.1%) than the communities from which it was drawn (percentages in the communities were approximately 36, 44, and 4%, respectively). However, the sample was representative in terms of the percentage of Hispanics (9.9% in this sample vs. approximately 8% in the community) as well as parents' education levels (17.4% vs. approximately 19% with a bachelor's degree or higher) and median family income (\$30,000–\$35,000 vs. approximately \$32,000). The difference in the percentage of African American versus Caucasian children included in this study versus that found

in the community may have been due to the relatively high proportion of children from public versus private schools in this study (74.6% vs. 25.4%). Specifically, a relatively high percentage of African American compared to Caucasian children in the Philadelphia area attend public rather than private schools.⁶

The level of attrition among children in this study was relatively low, with an attrition rate of 6.9%. Children's attrition from the study was due almost entirely to children moving to a different school (80.7%). Of parents participating at Time 1, 66.8% also participated at Time 2. In addition, 70 parents participated at Time 2 who had not participated at Time 1.

Measures

Attributional Styles

The Revised Children's Attributional Style Questionnaire (CASQ-R; Kaslow & Nolen-Hoeksema, 1991), a 24-item forced choice questionnaire, was used to assess children's attributional styles. For each item, hypothetical events are presented and the child must pick one of two attributional explanations for the event. In each pair of attributional explanations, one of the attributional dimensions varies (internality, stability, or globality), whereas the other two are held constant. Twelve of the items present positive events (e.g., "You get an 'A' on a test") and 12 of the items present negative events (e.g., "A person steals money from you"). Responses to the CASQ-R are used to create an overall composite score, which represents the extent to which children attribute negative events to internal, stable, and global causes and positive events to external, unstable, and specific causes. Specifically, composite scores were created by summing the number of internal, stable, and global responses to items reflecting negative events and subtracting this score from the sum of internal, stable, and global responses to items reflecting positive events. Scores on this composite can range from -12 to 12, with lower scores indicating a more negative attributional style. In validating the CASQ-R, Thompson, Kaslow, Weiss, and Hoeksema (1998) administered the instrument to a sample of 9–12 year olds at two time points, separated by 6 months. In this sample, scores on the CASQ-R overall composite were fairly stable over 6 months ($r = .53$) and exhibited fair internal consistency ($\alpha = .61$ at both T1 and T2). In the current study, the

⁵ Comparison demographic data were created by weighting census data given for Philadelphia and Delaware counties in Pennsylvania by the percentage of students drawn from schools within each county (94.9 and 5.1%, respectively). Retrieved October 14, 2003, from <http://quickfacts.census.gov/qfd/states/42/42101.html> and <http://quickfacts.census.gov/qfd/states/42/42045.html>.

⁶ Specifically, 65% of children in Philadelphia public schools are African American versus 36% in the community, whereas the percentages for Caucasians are 16 and 44%, respectively. Retrieved October 14, 2003, from <http://www.phila.k12.pa.us/aboutus/> and <http://quickfacts.census.gov/qfd/states/42/42101.html>.

CASQ-R overall composite also exhibited fair internal consistency ($\alpha = .53$ and $.62$ at T1 and T2, respectively).

A parent version of the CASQ-R (P-CASQ-R) was used to assess parents' attributions for their children's events. The format of the P-CASQ-R is identical to the CASQ-R except that items refer to "my child" rather than "I". As with the CASQ-R, responses to the P-CASQ-R are used to create an overall composite score. Scores on this composite have been found to correlate significantly with children's attributional styles (Garber & Flynn, 2001). In this study, the P-CASQ-R overall composite exhibited fair internal consistency ($\alpha = .50$ and $.58$ at T1 and T2, respectively).

Verbal Victimization

A modified version of the Childhood Trauma Questionnaire-Emotional Abuse subscale (CTQ-EA; Bernstein et al., 1994) was used to assess children's levels of verbal victimization. A number of studies have supported the reliability and validity of the CTQ-EA in both clinical and community samples (e.g., Bernstein, Ahluvalia, Pogge, & Handelsman, 1997; Bernstein et al., 1994, 2003; Kaslow, Thompson, Borrks, & Twomey, 2000; Scher, Stein, Asmundson, McCreary, & Forde, 2001). For the current study, a 4-item modified version of the CTQ-EA (M-CTQ-VV) was used. The CTQ-EA was modified for the current study by (a) asking children to only report events occurring in the prior 6 months, (b) not limiting the assessment of verbal victimization to that committed by parents, and (c) omitting one item ("I believe that I was emotionally abused"). Items include, "In the last 6 months . . ." "someone called me things like 'stupid,' 'lazy,' or 'ugly'," "I thought my parents wished I had never been born," "someone said hurtful or insulting things to me," and "someone hated me." Each item on the CTQ is rated on a 5-point Likert-type scale, with response options ranging from "never true" to "very often true." Total scores on the M-CTQ-VV can range from 4 to 20, with higher scores indicating higher levels of verbal victimization. In the current study, the M-CTQ-VV exhibited adequate internal consistency ($\alpha = .70$ at T1 and T2).

Negative Life Events

The Family Inventory of Life Events and Changes (FILE; McCubbin & Patterson, 1987) was used to assess negative life events. The FILE includes items assessing such major life events as moves, interpersonal conflicts, divorce and separations, illnesses, and deaths. Levels of

negative life events as assessed by the FILE have been shown to predict changes in children's attributional styles over a 1-year follow-up (Garber & Flynn, 2001). A measure of major life events, as opposed to one assessing hassles, was chosen because it was thought that parents would be better able to report on major events in their children's lives than they would for hassles. For each event listed the participating parent was asked to indicate whether or not the event happened in the past 6 months and, for each event endorsed, to rate the event's impact on the child participating in the study (ranging on a 5-point Likert-type scale from "no effect at all" to "very big effect"). Following Garber and Flynn (2001), the number of items endorsed was used for all analyses.⁷ Total scores on the FILE can range from 0 to 90, with higher scores indicating more life stress. In addition to total scores, we also computed scores for each of the FILE subscales: time parents spent away, conflicts, marital, births/pregnancy, money, jobs, moves, illnesses, and deaths.

Depressive Symptoms

The Children's Depression Inventory (CDI; Kovacs, 1981), a 27-item self-report inventory, was used to assess children's levels of depressive symptoms. Each item on the CDI inquires about the presence of a depressive symptom in the previous two weeks. Modeled after the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the CDI was designed to assess symptoms of depression in children between the ages of 8 and 17 and numerous studies have supported its reliability and validity (e.g., Kovacs, 1981, 1985; Smucker, Craighead, Craighead, & Green, 1986). Consistent with previous studies (e.g., Nolen-Hoeksema et al., 1992; Smucker et al., 1986), item 9 on the CDI, which assesses suicidal ideation, was not administered, because of concerns previously expressed by school officials. Excluding item 9, total scores on the CDI can range from 0 to 52, with higher scores indicating more severe levels of depressive symptoms. In the current study, the CDI exhibited good internal consistency ($\alpha = .87$ at T1 and T2).

Hopelessness

The Hopelessness Scale for Children (HSC; Kazdin et al., 1986) was used to assess children's negative expectations about the future. The HSC, which was modeled after the Beck Hopelessness Scale (Beck, Weissman,

⁷ Analyses were also conducted using the sum of impact ratings for the events endorsed and results from these analyses are virtually identical to those reported.

Lester, & Trexler, 1974), is composed of 17 True–False items. Total scores on the HSC can range from 0 to 17, with higher scores indicating more severe levels of hopelessness. The HSC has demonstrated adequate internal consistency ($\alpha = .69$) and moderate retest reliability over 10 weeks ($r = .49$) among a community sample of adolescents (Spirito et al., 1988). In addition, studies have found that scores on the HSC are significantly correlated with children’s depressive symptom levels (Kazdin et al., 1983, 1986; Spirito et al., 1988) and attributional styles (Spirito et al., 1988). In this study, the HSC exhibited adequate internal consistency (α s = .68 and .66 at T1 and T2, respectively).

Procedure

Participants were recruited from Philadelphia-area public and private schools. Letters inviting participation in the study were sent home to parents of all fourth and fifth grade children ($N = 3,218$) in participating schools (18 public and 6 private schools). Specifically, consent forms were given to principals of participating schools, who then gave them to children via their teachers. Children were asked to take the consent forms home, have their parents sign the forms indicating whether or not they wanted to participate in the study, and then return the forms to their teachers. The teachers then returned the signed consent forms to the principal, from whom they were collected by research personnel. There were multiple points, therefore, at which the consent forms could have been lost, misplaced, or forgotten, which may have contributed to our low consent rate.

Children whose parents provided consent were asked for their assent to participate in the study. Children assenting were administered the CASQ-R, M-CTQ-VV, CDI, and HSC. These measures were administered in a group format and were read aloud as the children followed along and answered the questions. Following this, the children took the P-CASQ-R and FILE home for one of their parents to complete and return. All measures were administered twice, approximately 6 months apart—once in the Fall and once in the Spring. A 6-month time interval was chosen for two reasons. First, to maximize our chances of detecting significant changes in children’s attributional style, we wanted to have the longest follow-up interval that could be conducted within one academic year. Second, our study was designed in large part to replicate and extend the findings of Nolen-Hoeksema et al. (1992), who used 6 months as their follow-up interval. In the current study, the mean duration between the initial and follow-

up assessments was 5.90 months ($SD = 0.79$ months). The names of parents returning consent forms, either accepting or declining participation in the study, were entered in a lottery for one of three cash prizes—two \$100 prizes and one \$250 prize.

RESULTS

The means and standard deviations of the child and parent measures are presented in Table II. Given that a number of the variables exhibited significant skew, the data were transformed (e.g., square root, log 10) to satisfy assumptions of normality prior to further analysis.

Estimation of Missing Data

Next, we examined whether the data were missing at random, thereby justifying the use of data imputation methods for estimating missing values (cf. Shafer & Graham, 2002). As a first step, a series of t tests was conducted to determine if attriting children differed from nonattritors on any of the variables included in this study. Specifically, we compared children participating at both assessment points versus those attriting after Time 1 in terms of demographic and study variables. None of these analyses was significant. Next, we conducted analyses to determine whether children whose parents participated in the study at Time 1 and/or Time 2 differed on any demographic or study variables compared to children whose parents did not participate. None of these analyses was significant. Finally, Little’s missing completely at random (MCAR) test, for which the null hypothesis is that the data are MCAR (Little & Rubin, 1987) was nonsignificant, $\chi^2(523) = 520.81, p = .52$, providing further support for the imputation of missing values. Given these results, maximum likelihood estimates of missing data were created and used in all subsequent analyses (see Shafer & Graham, 2002). Unless otherwise noted, therefore, all analyses are based upon the full sample of 448 children and their parents.

Preliminary Analyses

Analyses were next conducted to determine whether any of the study variables were significantly related to participants’ demographic characteristics (i.e., children’s age, gender, race/ethnicity, and attendance of public versus private schools; parent education; and family income as reported at Time 1). Given the number of tests

Table II. Descriptive Statistics for Study Variables

Variable	Time 1			Time 2		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
CASQ-R	4.98	3.04	– 5–12	5.39	3.27	– 8–12
CDI	9.38	7.53	0–47	8.26	7.20	0–47
HSC	3.63	2.69	0–16	3.47	2.52	0–16
M-CTQ-VV	9.72	3.87	4–20	9.32	3.69	4–20
P-CASQ-R	6.45	2.68	– 3–12	6.79	2.75	– 2–12
FILE	12.62	9.07	0–61	12.34	10.38	0–70
FILE-time spent away	0.53	0.63	0–2	0.47	0.63	0–2
FILE-conflicts	3.50	2.79	0–13	3.60	3.23	0–15
FILE-marital	0.74	1.22	0–7	0.64	1.06	0–7
FILE-births/pregnancy	0.46	0.83	0–5	0.48	0.83	0–4
FILE-money	1.97	1.74	0–8	1.97	1.93	0–10
FILE-jobs	1.57	1.77	0–11	1.74	2.13	0–12
FILE-moves	0.44	0.66	0–2	0.30	0.56	0–2
FILE-illnesses	1.63	2.14	0–12	1.49	2.05	0–12
FILE-deaths	0.62	0.96	0–5	0.51	0.86	0–5

Note. CASQ-R: Children’s Attributional Style Questionnaire-Revised; CDI: Children’s Depression Inventory; HSC: Hopelessness Scale for Children; M-CTQ-VV: Modified Childhood Trauma Questionnaire-Verbal Victimization subscale; P-CASQ-R: Revised Children’s Attributional Styles Questionnaire-Parent Version; FILE: Family Inventory of Life Events.

conducted, the critical alpha level was adjusted to reduce the likelihood of Type I errors. To provide more liberal criteria, we conducted a Bonferonni correction for the number of families of tests (i.e., the number of demographic variables examined; $n = 6$) rather than the number of overall tests conducted ($n = 72$). This gave us a critical alpha level of .008 (.05/6).

As can be seen in Table III, older, compared to younger, children had parents who reported more negative attributional styles for child-relevant events at Times 1 and 2. In contrast, children’s gender was not significantly related to any of the variables in this analysis. Considering family income, children whose parents reported higher levels of family income at Time 1 had less negative attributional styles and lower depressive symptom levels at Times 1 and 2 and lower levels of hopelessness at Time 1. In addition, their parents reported less negative attributional styles for child-relevant events and fewer negative life events at Times 1 and 2. Further, parents of children in public, as compared to private, schools reported more negative attributional styles for child-relevant events as well as more negative life events at Times 1 and 2. Finally, children of parents with more education had less negative attributional styles at Times 1 and 2 and lower depressive symptom levels at Time 1 and their parents reported negative attributional styles for child-relevant events and fewer negative life events at Time 2. The correlations for school

type and parent education were reduced to nonsignificant, however, once family income was statistically controlled. Given these results, family income was entered as a covariate for all tests of changes in children’s attributional styles.

Next, a series of omnibus analyses of variance (ANOVAs) was used to examine potential racial/ethnic differences in each of the study variables. Patterns of significant ANOVAs were examined using Student–Newman–Keuls post hoc tests. Given the limited representation of some racial/ethnic groups (e.g., Asians) in this sample, these analyses focused on African Americans, Caucasians, and Hispanics. We found that Hispanic children had significantly more negative attributional styles at Time 1 than either Caucasian or African American children, $F(2, 374) = 5.09, p = .007$, and higher depressive symptom levels at Time 2 than Caucasian children, $F(2, 374) = 5.32, p = .005$. Although not significant, the same pattern was observed for attributional styles at Time 2, $F(2, 374) = 3.70, p = .03$. The parents of Caucasian children reported more positive attributional styles for child-relevant events than did the parents of African American or Hispanic children at Time 2, $F(2, 374) = 7.70, p = .001$. There was also a nonsignificant trend for parents’ attributions for child-relevant events at Time 1, $F(2, 374) = 4.14, p = .02$. In addition, parents of Caucasian children reported significantly fewer negative events than parents of

Table III. Correlations Among Demographic and Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Child age	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Child sex ^a	-.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. School type ^a	.09	.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Parent education	-.06	-.10	-.28	—	—	—	—	—	—	—	—	—	—	—	—	—
5. Family income	-.14	-.03	-.40	.55	—	—	—	—	—	—	—	—	—	—	—	—
6. T1 CASQ-R	-.12	.01	-.07	.14	.17	—	—	—	—	—	—	—	—	—	—	—
7. T2 CASQ-R	-.06	-.01	-.03	.21	.24	.48	—	—	—	—	—	—	—	—	—	—
8. T1 CDI	.05	.01	.11	-.15	-.15	-.46	-.43	—	—	—	—	—	—	—	—	—
9. T2 CDI	.00	-.01	.09	-.06	-.15	-.35	-.51	.65	—	—	—	—	—	—	—	—
10. T1 HSC	.10	.10	.09	-.06	-.18	-.31	-.26	.47	.39	—	—	—	—	—	—	—
11. T2 HSC	-.03	.00	.01	.01	.02	-.23	-.32	.34	.43	.41	—	—	—	—	—	—
12. T1 M-CTQ-VV	.01	.02	.01	-.10	-.02	-.21	-.23	.53	.38	.39	.26	—	—	—	—	—
13. T2 M-CTQ-VV	-.04	.01	.00	.04	.01	-.14	-.29	.36	.47	.24	.29	.48	—	—	—	—
14. T1 P-CASQ-R	-.17	-.01	-.13	.06	.16	.19	.13	-.14	-.12	-.16	-.14	-.19	-.15	—	—	—
15. T2 P-CASQ-R	-.19	.00	-.14	.17	.26	.18	.22	-.19	-.18	-.10	.11	-.15	-.13	.72	—	—
16. T1 FILE	.08	-.02	.13	-.07	-.24	-.09	-.09	.19	.16	.17	.07	-.00	.00	-.14	-.07	—
17. T2 FILE	.00	-.03	.14	-.03	-.18	.05	.01	.17	.19	.09	.08	.04	.07	-.20	-.16	.81

^aValues for child sex and school type represent point-biserial correlations. Child sex was coded 0 for boys and 1 for girls. School type was coded 0 for private schools and 1 for public schools. CASQ-R: Revised Children's Attributional Style Questionnaire; CDI: Children's Depression Inventory; HSC: Hopelessness Scale for Children; M-CTQ-VV: Modified Childhood Trauma Questionnaire-Verbal Victimization subscale; P-CASQ-R: Revised Children's Attributional Style Questionnaire-Parent Version; FILE: Family Inventory of Life Events; Correlations $\geq |.10|$ significant at $p < .05$. Correlations $\geq |.12|$ significant at $p < .01$. Correlations $\geq |.16|$ significant at $p < .001$.

African American children at Time 2, $F(2, 374) = 8.53$, $p < .001$. Although the omnibus ANOVA for negative life events was also significant at Time 1, $F(2, 374) = 7.12$, $p = .001$, the post hoc tests failed to reveal significant between group differences. This said, however, the pattern of findings was the same, with parents of Caucasian children reporting marginally ($p = .014$) fewer negative life events than parents of African American children. All other comparisons with children's race/ethnicity were nonsignificant (lowest $p = .05$). In addition, statistically controlling for family income at Time 1, all but two of the significant race/ethnicity effects were reduced to nonsignificant. Specifically, the only two racial/ethnic differences to remain significant were children's attributional styles at Time 1 and parents' reports of negative life events at Time 2.

Correlations among the main study variables are also presented in Table III. As can be seen in the table, each of the variables was relatively stable over the follow-up ($r_s = .41-.81$).⁸ As also can be seen in the table, children's attributional styles at both time points were significantly related to each of the other variables except for Time 1 and Time 2 FILE ratings.

⁸The correlation between Time 1 and Time 2 P-CASQ-R scores was also significant when analyses were limited to families in which the same parent participated at both assessment points, $r(127) = .63$, $p < .001$.

Prospective Analyses

To test the prospective hypotheses, a series of set-wise hierarchical multiple regression, analyses of partial variance (see Cohen & Cohen, 1983), was conducted. For all prospective analyses, therefore, children's attributional styles at Time 1 were entered in the first step of a hierarchical regression equation in which their Time 2 attributional styles served as the criterion variable. In the second step of the regression, the predictor variable under consideration (e.g., depressive symptoms, hopelessness, etc.) was entered, allowing an examination of each variable's ability to predict residual changes in children's attributional styles over the 6-month follow-up. Thus, separate analyses were conducted for each predictor variable. Parents' reports of negative events were excluded from these analyses because they were not significantly related to Time 2 attributional styles in the correlational analyses. Given the significant relation between reports of family income at Time 1 and children's attributional styles at Time 2, income was used as a covariate in all of these analyses.

Results of these analyses are shown in Table IV. Because Time 1 attributional styles and family income were entered in step 1 of each analysis, they are presented only once in the table. As can be seen in the table, elevated levels of depressive symptoms and hopelessness at Time 1, as well as elevated levels of verbal victimization reported as having occurred between Time 1 and Time

Table IV. Summary of Hierarchical Linear Regressions Predicting Changes in Children’s Attributional Styles

Step	Variable entered	B	SE(B)	β	df	t	pr	ΔR^2
1	T1 CASQ-R	.09	.01	.45	445	10.83***	.46	.26
	T1 Family income	.14	.03	.17	445	3.99***	.19	
2	T1 CDI	-.13	.02	-.25	444	-5.63***	-.26	.05
2	T1 HSC	-.23	.10	-.10	444	-2.41*	-.11	.01
2	T2 M-CTQ-VV	-.79	.14	-.23	444	-5.72***	-.26	.05
2	T1 M-CTQ-VV	-.45	.14	-.14	444	-3.26**	-.15	.02
2	T1 P-CASQ-R	.02	.06	.02	444	0.39	.02	.00

Note. CASQ-R: Revised Children’s Attributional Style Questionnaire; CDI: Children’s Depression Inventory; HSC: Hopelessness Scale for Children; M-CTQ-VV: Modified Childhood Trauma Questionnaire-Verbal Victimization subscale; P-CASQ-R: Revised Children’s Attributional Style Questionnaire-Parent Version.

* $p < .05$. ** $p < .01$. *** $p < .001$.

2, each significantly predicted negative changes in children’s attributional styles over the follow-up.⁹ In addition, verbal victimization reported as having occurred in the 6 months preceding Time 1 also significantly predicted negative changes in children’s attributional styles over the follow-up. In contrast, parents’ attributional styles for child-relevant events at Time 1 did not predict changes in children’s attributional styles over the follow-up.

Next, each of the predictors found to individually predict changes in children’s attributional styles were entered into a single regression analysis, so that the *unique* contribution of each variable could be examined, statistically controlling for its overlap with the other predictors. Although this analysis was initially conducted entering both Time 1 and Time 2 verbal victimization scores, as well as Time 1 CDI and HSC scores, in the same regression, we observed a suppressor effect for Time 1 verbal victimization (for a discussion of suppressor variables, see Cohen & Cohen, 1983; Tabachnick & Fidell, 1996). That is, the direction of the relation between Time 1 verbal victimization and Time 2 attributional styles was reversed when Time 2 verbal victimization was included in the analysis, because of the high correlation between Time 1 and Time 2 verbal victimization. Given this, the analyses were repeated entering the verbal victimization variables in separate analyses. Focusing first on the analysis with Time 2 verbal victimization, we found that reports of verbal victimization occurring between the two time points, as well as initial levels of depressive symptoms, but not hopelessness, continued to predict negative changes in children’s attributional styles over the follow-up (see

Table V). In the analysis with Time 1 verbal victimization scores, the only significant predictor of attributional style change was initial depressive symptoms.

Given that children’s reports of verbal victimization, but not parents’ reports of other negative life events, at Time 2 predicted changes in children’s attributional styles, exploratory analyses were conducted to examine whether any of the specific forms of life events reported by parents, considered individually, predicted changes in children’s attributional styles. Thus, prospective analyses were conducted examining each of the Time 2 FILE subscales (time parents spent away from the family, conflicts, marital stress, births/pregnancy, money, jobs, moves, illnesses, and deaths). Because of the exploratory nature of these analyses, a Bonferonni correction was used to reduce the likelihood of Type I errors, giving us a critical alpha level of .006 (.05/9). Even with this reduced alpha level, two significant effects, and one nonsignificant trend, emerged. Specifically, statistically controlling for the effects of family income, higher scores on the time parents spent away subscale, $t(444) = -3.06, p = .002, \beta = -.13$, significantly predicted negative changes in children’s attributional styles. Counterintuitively, however, statistically controlling for the effects of family income, higher reports of deaths at Time 2 predicted positive changes in children’s attributional styles, $t(444) = 4.38, p < .001, \beta = .18$.¹⁰ Finally, using our adjusted alpha level, higher numbers of moves reported at Time 2 were marginally

⁹ Given that some of the CDI items assess cognitive symptoms of depression, analyses were also conducted with the cognitive items removed (i.e., CDI items 2, 3, 5, 7, 8, 24, and 25; cf., Nolen-Hoeksema et al., 1986). Even with the cognitive items removed, Time 1 CDI scores continued to significantly predict changes in children’s attributional styles over the follow-up, $t(444) = -5.76, p < .001, \beta = -.25$.

¹⁰ Given this counterintuitive finding, we examined it in greater detail. Focusing on item-level endorsements, before estimating missing values, we found that the five children who had another child in the family die during the follow-up, $t(209) = -2.05, p = .04, r_{\text{effect size}} = .14$, as well as the 27 children who had a friend of the family die during the follow-up, $t(209) = -2.16, p = .03, r_{\text{effect size}} = .15$, had more positive attributional styles at Time 2 than did children who did not experience these events. The effect for the 34 children who had a close relative die was marginal, $t(209) = -1.72, p = .09, r_{\text{effect size}} = .12$.

Table V. Summary of Hierarchical Linear Regression Examining Unique Contribution of Each Predictor to Changes in Children's Attributional Styles

Step	Variable entered	<i>B</i>	<i>SE(B)</i>	β	<i>df</i>	<i>t</i>	<i>pr</i>	ΔR^2
1	T1 CASQ-R	.09	.01	.45	445	10.83***	.46	.26
	T1 Family income	.14	.03	.17	445	3.99***	.19	
2	T1 CDI	-.10	.03	-.19	442	-3.78***	-.18	.08
	T1 HSC	.00	.10	.00	442	0.04	.00	
	T2 M-CTQ-VV	-.60	.14	-.17	442	-4.12***	-.19	

Note. CASQ-R: Revised Children's Attributional Style Questionnaire; CDI: Children's Depression Inventory; HSC: Hopelessness Scale for Children; M-CTQ-VV: Modified Childhood Trauma Questionnaire-Verbal Victimization subscale.

*** $p < .001$.

related to changes in attributional styles, $t(444) = -2.69$, $p = .007$, $\beta = -.11$. None of the other FILE subscales was significant (lowest $p = .05$).

Finally, a series of analyses was conducted to examine whether any of the demographic variables (i.e., children's age, gender, race/ethnicity, and attendance of public versus private schools; parent education; and family income) moderated any of the predictors' association with attributional style changes. Predictors examined in these analyses were Time 1 depressive symptoms, hopelessness, verbal victimization, and parents' attributional styles for child-relevant events as well as Time 2 verbal victimization and parent reports of negative life events. Given the number of analyses as well as their exploratory nature, a Bonferonni correction was used to reduce the likelihood of Type I errors. As before when examining demographic differences, we corrected for the number of families of tests conducted ($n = 6$) rather than the total number of tests ($n = 30$) to minimize the possibility of Type II errors, giving us a critical alpha level in these tests of .008 (.05/6). None of the interaction terms in these analyses was significant (lowest $p = .05$).¹¹

DISCUSSION

The goal of this study was to explore possible contributors to changes in children's negative attributional styles over time. As predicted, elevated levels of depressive symptoms and hopelessness at the initial assessment predicted increasing negativity in children's attributional styles over the 6-month follow-up. In addition, levels of verbal victimization, both during the follow-up and in the

6-months preceding the initial assessment, predicted negative changes in children's attributional styles. Examining the *unique* impact of each variable, initial levels of depressive symptoms as well as verbal victimization occurring during the follow-up period uniquely predicted changes in children's attributional styles, statistically controlling for their overlap with each other, levels of hopelessness, and the influence of family income. Contrary to hypotheses, however, neither parents' attributional styles for their children's events nor parent-reported overall levels of negative life events during the follow-up predicted changes in children's attributional styles.

The current results, therefore, both replicate and extend previous findings. Specifically, they add to the growing body of research suggesting that elevated depressive symptom levels contribute to the development of negative attributional styles in children (see Bennett & Bates, 1995; Nolen-Hoeksema et al., 1986, 1992). They also extend previous cross-sectional findings of a relation between verbal victimization and attributional styles (for a review, see Gibb, 2002) by finding that reports of verbal victimization predict actual changes in children's negative attributional styles. Indeed, reports of verbal victimization occurring before the initial assessment, as well as that occurring during the follow-up period, predicted changes in attributional styles over the follow-up. Finally, the current results extend previous cross-sectional findings of a relation between hopelessness and children's attributional styles (e.g., Abela, 2001; Spirito et al., 1988) by showing that levels of hopelessness prospectively predicted negative changes in children's attributional styles. Hopelessness was not uniquely related to attributional style change, however, once the effects of depressive symptoms and verbal victimization were statistically controlled.

The current results also support previous findings regarding the relation between parents' attributional styles for their children's events and children's attributional styles. Specifically, consistent with previous studies (e.g., Alloy et al., 2001; Garber & Flynn, 2001; Turk & Bry,

¹¹ We chose not to explore interactions with the separate FILE subscales given the large number of additional analyses this would have entailed ($n = 36$). However, given the unexpected findings for the FILE-deaths subscale, we did examine whether any of the demographic variables moderated this relationship. None of these analyses was significant (lowest $p = .46$).

1992), the zero-order correlations between parents' attributional styles for their children's events and their children's attributional styles were significant at both time points. Also consistent with previous studies (e.g., Garber & Flynn, 2001), however, parents' attributional styles for their children's events did not predict changes in children's attributional styles over the follow-up. Underscoring the importance of conducting longitudinal research to answer developmental questions rather than simply inferring causation from cross-sectional findings, it may be that parents' attributional styles for their children's events are simply a reflection of children's own attributional styles rather than being a contributor to their development. An alternative possibility, however, is that the duration of the follow-up period in this study obscured the effects of parents' attributions. For example, it may be that parents' attributions for their children's events have a more proximal influence on children's attributional styles. Or, it may be that the influence of parents' attributions is apparent only over a longer follow-up period. A third possibility is that the development of children's attributional styles is most strongly influenced by parents' attributions during early childhood, with this effect diminishing over time.¹² The nonsignificant relation between parents' attributions for child-relevant events and changes in children's attributional style, therefore, may have been due to the age of children in the current study and studies with younger participants may observe stronger effects. It should be kept in mind, however, that the relation between children's and their parents' attributions for children's events may also simply reflect shared exposure to some other variable (e.g., genetic influences or shared negative life events). A final point that must be considered is that parents' actual feedback to their children was not assessed. To the extent that parents filter their responses to their children, assessing parents' attributions for their children's events may not accurately assess what parents actually tell their children about the causes of the children's events. Indeed, it is likely to be the actual attributional feedback parents directly communicate to their children that has an influence on the children's developing attributional styles, rather than the attributions parents make for the children's events *per se*.

Finally, in contrast to previous studies (e.g., Garber & Flynn, 2001; Johnson & Miller, 1990; Tiggemann et al., 1991), overall reports of negative life events were neither cross-sectionally nor prospectively related to children's attributional styles. There are several possible reasons for this discrepancy. First, the nonsignificant results may have

been due to the fact that parents, rather than children, reported negative life events occurring in the children's lives. Also, the FILE assesses negative events occurring to family members generally, rather than those specific to any one child. A measure of negative life events specific to the child may yield more supportive results. Garber and Flynn (2001), however, used the same measure and found that mothers' reports of children's negative life events did predict changes in children's attributional styles over a 1-year follow-up. Garber and Flynn's longer follow-up period may have allowed more time for severe or chronic negative life events to occur, which may have resulted in increased statistical power to detect significant effects. The lack of significant effects in the current study, therefore, may have been due, in part, to the shorter follow-up period in our study compared to the study conducted by Garber and Flynn (2001). Another possibility is that certain types of life events may be more strongly related to children's attributional styles than are others. For example, as noted previously, reports of verbal victimization did predict changes in children's attributional styles. In addition, when we conducted exploratory analyses of subtypes of negative life events reported on the FILE, two significant effects emerged. Specifically, increased levels of parental absence during the follow-up were associated with negative changes in children's attributional styles. This is consistent with previous findings of an association between parental absence or loss and children's depressive cognitions and symptoms (for reviews, see Birmaher et al., 1996; Garber & Horowitz, 2002). We also found, however, that higher levels of deaths during the follow-up were associated with positive changes in children's attributional styles. Although we could speculate as to why a death may contribute to short-term improvements in attributional styles (e.g., increased family cohesion and support in times of crisis), we prefer to await replications before offering any conclusions about this counterintuitive finding. This said, the pattern of results observed in this study suggests that assessing multiple forms of life events and different categories of life events independently may be important.

Another group of findings that should be noted are those based on participants' demographic characteristics. The most significant of these were income-related differences in children's attributional styles and depressive symptoms as well as parents' attributions for child-relevant events and reports of negative life events. There were also significant racial/ethnic differences in the variables, two of which remained significant even after controlling for family income. Specifically, Hispanic children exhibited more negative attributional styles at Time 1 than did African American and Caucasian children. In

¹² We would like to thank an anonymous reviewer for suggesting this possibility.

addition, parents of Caucasian children reported fewer negative life events than parents of African American children at Time 1. Although we replicated previous findings that Hispanic children report more depressive symptoms than Caucasian children (cf. Twenge & Nolen-Hoeksema, 2002), this effect was observed only at Time 2 and was nonsignificant once family income was statistically controlled.

Also noteworthy was the absence of significant sex differences in any of the variables examined. This is consistent with the findings of previous studies that gender differences in attributional style and depression are not apparent until adolescence (for a review, see Hankin & Abramson, 2001). However, studies generally have found gender differences in negative life events, with girls reporting more negative events than boys (for a review, see Hankin & Abramson, 2001). This difference seems most apparent in the reporting of negative peer-related interpersonal events. The lack of significant gender differences in the current study, therefore, may have been due to the fact that we did not focus specifically on negative experiences with peers. Thus, even though the M-CTQ-VV and the FILE-conflicts subscale included negative interpersonal events, none were specific to peer relationships.

The current findings have potentially important implications for the hopelessness theory of depression. This is the first prospective study to test Rose and Abramson's (1992) hypothesis that verbal victimization contributes to negative changes in children's attributional styles and the current findings suggest that verbal victimization does indeed prospectively predict changes in children's attributional styles. The current results also are consistent with the "scar" hypothesis (Lewinsohn et al., 1981) and add to the growing body of research supporting the "scarring" effects of depression on children's attributional styles (see also Bennett & Bates, 1995; Johnson & Miller, 1990; Nolen-Hoeksema et al., 1986, 1992). In so doing, the results broaden Rose and Abramson's (1992) developmental extension of the hopelessness theory by suggesting that depressive symptoms also may contribute to the development of negative attributional styles.

This study is also characterized by several limitations. Most notable was the reliance on children's self-report for the assessment of attributional styles, depression, hopelessness, and verbal victimization. Given that each of the child-assessed variables, but none of the parent-assessed variables, predicted changes in children's attributional styles over the follow-up, it is possible that the significant results were due, in part, to a response bias. That is, it may be that depressed children simply

responded negatively to all measures at both time points. It should be noted, however, that although parents' reports of attributional styles and overall negative life events did not predict changes in children's negative attributional styles, a number of the correlations between parent- and child-reported variables were significant, indicating that at least these relations were not because of shared method variance. In addition, two of the parent-reported FILE subscales also predicted changes in children's attributional styles. Future studies would benefit from measures of cognitive style, depressive symptoms, hopelessness, and verbal victimization that do not rely solely on children's self-report (e.g., using information processing tasks or including multiple respondents for the assessment of each construct).

Second, the attributional style measure exhibited relatively low reliability, which limited the power of statistical tests examining the study's main hypotheses. This said, the internal consistency of the CASQ-R in the current study was similar to that obtained in previous studies (e.g., Thompson et al., 1998). Thus, although the effects obtained in the current study were small to medium, which is the norm in psychological research (Cohen, 1988), stronger effects might be obtained with the use of more reliable measures of children's attributional styles. Encouragingly, researchers have begun developing new self-report and interview-based measures of children's and adolescents' attributional styles (e.g., Brozina & Abela, 2003; Conley, Haines, Hilt, & Metalsky, 2001; Hankin & Abramson, 2002), each of which has demonstrated stronger internal consistency than the CASQ-R.

A third limitation was the low consent rate, which limits the generalizability of the current results. Despite the low consent rate, there is some evidence to support the external validity of the results. First, the children and parents participating in this study were similar to those of the communities from which they were drawn in terms of demographic variables, with the exception of a higher proportion of African Americans relative to Caucasians and Asians in this study. This difference may have been due to the relatively high proportion of children from public versus private schools included in this study. Specifically, public schools in the Philadelphia area enroll a higher percentage of African American children and a lower percentage of Caucasian children than do the private schools. Second, the levels of negative attributional styles, hopelessness, and depressive symptoms observed in this study were similar to those found in other studies of nonclinical children (e.g., Abela, 2001; Nolen-Hoeksema et al., 1986, 1992; Smucker et al., 1986; Spirito et al., 1988; Thompson et al., 1998). In addition, the pattern of relations

observed in this study, with the exception of parent-reported overall levels of negative life events, was similar to that obtained in previous studies (e.g., Garber & Flynn, 2001; Johnson & Miller, 1990; Nolen-Hoeksema et al., 1986, 1992). Finally, despite the considerable heterogeneity of the sample in terms of demographic characteristics, none of the analyses predicting changes in children's attributional styles were moderated by the demographic variables examined. This is consistent with the view that the strength of the relations observed did not differ significantly as a function of the demographic differences examined, although such null findings should be interpreted with caution.

Fourth, the age range of the children was fairly narrow, which limited power to detect potential age-related differences in the relations among the variables. Although the age range was selected to include participants old enough to complete the questionnaires and young enough to maximize changes in attributional styles, a broader age range would be advantageous in exploring potentially developmentally-dependent effects. For example, it may be that the different variables have a greater impact at certain ages than at other ages.

In summary, the current results provide evidence that levels of depressive symptoms and verbal victimization contribute to negative changes in children's attributional styles. Though less strong, hopelessness also predicted changes children's attributional styles. These results are consistent with the predictions of Rose and Abramson (1992) and suggest that their model may be expanded to include negative mood states as well as childhood maltreatment. Future studies should seek to extend the current findings by employing longer follow-up periods with multiple assessment points, utilizing multi-method assessments of each construct, and exploring mechanisms by which these factors may contribute to the development of negative attributional styles in children.

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