CHILDREN'S ATTRIBUTIONAL STYLE AS A MEDIATOR OF THE RELATION BETWEEN PARENTING BEHAVIORS AND CHILDREN'S DEPRESSIVE SYMPTOMS

By

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CHAPTER I

INTRODUCTION

Having depressive attributional style is well-established as a cognitive risk factor for the emergence of depression (Abramson, Metalsky, & Alloy, 1989; Abramson, Seligman, & Teasdale, 1978). Furthermore, a few studies suggest that aspects of parenting style contribute to the development of depressive attributional style in childhood (Alloy et al., 2001; Garber & Flynn, 2001; Jaenicke et al., 1987; Muris, Schmidt, Lambrichs, & Meesters, 2001; Radke-Yarrow, Belmont, Nottelman, & Bottomly, 1990; Sheeber, Hops, & Davis, 2001). Very few studies thus far have examined whether children's attributional style serves as a mediator of the relation between parenting behaviors and children's depressive symptoms. In the current study we examined, both cross-sectionally and longitudinally, children's depressive attributional style as a possible mediator of the relation between parenting behaviors and the development of depressive symptoms in youth.

Three fundamental relations underlie such a mediational model. The first relation is between parenting and attributional style. The mechanisms by which such a cognitive style develops have not been thoroughly examined (Pineda & Cole, submitted). Differential levels of positive (e.g., warmth, support) and negative (e.g., critical, hostile) parenting behaviors likely contribute to the development of a depressive attributional style, i.e., internal, stable, and global attributions for negative events and external, unstable, and specific attributions about positive events. The second relation that

underlies this mediational model is between attributional style and depressive symptoms. Considerable research suggests that attributional style serves as a cognitive diathesis for depression in children (e.g., Abramson et al., 1978, 1989). The third relation is between parenting behaviors and depressive symptoms. Parenting behaviors likely have both direct and indirect effects on children's depressive symptoms. We do not suggest that attributional style is the sole mediator of the relation between parenting and depressive symptoms; rather we expect that attributional style will partially mediate this relation. That is, parenting behaviors may indirectly influence children's depressive symptoms through their effect on attributional style (Whisman & Kwon, 1992).

Only one study (Whisman & Kwon, 1992), to our knowledge, has tested a model in which attributional style mediates the relation between parenting behaviors and depressive symptoms. They found support that the relation between low parental care and depressive symptoms was partially mediated by a depressive attributional style.[1] Although Whisman and Kwon found support that children's depressive attributional style partially mediated the relation between low parental care and depressive symptoms, several shortcomings of the study prevent clear conclusions. First, the three key constructs (i.e., parenting, attributional style, and depression) were assessed only by self-report. Such monomethodism can inflate the estimates of the correlations among the targeted constructs (Campbell & Fiske, 1959; Cook, 1985). Second, the data obtained for parenting behaviors were retrospective; 17-36 year-old undergraduate students (M = 19.7, SD = 2.3) reported on the parenting they received during their first 16 years of life. The participants' perceptions of parental behaviors may have been biased by their current mood and may not have accurately reflected the actual parenting behaviors they

experienced as children. Furthermore, parenting behaviors likely changed across the children's 16 years of life, so an accurate report of the parenting they received at any particular stage of development is not possible. Third, the study was cross-sectional; consequently, determination of the temporal sequencing of variables and controlling for prior levels of the outcome variable were not possible (Cole & Maxwell, 2003; Maxwell & Cole, in press; Gollob & Reichardt, 1991).

Pineda and Cole (submitted) conducted a literature review of studies that examined any one of the three key correlations underlying this putative mediational phenomenon: between parenting behaviors and attributional style, attributional style and depressive symptoms, and parenting and depressive symptoms. First, with regard to the relation between parenting and attributional style, children may develop beliefs about themselves through their early experiences with significant people in their lives (e.g., parents; Abramson et al., 1989; Alloy et al., 1988). Relative amounts of negative and positive parenting behaviors children receive may contribute to the development of either a healthy or a dysfunctional attributional style (Sheeber et al., 2001). Previous research suggests that children who experience high levels of parental criticism and rejection and low levels of parental support and warmth are more likely to develop a depressive attributional style (Alloy et al., 2001; Garber & Flynn, 2001; Jaenicke et al., 1987; Muris et al., 2001; Radke-Yarrow et al., 1990; Sheeber et al., 2001). For example, Muris et al. (2001) studied a community sample of 13-19 year-olds and found a positive correlation between parental rejection and depressive attributional style. In response to consistent rejecting and critical comments, children may internalize negative beliefs about themselves, thereby contributing to the development of a depressive attributional style.

Additionally, a lack of parental warmth and support may contribute to children's self-blaming attributions, potentially persuading children that the world is a negative place that they cannot control (Abramson et al., 1989; Alloy et al., 1988; Garber & Flynn, 2001; Muris et al., 2001). Conversely, the presence of parental support and warmth may protect children and adolescents from developing a depressive attributional style (Armsden, McCauley, Greenberg, Burke, & Mitchell, 1990; Papini & Roggman, 1992; Schwartz, Kaslow, Seeley, & Lewinsohn, 2000). More prospective studies are needed to examine the contribution of positive and negative parenting behaviors to the development of children's attributional style.

Second, considerable research suggests that attributional style serves as a cognitive diathesis for depression in children. Youth with a depressive attributional style are more vulnerable to developing depressive symptoms than are individuals without a depressive attributional style (e.g., Cole & Kaslow, 1988; Cole & Turner, 1993; Gladstone & Kaslow, 1995; Hops, Lewinsohn, Andrews, & Roberts, 1990; Joiner & Wagner, 1995; Petersen et al., 1993; Robinson, Garber, & Hilsman, 1995). Three literature reviews have examined this relation (Gladstone & Kaslow, 1995; Joiner & Wagner, 1995; Pineda & Cole, submitted). Overall, cross-sectional studies found consistent support for this relation (e.g., Abela, 2001; Garber & Hilsman, 1992; Robins & Hinkley, 1989; Voelz, Walker, Pettit, Joiner, & Wagner, 2003). However, evidence of a *causal* role for attributional style in the display of depressive symptoms was mixed (e.g., Barnett & Gotlib, 1988; Joiner & Wagner, 1995). Several researchers found that a depressive attributional style temporally preceded depressive symptoms (e.g., Abela, 2001; Lewinsohn, Clarke, Seeley, Rohde, 1994; Nolen-Hoeksema, 1986, 1992; Panak &

Garber, 1992; Robinson et al., 1995). For example, Robinson et al. found that 6th grade children who reported a more depressive attributional style during the spring of the 6th grade reported higher levels of depressive symptoms in the fall of the 7th grade. Other research, however, was not consistent with these findings (e.g., Dixon & Ahrens, 1992; Hammen et al., 1988; Metalsky, Halberstadt, & Abramson, 1987). For example, Hammen et al.'s study reported that depressive attributional style did not predict depression scores six months later for either children or adolescents. More research is needed to examine the causal role for attributional style in subsequent depressive symptoms.

Third, parenting behaviors likely have a direct effect on children's depressive symptoms. Previous research suggests that negative and positive parenting behaviors have separate and distinct effects on depressive symptoms and should be examined as separate constructs (Dallaire et al., 2006; Lovejoy et al., 1999; Palmer & Hollin, 2001). Pineda and Cole's (submitted) review examined the relation between negative parenting and depressive symptoms, as well as the relation between positive parenting and depressive symptoms. They found consistent evidence that high levels of negative parenting behaviors, including rejection, criticism, hostility, and conflict, are associated with higher levels of depressive symptoms in children (e.g., Asarnow et al., 1994; Ge, Conger, Lorenz, & Simons, 1994; Goodman & Gotlib, 1999; Sheeber et al., 2001). They also found that most studies reported negative correlations between positive parenting behaviors (e.g., warmth, support) and depressive symptoms in children, suggesting that positive parenting behaviors may serve as a protective factor (e.g., Hamilton et al., 1999; Ge, Best, Conger, & Simons, 1996; Rapee, 1997; Stark, Humphrey, Crook, & Lewis, 1990; Stice, Ragan, & Randall, 2004). Families characterized by elevated levels of

rejecting, critical, and conflictual parent-child interactions and low levels of supportive and warm interactions may place children at particularly high risk for depression (e.g., Alloy et al., 2001; Cole & Rehm, 1986; Maccoby & Martin, 1983; Sheeber et al., 2001).

Additionally, theoretical arguments have been made for the existence of negative life events and age as possible moderators of the relation between attributional style and depressive symptoms, suggesting a combination of mediational and moderational processes. First, the relation between depressive attributional style and depressive symptoms may exist in the presence, but not the absence, of negative life events (Abramson et al., 1989; Metalsky, Abramson, Seligman, Semmel, & Peterson, 1982; Metalsky et al., 1987; Metalsky, Joiner, Hardin, & Abramson, 1993). Pineda and Cole's (submitted) review of longitudinal studies provided some evidence suggesting that attributional style and negative events interact to predict later depression in youth (e.g., Abela, 2001; Conley, Haines, Hilt, & Metalsky, 2001; Dixon & Ahrens, 1992; Hilsman & Garber, 1995; Panak & Garber, 1992). Other studies, however, either found mixed results (e.g., Nolen-Hoeksema et al., 1986, 1992) or failed to support this relation (e.g., Hammen et al., 1988). Taken together, evidence for the interaction between attributional style and negative events as a predictor of later depression is mixed, and further research is warranted (Joiner & Wagner, 1995). In the current study, we hypothesize that attributional style and negative life events will interact to predict later depressive symptoms, where children with a more depressive attributional style who also experience higher levels of negative life events will be more likely to exhibit subsequent depressive symptoms.

Second, the relation of attributional style to depressive symptoms may vary with age or developmental level. From a developmental perspective, attributional style may not be established until children develop more mature cognitive capabilities and attributional style becomes stable (Cole & Turner, 1993; Fincham & Cain, 1986; Nolen-Hoeksema et al., 1992; Turner & Cole, 1994). As attributional style becomes more stable and style-like over the course of middle childhood and adolescence, attributions may play an increasingly important role in the demonstration of helplessness behaviors (Fincham & Cain, 1986). Four studies directly examined this relation. Two studies supported the idea that the relation between attributional style and depression increases with age (Nolen-Hoeksema et al., 1992; Conley et al., 2001). Two other studies did not (Abela, 2001; Kaslow et al., 1984). These studies highlight the importance of examining the development of a stable attributional style (Cole et al., 2007). We examine this possible interaction in the current study, where we hypothesize that the relation between attributional style and depressive symptoms will be significant in older but not younger children.

Age may also moderate the other two relations making up the mediational model, i.e., parenting to attributional style and parenting to depressive symptoms. First, the effect of parenting behaviors on children's emerging attributional style may depend on children's cognitive development. As children get older, attributional style is established and subsequently becomes more stable and style-like. When children develop a stable attributional style, they may interpret and internalize the parenting they receive differently than when they were younger (Cole et al., 2007). Thus, the relation between parenting behaviors and attributional style may increase as children get older. In the

current study we hypothesize that age will moderate the relation between parenting behaviors and children's depressive symptoms, where the relation will be significant in older children but not younger children whose attributional style is not yet stable.

Second, previous research suggests depression is more prevalent in older children and adolescents compared to younger children (Anderson & McGee, 1994; Garrison et al., 1997). Parents' behaviors and interactions with their children change as they get older (e.g., disciplinary styles); for example, parents may become more restrictive and critical when their children reach adolescence, and these parenting behaviors may influence older children's depressive behaviors. Therefore, the relation between parenting behaviors and depressive symptoms may become stronger as children grow older. In the current study we expect that parenting behaviors and age will interact to predict subsequent depressive symptoms, where greater degrees of negative parenting (e.g., criticism) may be exhibited with older children, compared to younger, children.

Gender may also moderate any of the three relations of interest. Previous literature suggests that gender differences in depression arise once children reach late childhood and early adolescence, where females tend to exhibit more depressive symptoms than males (e.g., Avison & McAlpine, 1992; Gjerde, Block, & Block, 1991; Stice et al., 2004). Additionally, some research suggests that the relation between parenting behaviors and children's depressive symptoms may differ based on the child's gender (Gjerde et al., 1991; Stice et al., 2004). For example, Gjerde et al. examined mother-daughter, mother-son, father-daughter, and father-son dyads and found evidence that lack of maternal support when daughters were five years old predicted depressive symptoms 13 years later (i.e., at 18 years of age). In the current study we will also

examine gender as a possible moderator of the relations comprising the mediational model.

Meta-analytic Review

Based on the reviewed literature, Pineda and Cole (submitted) utilized meta-analytic techniques to estimate the strength of these three key correlations, as well as the indirect (or mediational) effect of parenting behaviors on depressive symptoms through attributional style. They meta-analytically derived correlations among positive/negative parenting, attributional style, and depressive symptoms. Overall, large correlations emerged between parenting behaviors and attributional style (approximately .56) and between attributional style and depressive symptoms (approximately .57). Moderate correlations emerged between parenting behaviors and depressive symptoms (approximately .36). Furthermore, meta-analytic tests of mediation revealed that internal-stable-global attributions about negative events explained 85% of the correlation between positive parenting and depressive symptoms and 82% of the correlation between negative parenting and depressive symptoms. However, these results should be interpreted cautiously, because they are based on meta-analytic syntheses across studies. All of these studies were cross-sectional. Very few of these studies examined all three relations, and none of these studies tested the mediational hypothesis. Additionally, most of the studies used the Children's Attributional Style Questionnaire (CASQ; Kaslow, Tanenbaum, & Seligman, 1978; Seligman et al., 1984), which has been shown to have low internal consistency (Seligman et al., 1984).

Current Study

The major goal of the current study is to test attributional style as a mediator of the relation between parenting and depressive symptoms. We will build upon the extant literature by addressing some of the shortcomings of previous studies. First, we will simultaneously examine all three relations underlying the mediational model. To our knowledge, only Whisman and Kwon's study (1992) explicitly tested this entire model. Second, we will utilize the Children's Attributional Style Interview (CASI; Conley et al., 2001) and the Adolescent Cognitive Style Questionnaire (ACSQ; Hankin & Abramson, 2002) to assess attributional style, rather than the CASQ. The CASI and ACSQ both have stronger indices of internal consistency than the CASQ, particularly for negative events (Cole et al., 2007). Third, our data include 2nd, 4th, and 6th graders followed over two years, enabling us to examine age as a possible moderator of the proposed mediational relations. Fourth, we utilize child- and parent-reports of negative life events, enabling us to test whether negative life events moderate the prospective relation of attributional style to depressive symptoms. Fifth, we will examine whether gender moderates any of the prospective relations of interest.

With very few tests of this full mediational model thus far, we will examine the mediational model per Baron and Kenny's criteria (1986), which is similar to much of the literature examining mediation. We hypothesize that children's attributional style will partially mediate the relation between positive and negative parenting behaviors and children's depressive symptoms, where we expect negative and positive parenting will differentially relate to attributional style and depressive symptoms in youth. We will

utilize Baron and Kenny's criteria for testing mediation; thus, this cross-sectional test of mediation will replicate much of the previous literature examining mediation. Furthermore, this examination extends the tests of mediation by Pineda and Cole (submitted), which estimated the total effect mediated by attributional style by synthesizing effect sizes across studies. In the current paper the test of mediation will derive from the same sample, rather than aggregating information from many different studies.

Although cross-sectional tests of mediation are informative, they do not provide appropriate tests of mediation. Cross-sectional analyses do not enable researchers to control for prior levels of the outcome variable (Cole & Maxwell, 2003; Gollob & Reichardt, 1991). Mediation implicitly involves at least two causal relations (e.g., X→M and M→Y), where one variable must precede and cause another variable (Cole & Maxwell, 2003; Holland, 1986; Hume, 1978; Maxwell & Cole, in press; Sobel, 1990). Cross-sectional data do not enable us to test causal relations, and longitudinal studies are needed to appropriately test for causal relations between variables. Therefore, we will also conduct longitudinal and half-longitudinal tests of mediation where we expect children's attributional style will partially mediate the relation between parenting behaviors and children's depressive symptoms.

CHAPTER II

METHOD

This study is part of a longitudinal, cohort sequential investigation of the developmental origins of depressive cognitions in children. The current study involves three waves of data, approximately one year apart.

Participants

We recruited participants from five elementary and two middle schools in a mid-size southern city at the beginning of the 2002-2003 academic year. We distributed consent forms to parents of 1,040 second-, fourth-, and sixth-grade students. A total of 660 parents returned consent forms, with 526 allowing their child to participate. Eleven of the students for whom we obtained consent did not participate due to moving out of the school district, chronic absenteeism, or expulsion. This resulted in a final sample of 515 children. Children's ages ranged from 6 to 13 years ($M = 9.50$, $SD = 1.67$), including 161 second-grade students (mean age 7.5 years), 174 fourth-grade students (mean age 9.5 years), and 180 sixth-grade students (mean age 11.3 years). The sample was ethnically diverse with 343 identifying themselves as African-American (67%), 153 Caucasian (30%), 9 Latino (1.5%), 2 Native American (<1%), 2 Asian or South Pacific Islander (<1%), and 6 "other" (1%). Slightly more females participated ($N = 294$, 58%) than males ($N = 221$, 42%).

We asked the participants' parents or guardians to complete questionnaires about the target children. Of the 515 participating students, 284 parents (55%) completed data about their child (87 second grade parents, 101 fourth grade parents, and 96 sixth grade parents). Parents identified their ethnic background as follows: 177 African-American (62%), 86 Caucasian (30%), 4 Latino (1%), 2 Asian American (<1%), 2 Native American (<1%), and 13 "other" or "mixed" (5%). In 86% of the cases, the mother of the child completed the questionnaires. The remainder were completed by grandmothers (7%), fathers (5%), stepmothers (<1%), and other relatives or guardians (2%). Of the responding adults, 47% reported being currently married, and the remainder reported they were either never married (27%) or divorced (26%). Parents reported their educational backgrounds as follows: 27% received less than high school education, 27% completed high school, 35% received some post-high school education, 6% completed a bachelor's degree, and 5% received some post-baccalaureate education.

Although repeated efforts were made to obtain data from parents (e.g., phone calls and additional mailings), approximately 45% of parents did not return the questionnaires. We compared participating and nonparticipating parents with regard to the variables for which data were available (i.e., demographic characteristics and children's questionnaire data). Differences were small and nonsignificant (all *p*s > .25). Under the assumption that the data were *missing at random*, though not necessarily *missing completely at random* (see Muthen, Kaplan, & Hollis, 1987), we utilized full information maximum likelihood methods of data analysis, which generally provides less biased estimates than more conventional methods such as list-wise deletion, pair-wise deletion, or imputation.

Measures

Parenting. We used both child- and parent-report measures of parenting behaviors. Children completed the Parent Perception Inventory (PPI), a questionnaire based on the original PPI designed by Hazzard, Christensen, and Margolin (1983). The original PPI utilized an interview format to assess children's perceptions of 18 parental behaviors (9 positive and 9 negative). Based on the 18 behaviors, we constructed a 36-item self-report measure by creating two items for each of the 18 parenting behaviors. Children rate how often their mother or primary caregiver engages in each behavior on a 5-point scale (1 = *not at all*, 5 = *all the time*). With the original PPI Hazzard and colleagues provided a two-factor solution that they identified as positive and negative parenting behaviors. A factor analysis of our modified PPI yielded a similar two-factor solution. Representative positive parenting items include, "How often does this person spend time with you?" and "How often does this person say something nice about you?" Representative negative parenting items include, "How often does this person get mad at you?" and "How often does this person criticize you or say you're doing things wrong?" Two items did not load onto either the positive or negative parenting factor and were, therefore, excluded from the analyses. Thus, the questionnaire consisted of a total of 34 items, with 18 items tapping children's perceptions of positive parenting behaviors and 16 items tapping children's perceptions of negative parenting behaviors (see Appendix A). Possible scores on the positive parenting scale range from 18 to 90, where higher scores represent more positive parenting behaviors. Potential scores on the negative parenting scale range from 16 to 80 with higher scores indicating more negative

parenting behaviors. Two studies suggested the original PPI demonstrated good internal consistency and internal validity in samples of children ranging from 5 to 13 years of age (Glaser, Horne, & Myers, 1995; Hazzard et al., 1983). This modified PPI revealed good internal consistency in all three cohorts. For the positive parenting factor, Cronbach's alphas were .78, .76, and .84 in cohorts 1, 2, and 3, respectively. For the negative parenting factor, alphas were .78, .82, and .82, respectively.

Parents completed the Parenting Behaviors Inventory (PBI; Lovejoy et al., 1999), which is a 20-item questionnaire that assesses positive and negative parenting behaviors. The questionnaire includes 10 items that assess hostile and coercive parenting behaviors (e.g., "I spank or use physical punishment with my child") and 10 items that assess supportive and engaged parenting behaviors (e.g., "I thank or praise my child"). Each item is rated on a 6-point Likert scale (0 = *not at all true/I do not do this,* 5 = *very true/I often do this*). A confirmatory factor analysis of this measure revealed two factors: supportive/engaged parenting and hostile/coercive parenting (Lovejoy et al., 1999). Our factor analysis with the current sample replicated this two-factor structure. Three items either had very weak factor loadings or very high cross-loadings. These items were excluded from analyses, resulting in 10 items representing the supportive/engaged factor and 7 items representing the hostile/coercive factor (see Appendix B). Thus, possible scores on the supportive/engaged scale range from 0 to 50 with higher scores representing greater levels of supportive/engaged parenting behaviors. Potential scores on the hostile/coercive scale range from 0 to 35 with higher scores representing greater levels of hostile/coercive parenting. Lovejoy and colleagues reported the PBI retained high internal validity (Cronbach's alpha was .83 for the supportive/engaged factor and

.81 for the hostile/coercive factor). Additionally, they provided evidence of test-retest reliability and inter-observer reliability. In the current study, the PBI subscales retained their structural integrity when factor analyzed, and Cronbach's alpha for the supportive/ engaged factor and the hostile/coercive factor were .85 and .62, respectively.

Attributional Style. Children's attributional style was assessed with the CASI (Conley et al., 2001), which is a semi-structured interview of attributional style designed for children 5 years and older. The original CASI is comprised of eight positive items and eight negative items, which are presented as hypothetical scenarios. The current study included only the eight negative hypothetical scenarios, four of which were interpersonal events (e.g., "You say something to some kids at school, and they make fun of you") and four of which were achievement events (e.g., "You do a math worksheet, but you get a lot wrong;" see Appendix C). Children provide a causal explanation for each scenario and then indicate the degree to which their explanation is internal, stable, and global on 7-point Likert scales (1 = *low*, 7 = *high*). Three scale scores (internality, stability, and globality) consisted of the sum of the corresponding questions across the eight scenarios. Conley et al. conducted a validation study with a sample of 5- to 10-year old children and found good internal consistency for the CASI subscales; Cronbach's alphas ranged from .72 - .82. In the current study Cronbach's alphas were .81, .83, and .83 for cohorts 1, 2 and 3, respectively. Children in 2nd to 6th grade completed the CASI.

The Adolescent Cognitive Style Questionnaire (ACSQ; Hankin & Abramson, 2002) is a self-report measure that assesses internal/external, stable/unstable, and global/specific attributions about the causes of 12 hypothetical, negative scenarios that

could be encountered in everyday life. (The ACSQ also assesses negative inferences about the self and inferences about consequences after experiencing such events; however, these scales were not used in the current study.) Six of the 12 scenarios are set in an academic setting (e.g., "You take a test and get a bad grade"), and the remaining 6 scenarios are set in a social setting (e.g., "You want a boyfriend/ girlfriend but you don't have one"). For each item participants write down the cause of the event, as with the CASI. The participants then rate the degree of internality, stability, and globality for each cause. Each of these three response items are rated on a 7-point Likert scale (1 = *low*, 7 = *high*). In adolescent samples, the measure has high levels of internal consistency (α = .81 to α = .91), test-retest reliability (r = .51, r = .73), predictive, and convergent validity (Hankin & Abramson, 2002).

In the current study, we excluded four items (two social and two achievement) because they were inappropriate for younger populations (e.g., "You don't get accepted by any colleges"), resulting in eight total items (see Appendix D). Children in 7th grade or older completed the ACSQ. Internal consistency for the negative composite was .76. This alpha is consistent with those obtained in another study that used the same abbreviated scale with a similar population; we expected lower αs as a function of using fewer items (Cole et al., 2007).

Depressive Symptoms. Children completed the Child Depression Inventory - Child Report (CDI; Kovacs, 1982), which is a 27-item self-report measure that assesses cognitive, affective, and behavioral symptoms of depression in children. Each item consists of three statements graded in order of increasing severity from 0 to 2. Children

select one sentence from each group that best describes themselves for the past two weeks (e.g., “I am sad once in a while,” “I am sad many times,” or “I am sad all the time”). In the current study, we omitted the suicide item due to concerns by school administration, resulting in a 26-item questionnaire (see Appendix E). In nonclinic populations the CDI has demonstrated relatively high levels of internal consistency, test-retest reliability, predictive, convergent, and construct validity (Cole & Jordan, 1995; Craighead, Smucker, Craighead, & Ilardi, 1998; Smucker, Craighead, Craighead, & Green, 1986). Timbremont, Braet, and Dreessen (2004) found predictive and discriminant validity of children’s overall CDI scores in predicting depressive disorders in a clinic-referred sample. Internal consistency for the CDI items used in the current study was .90.

We also obtained parents’ report of children’s depressive symptoms. Parents completed the Child Depression Inventory - Parent Report (CDI-PR; Wierzbicki, 1987), which consists of the 26 items used in the child-report version of the CDI (see Appendix F). The items are reworded for use by parents to rate their children’s depressive symptoms. Parents were instructed to choose one of three sentences that best fit their child’s behavior over the previous two weeks. Sentences are graded in order of increasing severity from 0 to 2 (i.e., “My child is sad once in a while,” “My child is sad many times,” or “My child is sad all the time”). In nonclinical samples the CDI-PR demonstrated convergent validity, test-retest reliability over a 1-month interval (r = .75; Wierzbicki, 1987), and internal consistency (Cronbach’s alpha = .88, Cole, Truglio, & Peeke, 1997). Cole, Hoffman, Tram, and Maxwell (2000) found congruence between the CDI-PR and the CDI. Cronbach’s alpha in the current study was .91.

Negative life events. We used an adapted version of both a child- and parent-report form of the Life Events Checklist (LEC), which consists of 30 negative life events (Work, Cowen, Parker, & Wyman, 1990). For the parent form, parents report on the child's experience of each event (see Appendix G). Items on this checklist range from medium to major live events (e.g., "A close family member was arrested or in jail," "It hasn't been safe around where you live"); minor events (or daily hassles) are not included in this measure. Respondents indicate whether or not the child has been exposed to each of the events in the past 6 months using a *yes/no* format. We added an additional component to the checklist such that if the respondent endorsed an item, they also reported the degree to which the event was upsetting for the child using a 3-point scale (1: *not much* to 3: *very much*). Potential scores range from 0 to 90 with higher scores reflecting large numbers of more upsetting events. We chose the LEC to assess negative life events, because it was developed specifically for inner city, low SES youth. Given the demographics of our sample, the LEC was particularly appropriate to use. The child-report version is simply a reworded form of the parent-report version (see Appendix H). In the current study Cronbach's alpha for the child-report form was .71, and the parent-report form was .85.

Procedure

Research assistants included doctoral students in clinical psychology and advanced undergraduate psychology majors at a private, mid-sized southern university. Research assistants received comprehensive training on all of the measures and procedures prior to data collection. The measures included in this study are a subset of

instruments from a larger battery administered to students during two one-hour sessions, scheduled within one month of each other. In order to control for order effects, we counterbalanced questionnaires within each session. In keeping with the developmental level of the participants, we employed slightly different protocols based on the students' grade level. For 2nd and 3rd graders, research assistants read all questions aloud in a one-on-one setting, allowing the children to reply verbally or use graphical visual aids. For 4th graders, research assistants read the questions aloud to participants in groups of 3-4 students, and the participants recorded their responses under close supervision on their own questionnaires. For 5th graders and older, a research assistant read the questionnaires to participants in groups of 20-30 students, and the participants recorded their responses on their own instruments. Two or three additional research assistants circulated through the room to answer questions and make sure that children understood the questionnaires. In order to further ensure understanding of the questions and response items by participants in all grade levels, we created laminated response charts as a visual aid to assist children in differentiating between the various answer choices. At the end of each session children received candy and decorative pencils for their participation.

We mailed participants' parents a packet of questionnaires to complete at their convenience. These questionnaires took approximately 30-45 minutes to complete. If parents did not return the completed questionnaire packet after two mailings, efforts were made to contact parents by phone. Upon returning these questionnaires by mail, the parents received a check for $15.

CHAPTER III

RESULTS

Cross-sectional Analyses

We utilized a latent variable approach to test cross-sectional mediation (Figure 1). A measure for each latent variable was randomly parceled into two halves, in which both parcels loaded onto the corresponding latent variable. Eight models could be constructed from the possible combinations of the four measures of parenting behaviors (i.e., PBI-Positive, PBI-Negative, PPI-Positive, PPI-Negative), one measure of attributional style, and two measures of depressive symptoms (i.e., CDI and CDI-PR). We calculated the correlations of the three constructs of interest (see Tables 1-3). In each of the eight models, we first examined the correlations between negative or positive parenting behaviors and children's depressive symptoms, which is consistent with the first of Baron and Kenny's (1986) criteria for testing mediation. Three of the eight models (i.e., child-reported negative parenting - child-reported depressive symptoms, child-reported positive parenting - child-reported depressive symptoms, and parent-reported positive parenting - parent-reported depressive symptoms) demonstrated significant correlations overall (see Table 1).

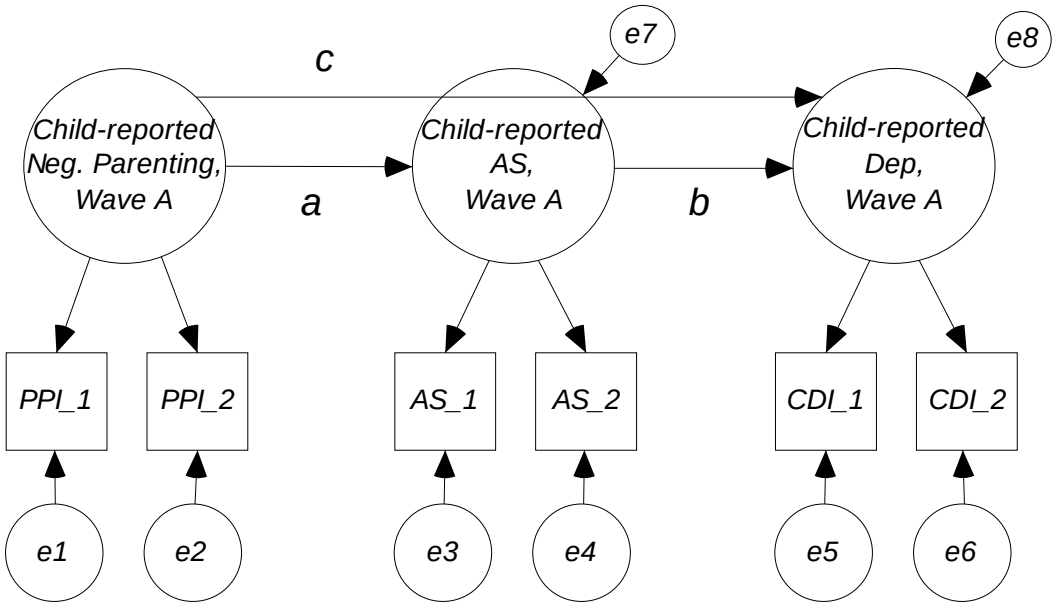

Figure 1. Model of cross-sectional mediation.

Table 1.

Correlations between Positive and Negative Parenting Behaviors and Children's Depressive Symptoms

	CR NP-CR Dep	PR NP-CR Dep	CR NP-PR Dep	PR NP-PR Dep	CR PP-CR Dep	PR PP-CR Dep	CR PP-PR Dep	PR PP-PR Dep
Cohort 1								
Wave A	.15	.00	-.03	.31*	-.19	-.28*	-.01	-.43***
Wave B	.41***	.06	.17	.26*	-.34***	-.05	-.04	-.17
Wave C	.39***	.06	.09	.45***	-.37***	-.04	-.01	-.22*
Cohort 2								
Wave A	.39***	.09	.19	.44***	-.32***	-.02	-.48***	-.40***
Wave B	.38***	.00	.02	.01	-.28***	.18	.05	-.56***
Wave C	.49***	-.02	.02	.00	-.39***	-.01	.00	-.33***
Cohort 3								
Wave A	.51***	.09	.19	.32	-.37***	-.44***	.04	-.30**
Wave B	.51***	.04	-.05	.06	-.29***	-.08	.12	-.33***
Wave C	.49***	-.01	-.02	.09	-.50***	.08	-.23*	-.51***

Note. CR = Child-report; PR = Parent-report; NP = Negative Parenting; PP = Positive Parenting; Dep = Depressive Symptoms.

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

Table 2.

Correlations between Positive and Negative Parenting Behaviors and Children's Attributional Style

	CR NP-CR AS	PR NP-CR AS	CR PP-CR AS	PR PP-CR AS
Cohort 1				
Wave A	.25**	.03	.06	.37**
Wave B	.35***	.12	.07	.06
Wave C	.10	-.18	.07	.19
Cohort 2				
Wave A	.36***	-.04	.10	.11
Wave B	.22*	-.04	.06	-.02
Wave C	.33***	.02	.10	.10
Cohort 3				
Wave A	.33***	.03	.26**	.17
Wave B	.08	.04	.17	.07
Wave C	.12	-.03	.03	-.04

Note. CR = Child-report; PR = Parent-report; NP = Negative Parenting; PP = Positive Parenting; AS = Attributional Style.

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

Table 3.

Correlations between Children's Attributional Style and Depressive Symptoms

	CR AS-CR Dep	CR AS-PR Dep
Cohort 1		
Wave A	.38***	.04
Wave B	.44***	.08
Wave C	.02	.08
Cohort 2		
Wave A	.30***	.23
Wave B	.16	.13
Wave C	.19*	.10
Cohort 3		
Wave A	.34***	-.00
Wave B	.31**	.04
Wave C	.27**	.09

Note. CR = Child-report; PR = Parent-report; AS = Attributional Style; Dep = Depressive Symptoms.

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

Second, we examined whether or not significant correlations generally existed between negative or positive parenting behaviors and children's attributional style, which is consistent with Baron and Kenny's second condition to test cross-sectional mediation. Only one model supported the second criterion (i.e., child-reported negative parenting - child-reported attributional style; see Table 2).[2] Thus, only one of the eight models supported both the first and second criteria (Baron & Kenny, 1986) for cross-sectional mediation, i.e., child-reported negative parenting - child-reported attributional style - child-reported depressive symptoms. We further examined this model for support of cross-sectional mediation.

With support for two of Baron and Kenny's criteria, we examined the latent variable model including child-reported negative parenting behaviors, attributional style, and depressive symptoms to look for support of the other two criteria for cross-sectional mediation (Figure 1). We conducted nine cross-sectional tests of mediation, one for each of the three grades at each of the three different waves, which resulted in beta weights for each of the cohorts at the three waves (see Table 4). Additionally, we calculated the total effect of negative parenting behaviors on depressive symptoms by testing a model that did not include attributional style, which enabled us to test Baron and Kenny's fourth criterion (described below; Figure 2). The beta weights of the relation between attributional style and depressive symptoms enabled us to examine whether support was established for Baron and Kenny's (1986) third criterion; that the mediator and the dependent variable must be significantly related when controlling for the independent variable. Results indicated that three of the nine relations were significant (see Table 3).

Consistent with Baron and Kenny's fourth criterion for testing cross-sectional mediation, we examined if the relation of negative parenting behaviors on depressive symptoms became nonsignificant when controlling for attributional style. That is, we compared the nine estimates of the total effect of negative parenting behaviors on depressive symptoms with the nine estimates of the relation of negative parenting behaviors on depressive symptoms while controlling for attributional style. None of the relations became nonsignificant when controlling for attributional style (see Table 4). Finally, we conducted Sobel's test to determine if the indirect effect (i.e., a*b) was significant. One of the nine estimates of Sobel's test was significant, providing some evidence that child-reported attributional style partially mediated the relation between child-reported negative parenting behaviors and child-reported depressive symptoms.

Altogether, we examined 72 variations of the cross-sectional mediation model. Support for our partial mediation hypothesis (using Sobel's test) emerged in only one case (see Table 4). This case involved only the younger children in the study.

Table 4.

Cross-sectional Tests of Mediation with the Model of Child-reported Negative Parenting, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights and Sobel's Test of the Indirect Effect

	Total Effect of NP→Dep (path *d*)	Direct Effect of NP→Dep (path *c*)	NP→AS (path *a*)	AS→Dep (path *b*)	Sobel's test
Cohort 1					
Wave A	.06	.08	.80*	.03	1.17
Wave B	.24***	.17**	1.01***	.08***	2.74***
Wave C	.32***	30***	.44	.02	.72
Cohort 2					
Wave A	.26***	.25***	.28	.04	.81
Wave B	.26***	.27***	.60*	.03	.99
Wave C	.32***	.31***	.52**	.02	.79
Cohort 3					
Wave A	.25***	.29***	.91***	.00	.09
Wave B	.33***	.29***	.43*	.09**	1.66
Wave C	.40***	.38***	.30	.08*	1.22

Note. NP = Negative Parenting; AS = Attributional Style; Dep = Depressive Symptoms.

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

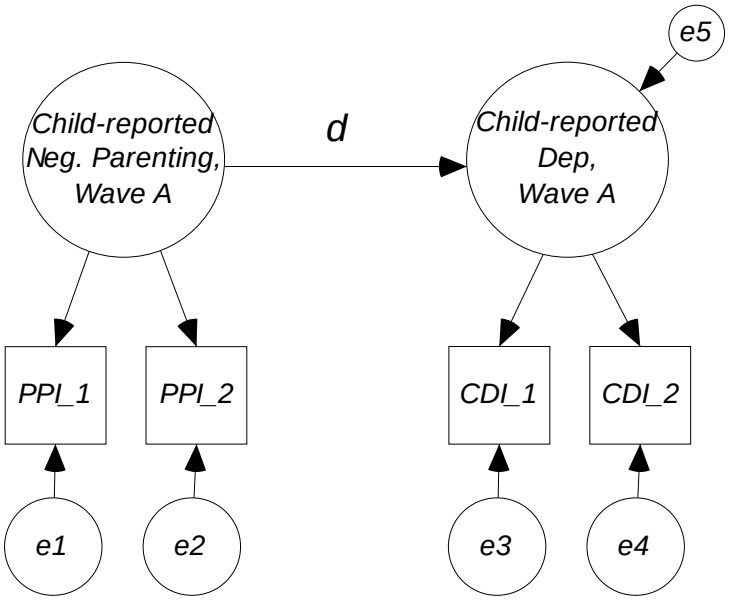

Figure 2. Model to examine the total effect of parenting behaviors on depressive symptoms with cross-sectional data.

Half-longitudinal analyses

Although the cross-sectional analyses partially replicated previous research, they do not provide evidence of true mediation. Mediation implies two causal relations, X→M and M→Y, and longitudinal designs are necessary to test causality (Cole & Maxwell, 2003; Maxwell & Cole, in press). One approach to control for potential third variable confounds and to test for possible causal relations involves conducting half-longitudinal tests of mediation (Cole & Maxwell, 2003). Half-longitudinal tests of mediation involve using two waves of data: two approaches are possible: (1) parenting behaviors and attributional style are assessed at Time 1 and depressive symptoms are assessed at Time 2 (see Figure 3), and (2) parenting behaviors are assessed at Time 1 and attributional style

and depressive symptoms are assessed at Time 2 (see Figure 4). We examined both methods to test for possible mediation.

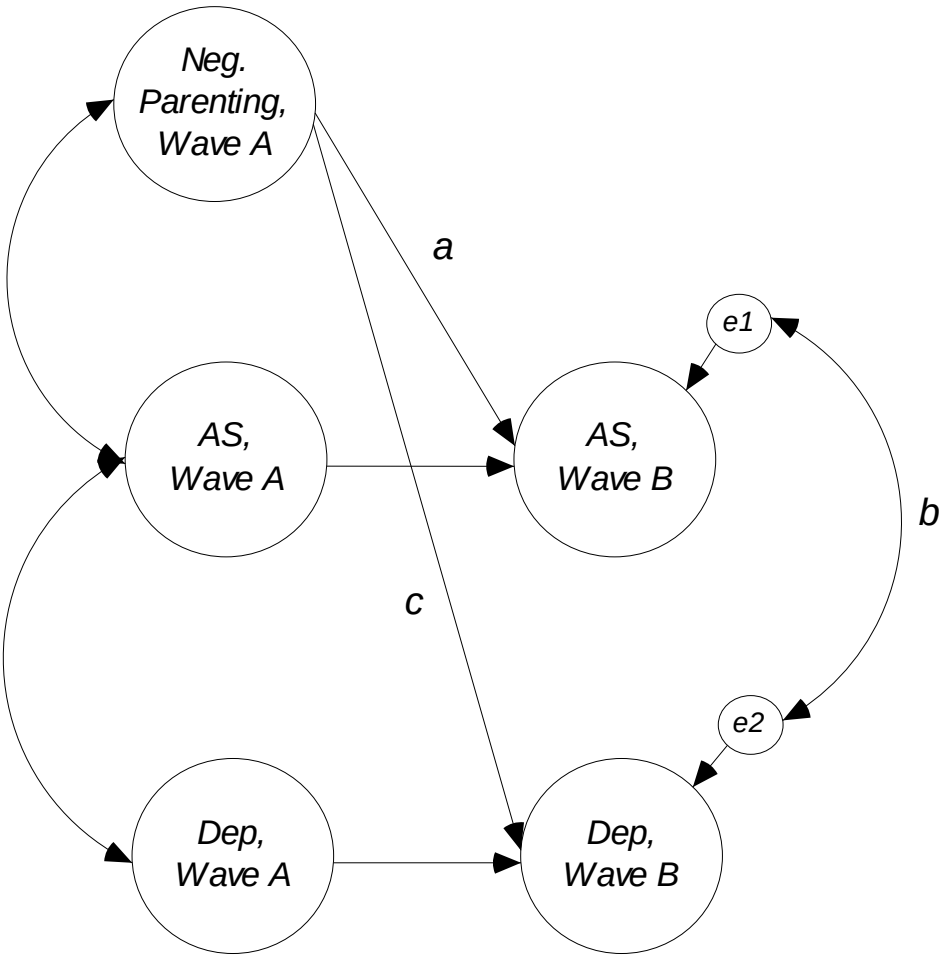

Figure 3. Conceptual model: First method to test half-longitudinal mediation, where parenting behaviors are assessed at Time 1 and attributional style and depressive symptoms are assessed at Time 2.

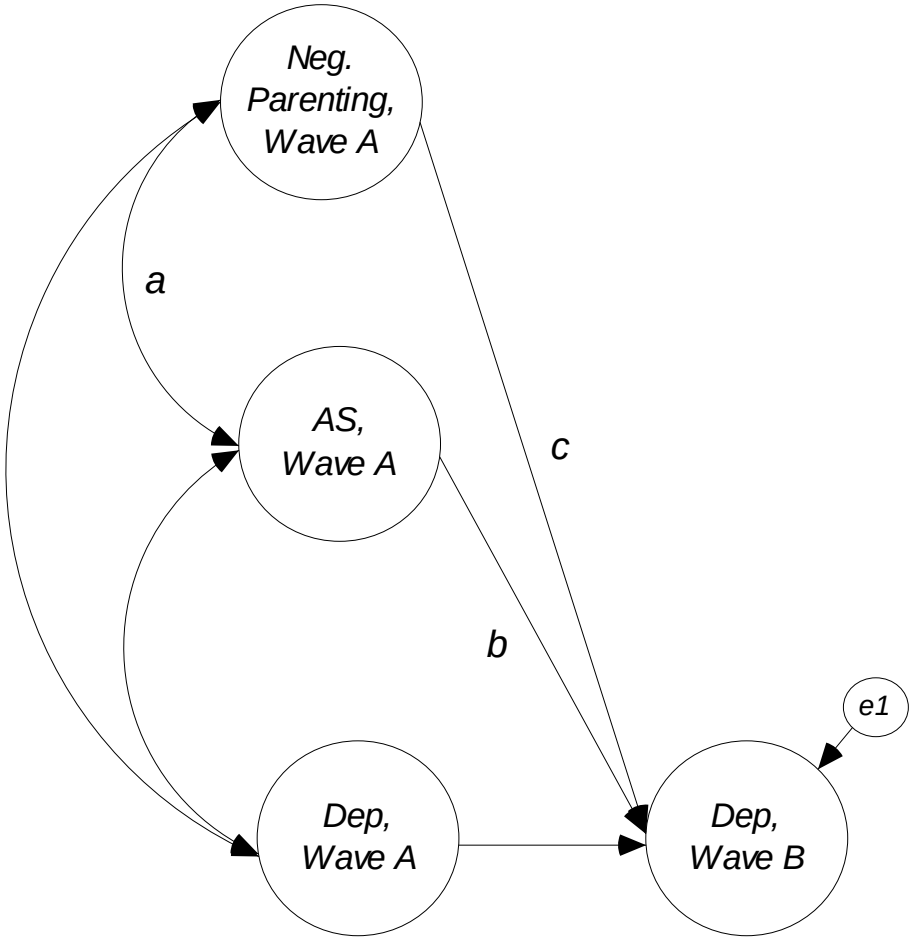

Figure 4. Conceptual model: Second method to test half-longitudinal mediation, where parenting behaviors and attributional style are assessed at Time 1 and depressive symptoms are assessed at Time 2.

We examined the eight latent variable models (derived from the four reports of parenting behaviors, one report of attributional style, and two reports of depressive symptoms) in order to determine if support for Baron and Kenny's (1986) criteria for mediation were supported. Each model included two waves of data for parenting behaviors, attributional style, and depressive symptoms (see Figures 3 and 4). As in the cross-sectional analyses, the three measures were randomly parceled at each wave. For

example, each half of the CASI was divided evenly between social and achievement events, and new parcels were created for each wave. We constrained some paths in the models to be equal across waves (e.g., the factor loadings). The goodness of fit indices for the eight latent variable models, i.e., the CFI, IFI, and TLI were adequately large, and the RMSEA estimates were quite small, indicating only small discrepancies between the specified model and the true model (see Table 5). With some of the paths constrained across waves, the results of the half-longitudinal analyses were identical whether Waves A and B or Waves B and C were examined. Therefore, results will be presented once for each of the two approaches to testing half-longitudinal mediation.

Table 5.

Fully Longitudinal Model: Goodness of Fit Indices for Eight Base Models

Base Model	χ^2	df	CFI	IFI	TLI	RMSEA (range)
PR NP - CR AS - CR Dep	600.78	396	.93	.94	.91	.03 (.02-.03)
CR NP - CR AS - CR Dep	553.17	396	.96	.84	.96	.02 (.02-.03)
CR NP - CR AS - PR Dep	700.08	396	.91	.92	.89	.03 (.03-.04)
PR NP - CR AS - PR Dep	730.94	396	.88	.88	.84	.03 (.03-.04)
PR PP - CR AS - CR Dep	541.54	396	.96	.96	.95	.02 (.02-.03)
CR PP - CR AS - CR Dep	553.34	396	.96	.96	.95	.02 (.02-.03)
CR PP - CR AS - PR Dep	675.21	396	.92	.93	.90	.03 (.02-.03)
PR PP - CR AS - PR Dep	692.12	396	.91	.91	.88	.03 (.03-.04)

Note. PR = Parent-report; CR = Child-report; NP = Negative Parenting; PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.

Half-longitudinal method 1. Utilizing the first method for testing half-longitudinal mediation, we examined three paths to look for evidence of mediation: (1) negative parenting behaviors (Time 1) → depressive symptoms (Time 2), (2) negative parenting

behaviors (Time 1) → attributional style (Time 2), and (3) the covariance of attributional style and depressive symptoms at Time 2 (Figure 3). Consistent with Baron and Kenny's (1986) method, we first determined if a significant relation existed between parenting behaviors and depressive symptoms. In order to determine the total effect of parenting behaviors on depressive symptoms, we tested each of the eight models without attributional style included in the models (path *d*; Figure 5). Each of the eight models provided three estimates of path *d*, one for each of the three cohorts. Therefore, a total of 24 beta weights estimated the total effect of parenting behaviors on depressive symptoms, with 12 reflecting the effects of negative parenting and 12 reflecting the effects of positive parenting on depressive symptoms. We found that 3 of these 24 tests were significant in the expected direction (see Tables 7-14). All three of these effects involved younger, not older, children.

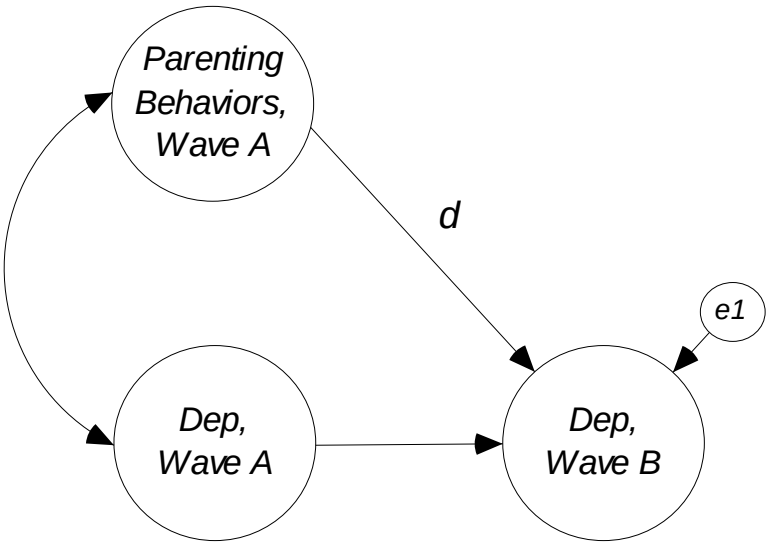

Figure 5. Conceptual model: Total effect of parenting behaviors on depressive symptoms in half-longitudinal tests of mediation.

Table 6.

Fully Longitudinal Models of the Total Effect of Parenting Behaviors and Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
PR NP - CR Dep	**.36****	.00	.08
CR NP - CR Dep	.12	-.07	-.22*
PR NP - PR Dep	-.38***	-.18**	.10
CR NP - PR Dep	.06	-.15*	.02
PR PP - CR Dep	.18	-.04	.24
CR PP - CR Dep	**-.19***	.02	.18*
PR PP - PR Dep	**-.15***	.11	-.04
CR PP - PR Dep	-.07	.07	.06

Note. CR = Child-report; PR = Parent-report; NP = Negative Parenting; PP = Positive Parenting; Dep = Depressive Symptoms.

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

Table 7.

First Method to Test Half-longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.36**	.00	.08
Direct Effect of NP→Dep (path *c*)	.39***	.07	-.06
NP→AS (path *a*)	.05	-.00	.06
AS→AS	.22**	.30***	.36***
Dep→Dep	.54***	.71***	.79***
Cov. of NP-AS	.12	-.06	.08
Cov. of NP-Dep	-.05	.26*	.12
Cov. of AS-Dep (Wave A)	.41***	.30**	.38***
Cov. of residuals of AS-Dep (path *b*)	.14*	.10	.19**

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 8.

First Method to Test Half-longitudinal Model of Child-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.12	-.07	-.22*
Direct Effect of NP→Dep (path *c*)	.17	.00	-.12
NP→AS (path *a*)	-.00	.14	.07
AS→AS	.21**	.25**	.37***
Dep→Dep	.52***	.72***	.82***
Cov. of NP-AS	.28**	.28***	.34***
Cov. of NP-Dep	.17*	.37***	.59***
Cov. of AS-Dep (Wave A)	.41***	.30**	.38***
Cov. of residuals of AS-Dep (path *b*)	.18**	.12	.20**

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 9.

First Method to Test Half-longitudinal Model of Child-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.06	-.15*	.02
Direct Effect of NP→Dep (path *c*)	-.08	-.01	-.03
NP→AS (path *a*)	.03	.16	.01
AS→AS	.27***	.26**	.39***
Dep→Dep	.73***	.84***	.72***
Cov. of NP-AS	.28**	.27***	.33***
Cov. of NP-Dep	.08	.05	.14
Cov. of AS-Dep (Wave A)	.16	.17	-.09
Cov. of residuals of AS-Dep (path *b*)	-.04	.07	-.03

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 10.

First Method to Test Half-longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	-.38***	-.18**	.10
Direct Effect of NP→Dep (path *c*)	.01	-.05	.08
NP→AS (path *a*)	.05	.01	-.02
AS→AS	.29***	.34***	.41***
Dep→Dep	.72***	.88***	.68***
Cov. of NP-AS	.13	-.03	.08
Cov. of NP-Dep	.38**	.43**	.44**
Cov. of AS-Dep (Wave A)	.16	.17	-.08
Cov. of residuals of AS-Dep (path *b*)	-.05	.08	-.03

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 11.

First Method to Test Half-longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	.18	-.04	.24
Direct Effect of PP→Dep (path *c*)	.15	-.08	.19*
PP→AS (path *a*)	.11	.10	.01
AS→AS	.25***	.28***	.37***
Dep→Dep	.56***	.73***	.83***
Cov. of PP-AS	-.39***	.03	-.11
Cov. of PP-Dep	-.17	-.02	-.45**
Cov. of AS-Dep (Wave A)	.41***	.29**	.38***
Cov. of residuals of AS-Dep (path *b*)	.14*	.12	.19**

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 12.

First Method to Test Half-longitudinal Model of Child-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.19*	.02	.18*
Direct Effect of PP→Dep (path *c*)	-.24**	-.02	.06
PP→AS (path *a*)	-.22**	-.01	.03
AS→AS	.23**	.28***	.37***
Dep→Dep	.48***	.72***	.80***
Cov. of PP-AS	-.05	-.07	-.29**
Cov. of PP-Dep	-.18	-.28***	-.45***
Cov. of AS-Dep (Wave A)	.40***	.30**	.38***
Cov. of residuals of AS-Dep (path *b*)	.13*	.11	.18**

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 13.

First Method to Test Half-longitudinal Model of Child-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.07	.07	.06
Direct Effect of PP→Dep (path *c*)	-.06	.01	-06
PP→AS (path *a*)	-.25***	-.04	-.02
AS→AS	.27***	.30***	.42***
Dep→Dep	.73***	.86***	.72***
Cov. of PP-AS	-.05	-.07	-.28**
Cov. of PP-Dep	.02	-.17*	.18
Cov. of AS-Dep (Wave A)	.17	.17	-.10
Cov. of residuals of AS-Dep (path *b*)	-.06	.06	-.04

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 14.

First Method to Test Half-longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.15*	.11	-.04
Direct Effect of PP→Dep (path *c*)	.05	.07	.07
PP→AS (path *a*)	.13	.13	.04
AS→AS	.32***	.29***	.42***
Dep→Dep	.75***	.90***	.75***
Cov. of PP-AS	-.40***	.04	-.13
Cov. of PP-Dep	-.31**	-.52***	-.34*
Cov. of AS-Dep (Wave A)	.13	.16	-.08
Cov. of residuals of AS-Dep (path *b*)	-.05	.06	-.04

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

We then examined the eight models for support of Baron and Kenny's (1986) second criterion, i.e., a significant relation of parenting behaviors on attributional style (path *a*; Figure 3). Each of the 8 models provided 3 estimates of each path (one for each of the three cohorts), resulting in 24 total estimates for each path examined, where 12 of the estimates involved the models with negative parenting behaviors, and the other half involved the models with positive parenting behaviors. Of the 24 estimates of path *a*, only 2 were significant (see Tables 7-14). These two significant beta weights involved younger children and derived from models utilizing child-reported measures of positive parenting behaviors.

We then examined the eight models with regard to the third path of interest, which is the covariance of attributional style and depressive symptoms at Time 2 (path *b*; Figure 3). This relation addresses Baron and Kenny's (1986) third condition for testing mediation. Of the 24 total estimates of path *b*, 8 were significant (see Tables 7-14). These effects emerged from models in which depressive symptoms were assessed via children's self-report.

To test Baron and Kenny's fourth condition, we then examined if the relation between parenting behaviors and children's depressive symptoms became nonsignificant after controlling for child-reported attributional style (path *c*; Figure 3). Results indicated that 2 of the 24 beta weights were significant in the expected direction. Of the three estimates of path *d* (i.e., the total effect) that were significant, only one became nonsignificant when controlling for attributional style.

In summary, we examined 24 variations of this half-longitudinal design. Evidence of partial mediation emerged in only one of these cases. Support for partial mediation

was limited to analyses that involved child-report measures of the constructs and younger children in the study.

Half-longitudinal method 2. We also utilized Cole and Maxwell's (2003) second method to examine half-longitudinal tests of mediation, in which parenting behaviors and attributional style at Time 1 predicted depressive symptoms at Time 2 (see Figure 4). We tested three versions of eight models, one set for each cohort, yielding a total of 24 estimates for each path.

Results of the examination of Baron and Kenny's (1986) first criteria are identical to the results described in the first method for testing half-longitudinal mediation: 3 of the 24 estimates were significant. For criterion number two (i.e., path *a*: the relation between parenting behaviors and attributional style), none of the 24 estimates were significant in the expected direction (i.e., a positive beta weight for negative parenting and attributional style and a negative beta weight for positive parenting and attributional style; see Tables 15-22). For criterion three (i.e., the relation of attributional style to depressive symptoms controlling for parenting behaviors: path *b* in Figure 4), only 2 out of 24 beta weights were significant in the expected direction (see Tables 15-22). The pattern of these results suggests that this path tended to be significant for younger children. Also, the two significant estimates derived from models that included negative (not positive) parenting behaviors and parent-reported depressive symptoms.

Finally, we addressed the fourth criterion for mediation. That is, we examined if the relation between positive or negative parenting behaviors and depressive symptoms becomes nonsignificant when controlling for attributional style (path *c* in Figure 4). The

results of the examination of path *c* are identical to the results of this path in the first method for testing half-longitudinal models. Of the three significant estimates of path *d*, one became nonsignificant when controlling for attributional style (see Tables 15-22).

In summary, we examined 24 variations of Cole and Maxwell's (2003) half-longitudinal design. No evidence of mediation (full or partial) emerged in any of these cases. Therefore, no support for our mediational hypotheses emerged.

Table 15.

Second Method to Test Half-longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.36**	.00	.08
Direct Effect of NP→Dep (path *c*)	.39***	.07	-.06
AS→Dep (path *b*)	-.08	.05	-.20*
Dep→Dep	.54***	.71***	.79***
Cov. of NP-AS (path *a*)	.12	-.06	.08
Cov. of NP-Dep	-.05	.26*	.12
Cov. of AS-Dep	.41***	.30**	.38***

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 16.

Second Method to Test Half-longitudinal Model of Child-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.12	-.07	-.22*
Direct Effect of NP→Dep (path *c*)	.17	.00	-.12
AS→Dep (path *b*)	-.09	.03	-.17
Dep→Dep	.52***	.72***	.82***
Cov. of NP-AS (path *a*)	.28**	.28***	.34***
Cov. of NP-Dep	.17*	.37***	.59***
Total Effect of NP→Dep (path *d*)	.41***	.30**	.38***

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 17.

Second Method to Test Half-longitudinal Model of Child-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	.06	-.15*	.02
Direct Effect of NP→Dep (path *c*)	-.08	-.01	-.03
AS→Dep (path *b*)	.17*	-.04	.06
Dep→Dep	.73***	.84***	.72***
Cov. of NP-AS (path *a*)	.28**	.27***	.33***
Cov. of NP-Dep	.08	.05	.14
Total Effect of NP→Dep (path *d*)	.16	.17	-.09

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 18.

Second Method to Test Half-longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of NP→Dep (path *d*)	-.38***	-.18**	.10
Direct Effect of NP→Dep (path *c*)	.01	-.05	.08
AS→Dep (path *b*)	.16*	-.03	.04
Dep→Dep	.72***	.88***	.68***
Cov. of NP-AS (path *a*)	.13	-.03	.08
Cov. of NP-Dep	.38**	.43**	.44**
Total Effect of NP→Dep (path *d*)	.16	.17	-.08

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 19.

Second Method to Test Half-longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	.18	-.04	.24
Direct Effect of PP→Dep (path *c*)	.15	-.08	.19*
AS→Dep (path *b*)	-.01	.04	-.20
Dep→Dep	.56***	.73***	.83***
Cov. of PP-AS (path *a*)	-.39***	.03	-.11
Cov. of PP-Dep	-.17	-.02	-.45**
Total Effect of PP→Dep (path *d*)	.41***	.29**	.38***

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 20.

Second Method to Test Half-longitudinal Model of Child-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.19*	.02	.18*
Direct Effect of PP→Dep (path *c*)	-.24**	-.02	.06
AS→Dep (path *b*)	-.02	.04	-.19
Dep→Dep	.48***	.72***	.80***
Cov. of PP-AS (path *a*)	-.05	-.07	-.29**
Cov. of PP-Dep	-.18	-.28***	-.45***
Total Effect of PP→Dep (path *d*)	.40***	.30**	.38***

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 21.

Second Method to Test Half-longitudinal Model of Child-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.07	.07	.06
Direct Effect of PP→Dep (path *c*)	-.06	.01	-06
AS→Dep (path *b*)	.12	-.03	.05
Dep→Dep	.73***	.86***	.72***
Cov. of PP-AS (path *a*)	-.05	-.07	-.28**
Cov. of PP-Dep	.02	-.17*	.18
Total Effect of PP→Dep (path *d*)	.17	.17	-.10

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 22.

Second Method to Test Half-longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights

	Cohort 1	Cohort 2	Cohort 3
Total Effect of PP→Dep (path *d*)	-.15*	.11	-.04
Direct Effect of PP→Dep (path *c*)	.05	.07	.07
AS→Dep (path *b*)	.14*	-.03	.08
Dep→Dep	.75***	.90***	.75***
Cov. of PP-AS (path *a*)	-.40***	.04	-.13
Cov. of PP-Dep	-.31**	-.52***	-.34*
Total Effect of PP→Dep (path *d*)	.13	.16	-.08

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Longitudinal analyses

Fully longitudinal tests of mediation provide another method for testing possible causal relations (Cole & Maxwell, 2003; Maxwell & Cole, in press). In fact, fully longitudinal analyses are more appropriate tests of mediation than half-longitudinal designs, because we can estimate longitudinal versions of both paths *a* and *b* (which combine to form the indirect effect), whereas half-longitudinal models can only provide longitudinal estimates of one of these paths. We utilized a multi-wave, latent variable approach to examine the eight versions of the fully longitudinal model, which derive from the four reports of parenting behaviors, one report of attributional style, and two

reports of depressive symptoms (see Figure 6). At each wave, we constructed random parcels of our manifest variables (as described previously). We then constrained some paths in the models to be equal across wave (e.g., factor loadings, auto-regressive paths), because they did not significantly differ from one another. In particular, we constrained most of the Wave A and Wave B paths to equal their counterparts at Wave B and Wave C, respectively. The goodness of fit indices for the eight multi-wave, latent variable models (i.e., the CFI, IFI, and TLI) were adequately large, and the RMSEA estimates were quite small, indicating little, if any, discrepancy between the specified model and the true model (see Table 5).

With each of the eight latent variable models, we examined the longitudinal counterparts to Baron and Kenny's (1986) criteria for testing mediation. With eight models and one estimate for each of the three cohorts, we calculated 24 estimates of each path, with 12 estimates involving the models with negative parenting and 12 estimates involving the models with positive parenting.

To test the first condition of mediation for the fully longitudinal models, we examined the total effect of negative or positive parenting behaviors on children's depressive symptoms. We obtained these estimates from models in which attributional style was excluded (Figure 7). We examined the effect of parenting at one time point (e.g., Time 1) on depressive symptoms at the subsequent time point (e.g., Time 2), which is denoted by path *d*. Three of the 24 beta weights were in the expected direction (see Tables 23-30). For each of the three models indicating a significant estimate, younger children demonstrated the significant estimate of path *d*. We also examined the two-year total effect of parenting behaviors at Time 1 on children's depressive symptoms at Time

3 (path *e*). Of the 24 estimates of path *e*, 3 beta weights were significant in the expected direction (see Tables 23-30). These three significant estimates derived from two of the eight models, which both included negative parenting and parent-reported depressive symptoms. Taken together, we examined 48 variations of the total effect of negative or positive parenting on depressive symptoms. Support for this relation emerged in 6 of the 48 cases. Support for this relation emerged for both negative and positive parenting behaviors and was limited to younger children in the study.

We then sought support for the second criterion that there be a significant relation between parenting behaviors and attributional style (path *a* in Figure 6). Of the 24 estimates of path *a*, 2 were significant, with both of these emerging only in our youngest cohort of children (see Tables 23-30). The two models indicating these two significant paths both involved child-reported measures of positive parenting behaviors.

The third criterion pertains to the effect of attributional style on depressive symptoms when controlling for parenting behaviors (path *b* in Figure 6). Two of these 24 estimates were significant (see Tables 23-30). Again, these two estimates involved only our youngest cohort of children. These models focused on negative parenting behaviors and parent-reported depressive symptoms.

We then examined the fourth criterion for mediation, which specifies that the relation between positive or negative parenting behaviors and depressive symptoms becomes nonsignificant when controlling for attributional style (path *c*; Figure 6). Results indicated that only 2 the 24 estimates were significant in the expected direction (see Tables 23-30).

In summary, none of the eight models provided support for mediation. Paths *a* and *b* were never significant in the same model. These fully longitudinal tests of mediation provided no support for the mediational hypotheses.

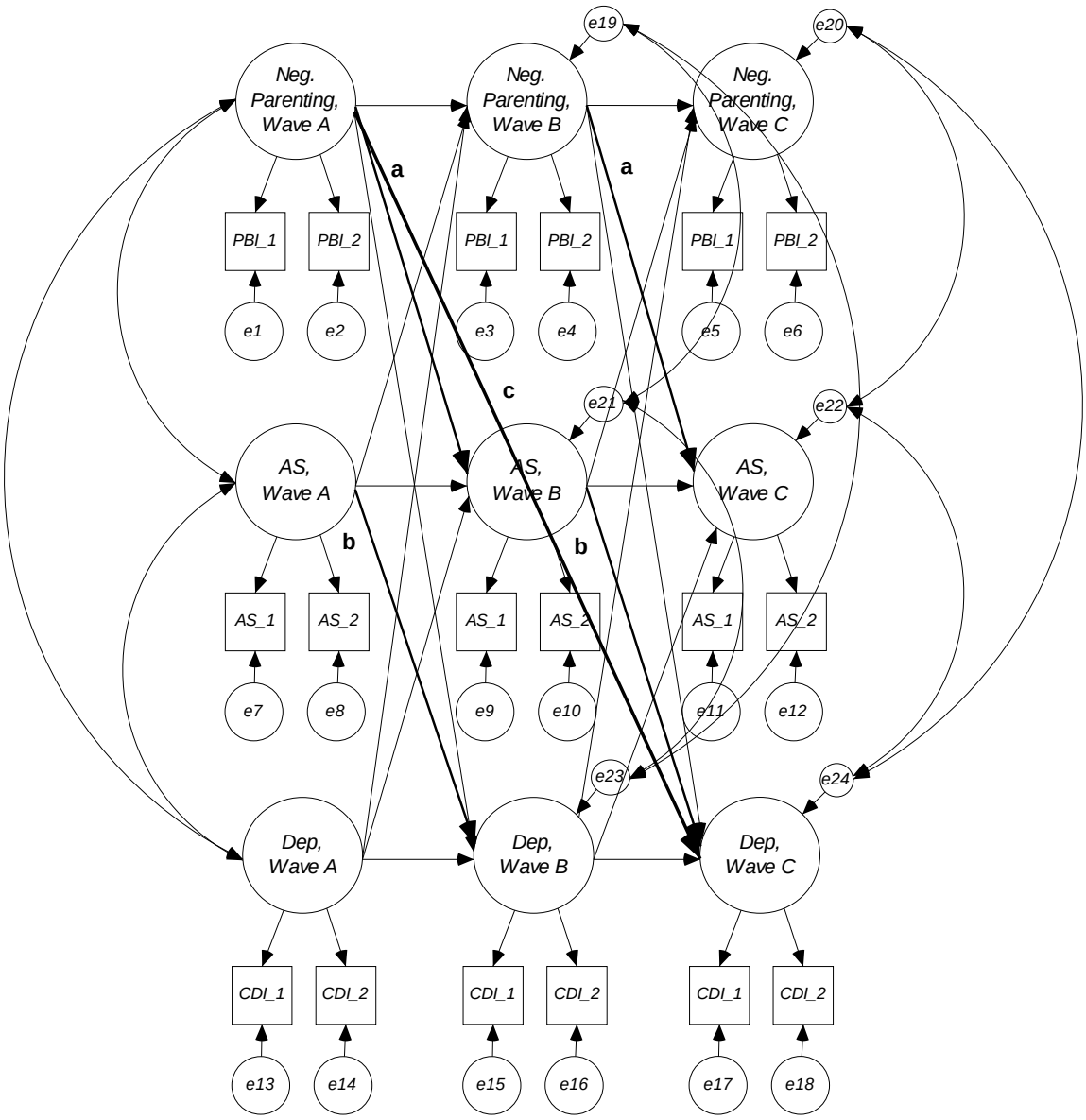

Figure 6. One of the eight models to test longitudinal mediation, as well as to test age and gender as possible moderators.

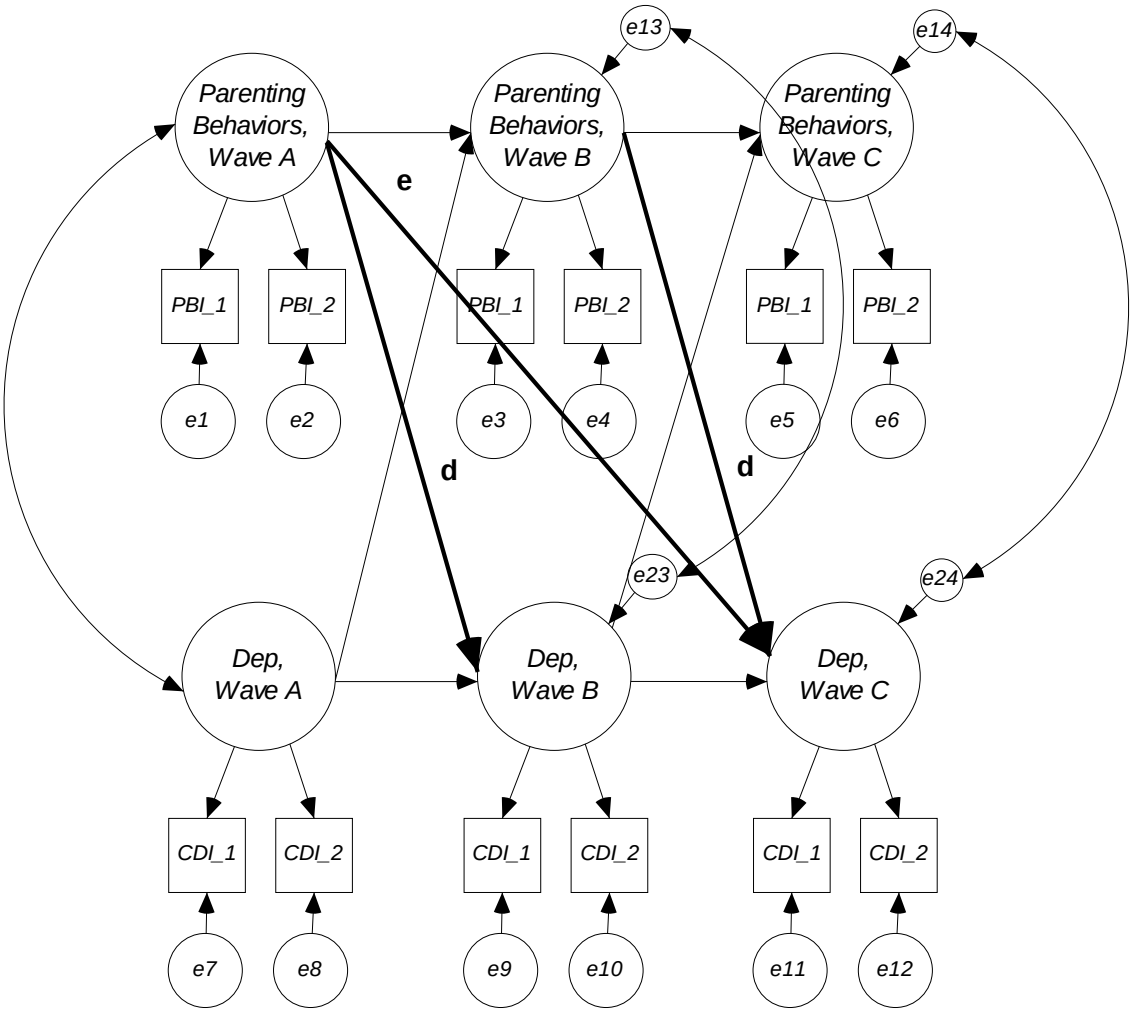

Figure 7. One model to examine the total effect of parenting behaviors on depressive symptoms with fully longitudinal data.

Table 23.

Fully Longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-Reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of NP→Dep (adjacent waves, path *d*)	.36**	.00	.08	--
Total Effect of NP→Dep (wave-skipping path *e*)	.04	-.27	-.25	--
NP→NP	.77***	.82***	.85***	.23
NP→AS (path *a*)	.05	-.00	.06	.24
NP→Dep (path *c*)	.39***	.07	-.06	9.47**
AS→NP	.01	.26**	-.13	7.22*
AS→AS	.22**	.30***	.36***	1.27
AS→Dep (path *b*)	-.08	.05	-.20*	2.99
Dep→NP	.13	-.04	.13	3.31
Dep→AS	.14*	.11	.10	.26
Dep→Dep	.54***	.71***	.79***	5.27
Cov. of NP-AS	.12	-.06	.08	1.31
Cov. of NP-Dep	-.05	.26*	.12	2.99
Cov. of AS-Dep	.41***	.30**	.38***	.72

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 24.

Fully Longitudinal Model of Child-reported Negative Parenting Behaviors, Child-Reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of NP→Dep (adjacent waves, path *d*)	.12	-.07	-.22*	--
Total Effect of NP→Dep (wave-skipping path *e*)	.11	.18	.16	--
NP→NP	.78***	.64***	.57***	2.16
NP→AS (path *a*)	-.00	.14	.07	1.30
NP→Dep (path *c*)	.17	.00	-.12	4.78
AS→NP	-.01	.01	-.18*	3.54
AS→AS	.21**	.25**	.37***	1.53
AS→Dep (path *b*)	-.09	.03	-.17	1.95
Dep→NP	.10	.16**	.14*	.48
Dep→AS	.14	.06	.06	.68
Dep→Dep	.52***	.72***	.82***	6.525*
Cov. of NP-AS	.28**	.28***	.34***	.34
Cov. of NP-Dep	.17*	.37***	.59***	7.41
Cov. of AS-Dep	.41***	.30**	.38***	.65

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 25.

Fully Longitudinal Model of Child-reported Negative Parenting Behaviors, Child-Reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of NP→Dep (adjacent waves, path *d*)	.06	-.15*	.02	--
Total Effect of NP→Dep (wave-skipping path *e*)	-.20	.27*	-.06	--
NP→NP	.49***	.72***	.63***	4.93
NP→AS (path *a*)	.03	.16	.01	1.46
NP→Dep (path *c*)	-.08	-.01	-.03	.54
AS→NP	.04	.01	-.13	2.57
AS→AS	.27***	.26**	.39***	1.24
AS→Dep (path *b*)	.17*	-.04	.06	4.34
Dep→NP	-.03	.09	.06	1.36
Dep→AS	.17*	.01	.25***	5.83
Dep→Dep	.73***	.84***	.72***	3.37
Cov. of NP-AS	.28**	.27***	.33***	.29
Cov. of NP-Dep	.08	.05	.14	.31
Cov. of AS-Dep	.16	.17	-.09	2.76

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 26.

Fully Longitudinal Model of Parent-reported Negative Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of NP→Dep (adjacent waves, path *d*)	-.38***	-.18**	.10	--
Total Effect of NP→Dep (wave-skipping path *e*)	.70***	.22*	.01	--
NP→NP	.84***	.92***	.93***	.25
NP→AS (path *a*)	.05	.01	-.02	.22
NP→Dep (path *c*)	.01	-.05	.08	2.17
AS→NP	.08	.30***	-.09	6.68*
AS→AS	.29***	.34***	.41***	1.12
AS→Dep (path *b*)	.16*	-.03	.04	4.28
Dep→NP	-.04	-.25**	-.19	2.31
Dep→AS	-.03	-.02	.26***	6.50
Dep→Dep	.72***	.88***	.68***	6.26*
Cov. of NP-AS	.13	-.03	.08	.92
Cov. of NP-Dep	.38**	.43**	.44**	.10
Cov. of AS-Dep	.16	.17	-.08	2.59

Note. NP = Negative Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 27.

Fully Longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-Reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of PP→Dep (adjacent waves, path *d*)	.18	-.04	.24	--
Total Effect of PP→Dep (wave-skipping path *e*)	.01	-.03	-.08	--
PP→PP	.66***	.88***	.86***	4.63
PP→AS (path *a*)	.11	.10	.01	1.13
PP→Dep (path *c*)	.15	-.08	.19*	4.62
AS→PP	-.06	.16	.10	2.62
AS→AS	.25***	.28***	.37***	.97
AS→Dep (path *b*)	-.01	.04	-.20	2.91
Dep→PP	-.12	-.09	-.02	.70
Dep→AS	.15*	.10	.10	.45
Dep→Dep	.56***	.73***	.83***	5.77
Cov. of PP-AS	-.39***	.03	-.11	7.13*
Cov. of PP-Dep	-.17	-.02	-.45**	5.56
Cov. of AS-Dep	.41***	.29**	.38***	.70

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 28.

Fully Longitudinal Model of Child-reported Positive Parenting Behaviors, Child-Reported Attributional Style, and Child-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of PP→Dep (adjacent waves, path *d*)	-.19*	.02	.18*	--
Total Effect of PP→Dep (wave-skipping path *e*)	-.22	-.13	-.26	--
PP→PP	.51***	.69***	.73***	5.54
PP→AS (path *a*)	-.22**	-.01	.03	6.95*
PP→Dep (path *c*)	-.24**	-.02	.06	8.19*
AS→PP	-.09	.04	.00	.81
AS→AS	.23**	.28***	.37***	1.46
AS→Dep (path *b*)	-.02	.04	-.19	2.84
Dep→PP	-.00	-.08	-.15*	2.14
Dep→AS	.07	.10	.11	.11
Dep→Dep	.48***	.72***	.80***	8.22*
Cov. of PP-AS	-.05	-.07	-.29**	4.12
Cov. of PP-Dep	-.18	-.28***	-.45***	2.97
Cov. of AS-Dep	.40***	.30**	.38***	.61

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 29.

Fully Longitudinal Model of Child-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of PP→Dep (adjacent waves, path *d*)	-.07	.07	.06	--
Total Effect of PP→Dep (wave-skipping path *e*)	.19	.03	-.01	--
PP→PP	.51***	.71***	.79***	9.74**
PP→AS (path *a*)	-.25***	-.04	-.02	7.39*
PP→Dep (path *c*)	-.06	.01	-06	1.03
AS→PP	-.09	-.03	.05	.05
AS→AS	.27***	.30***	.42***	1.93
AS→Dep (path *b*)	.12	-.03	.05	2.66
Dep→PP	.07	-.09	-.21*	5.03
Dep→AS	-.01	.02	.25***	6.07*
Dep→Dep	.73***	.86***	.72***	4.7
Cov. of PP-AS	-.05	-.07	-.28**	3.93
Cov. of PP-Dep	.02	-.17*	.18	4.26
Cov. of AS-Dep	.17	.17	-.10	3.08

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Table 30.

Fully Longitudinal Model of Parent-reported Positive Parenting Behaviors, Child-reported Attributional Style, and Parent-reported Depressive Symptoms: Unstandardized Regression Weights and $\Delta\chi^2$ Compared to Base Model

	Cohort 1	Cohort 2	Cohort 3	$\Delta\chi^2$ (df = 2)
Total Effect of PP→Dep (adjacent waves, path *d*)	-.15*	.11	-.04	--
Total Effect of PP→Dep (wave-skipping path *e*)	.19	.03	-.01	--
PP→PP	.34***	.83***	.86***	4.02
PP→AS (path *a*)	.13	.13	.04	.82
PP→Dep (path *c*)	.05	.07	.07	.09
AS→PP	-.10	.15	.08	3.94
AS→AS	.32***	.29***	.42***	1.25
AS→Dep (path *b*)	.14*	-.03	.08	3.63
Dep→PP	-.05	-.11	-.03	.42
Dep→AS	.06	.09	.26***	2.80
Dep→Dep	.75***	.90***	.75***	3.67
Cov. of PP-AS	-.40***	.04	-.13	7.53*
Cov. of PP-Dep	-.31**	-.52***	-.34*	1.72
Cov. of AS-Dep	.13	.16	-.08	2.35

Note. PP = Positive Parenting Behaviors; AS = Attributional Style; Dep = Depressive Symptoms; Cov. = Covariance.

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

Tests of Moderation

Negative life events. We tested the hypothesis that attributional style and negative life events interacted to predict subsequent depressive symptoms in six different ways: for each of the three cohorts from both Waves A to B and from Waves B to C. Using least squares regression, we controlled for the main effects of attributional style, negative life events, and initial levels of depressive symptoms and examined if negative life events and attributional style significantly interacted to predict later depressive symptoms. Of the six tests of the interaction, only one was significant (see Table 31). However, the

interaction effect was small (.23, $p < .05$) and when adjusting for family-wise Type I error, a p-value of .008 was needed to indicate a significant interaction. Therefore, none of the six tests of the interaction were significant, indicating negative life events do not moderate the relation between children's attributional style and children's depressive symptoms.

Table 31.

Negative Life Events as a Potential Moderator of the Relation between Attributional Style and Depressive Symptoms: Unstandardized Regression Weights

	AS x NLE → Dep
Cohort 1	
Wave A to B	.23*
Wave B to C	-.06
Cohort 2	
Wave A to B	-.09
Wave B to C	.07
Cohort 3	
Wave A to B	-.05
Wave B to C	.01

Note. AS = Attributional Style; NLE = Negative Life Events; Dep = Depressive Symptoms.

* $p < .05$.

Age. Using structural equation modeling (SEM), we then tested if age moderated any of the three prospective relations underlying the mediational model. We used a multi-group SEM approach to test these hypotheses, where the groups were the three age cohorts. Each of the eight multi-wave, latent variable models was examined to determine whether age (i.e., cohort) differences emerged for any of the mediational paths. Significant age/cohort differences are indicated by the change in χ^2. Of the four models including negative parenting behaviors, none indicated significant age/cohort differences

for either the effect of negative parenting behaviors on attributional style or the effect of attributional style on depressive symptoms (see Tables 23-26). In one of the four models (the one involving parent-reported negative parenting and child-reported depressive symptoms), a significant age difference emerged for the relation of negative parenting behaviors on depressive symptoms (path *c*). The relation was significant for the youngest cohort but not for the older children (see Tables 23-26). Overall, only one of four models indicated a significant difference based on age, providing weak support for moderation.

In the four models that involved positive parenting behaviors, age never moderated the relation between attributional style and depressive symptoms (see Tables 27-30). In one of the four models (the one in which child-reported parenting predicted child-reported depressive symptoms), the relation between positive parenting behaviors and children's depressive symptoms was moderated by age. The relation was significant for younger children but not older children. In two of the four models (the ones in which child-reported positive parenting predicted either parent- or child-reported depressive symptoms), positive parenting behaviors interacted with age to predict attributional style. This relation was significant for younger but not older children (see Tables 27-30). These results provide moderate support that positive parenting behaviors interacted with age to predict attributional style, but weak support was found for the remaining tests of moderation.

Taken together, results of longitudinal tests suggest weak support that age moderated any of the three prospective relations of interest, i.e., attributional style → depressive symptoms, negative or positive parenting behaviors → attributional style, and negative or positive parenting behaviors → depressive symptoms, although there was

moderate support that positive parenting behaviors and age interacted to predict attributional style in children.

Gender. Next we examined gender as a possible moderator using SEM. All multi-group, fully longitudinal models fit the data well. The goodness of fit indices (i.e., the CFI, IFI, and TLI) were large, and the RMSEA estimates were quite small, indicating small discrepancies between the specified model and the true model (see Table 32). We examined whether gender moderated any of the three relations of interest. Across the eight models, results suggested gender did not moderate any of the three prospective relations (see Tables 33-40). However, gender differences emerged for the auto-regressive path of attributional style across all eight models. The auto-regressive paths were significantly larger for females than males (see Tables 33-40).

Table 32.

Fully Longitudinal Model with Gender as a Moderator: Goodness of Fit Indices for Eight Base Models

Base Model	χ^2	df	CFI	IFI	TLI	RMSEA (range)
PR NP - CR AS - CR Dep	343.29	264	.97	.97	.96	.02 (.01-.03)
CR NP - CR AS - CR Dep	373.57	264	.97	.97	.96	.02 (.02-.03)
CR NP - CR AS - PR Dep	443.47	264	.95	.95	.93	.03 (.02-.03)
PR NP - CR AS - PR Dep	454.83	264	.93	.93	.90	.03 (.03-.04)
PR PP - CR AS - CR Dep	332.43	264	.98	.98	.97	.02 (.01-.02)
CR PP - CR AS - CR Dep	358.91	264	.98	.98	.97	.02 (.02-.03)
CR PP - CR AS - PR Dep	414.14	264	.96	.96	.95	.03 (.02-.03)
PR PP - CR AS - PR Dep	429.79	264	.95	.95	.93	.03 (.02-.03)

Note. PR = Parent-report; CR = Child-report; NP = Negative Parenting; PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.

Table 33.

Fully Longitudinal Model with Gender as a Moderator: Model of Parent-reported Negative Parenting - Child-reported Attributional Style - Child-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
NP → NP	.80***	.80***	1.12
NP → AS	.07	-.014	.57
NP → Dep	.21*	.00	2.91
AS → NP	-.12	.19*	5.98*
AS → AS	.12	.44***	9.9**
AS → Dep	-.09	-.09	.00
Dep → NP	.20*	.04	1.63
Dep → AS	.14*	.10	.27
Dep→ Dep	.64***	.74***	1.42
NP←→AS	.00	.02	.02
NP ←→Dep	-.13	.28**	7.35**
AS←→Dep	.36***	.35***	.00

Note. NP = Negative Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 34.

Fully Longitudinal Model with Gender as a Moderator: Model of Child-reported Negative Parenting - Child-reported Attributional Style - Child-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
NP → NP	.53***	.61***	.78
NP → AS	.07	.04	.10
NP → Dep	.05	.04	.02
AS → NP	-.05	-.07	.03
AS → AS	.13	.42***	7.94**
AS → Dep	-.07	-.10	.08
Dep → NP	.08	.18***	1.04
Dep → AS	.11	.08	.13
Dep→ Dep	.61***	.73***	1.56
NP←→AS	.25**	.37***	1.07
NP ←→Dep	.40***	.44***	.09
AS←→Dep	.36***	.35***	.01

Note. NP = Negative Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 35.

Fully Longitudinal Model with Gender as a Moderator: Model of Child-reported Negative Parenting - Child-reported Attributional Style - Parent-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
NP → NP	.55***	.67***	2.19
NP → AS	.10	.06	.21
NP → Dep	-.09	.01	1.82
AS → NP	-.03	-.04	.03
AS → AS	.16*	.43***	7.42**
AS → Dep	.12	.02	1.64
Dep → NP	.05	.09	.17
Dep → AS	.06	.05	.02
Dep→ Dep	.72***	.82***	2.04
NP←→AS	.25**	.37***	1.15
NP ←→Dep	.09	.15	.01
AS←→Dep	-.08	.07	2.85

Note. NP = Negative Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 36.

Fully Longitudinal Model with Gender as a Moderator: Model of parent-reported Negative Parenting - Child-reported Attributional Style - Parent-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
NP → NP	.99***	.85***	1.15
NP → AS	.05	.01	.09
NP → Dep	.02	-.06	.89
AS → NP	.11	.24**	7.60**
AS → AS	.18**	.47***	9.95**
AS → Dep	.11	.01	1.49
Dep → NP	-.12	-.22*	.54
Dep → AS	.06	.04	.02
Dep→ Dep	.71***	.85***	3.40
NP←→AS	.03	.05	.01
NP ←→Dep	.33**	.46***	.60
AS←→Dep	-.08	.17*	3.35

Note. NP = Negative Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 37.

Fully Longitudinal Model with Gender as a Moderator: Model of Parent-reported Positive Parenting - Child-reported Attributional Style - Child-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
PP → PP	.98***	.69***	10.75**
PP → AS	.01	.08	.69
PP → Dep	.00	.11	1.32
AS → PP	.12	.02	.78
AS → AS	.14	.44***	9.33**
AS → Dep	-.06	-.07	.01
Dep → PP	-.07	-.14*	.38
Dep → AS	.14*	.10*	.14
Dep→ Dep	.63***	.76***	2.06
PP←→AS	-.13	-.19	.14
PP ←→Dep	-.23*	-.17	.17
AS←→Dep	.36***	.35***	.00

Note. PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 38.

Fully Longitudinal Model with Gender as a Moderator: Model of Child-reported Positive Parenting - Child-reported Attributional Style - Child-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
PP → PP	.65***	.66***	.01
PP → AS	-.09	-.02	.63
PP → Dep	-.02	-.11	.98
AS → PP	-.13	-.03	.92
AS → AS	.13	.43***	9.20**
AS → Dep	-.06	-.10	.18
Dep → PP	-.03	-.10	.66
Dep → AS	.11	.09	.04
Dep→ Dep	.62***	.71***	1.02
PP←→AS	-.08	-.20**	1.28
PP ←→Dep	-.29***	-.34***	.16
AS←→Dep	.35***	.35***	.00

Note. PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 39.

Fully Longitudinal Model with Gender as a Moderator: Model of Child-reported Positive Parenting - Child-reported Attributional Style - Parent-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
PP → PP	.66***	.70***	.27
PP → AS	-.12*	-.06	.53
PP → Dep	-.09	.02	2.49
AS → PP	-.15*	-.06	.92
AS → AS	.17*	.45***	9.04**
AS → Dep	.09	.02	.83
Dep → PP	-.08	-.01	.43
Dep → AS	.06	.05	.00
Dep→ Dep	.71***	.82***	2.68
PP←→AS	-.07	-.20**	1.32
PP ←→Dep	-.01	-.11	.47
AS←→Dep	-.08	.16*	3.02

Note. PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 40.

Fully Longitudinal Model with Gender as a Moderator: Model of Parent-reported Positive Parenting - Child-reported Attributional Style - Parent-reported Depressive Symptoms: Unstandardized Regression Weights and Change in χ^2 Compared to Base Model

Path constrained across gender	Males: Unstandardized Regression Weights	Females: Unstandardized Regression Weights	$\Delta\chi^2$ (df = 1)
PP → PP	.99***	.67***	9.88**
PP → AS	.04	.10	.35
PP → Dep	.07	.05	.09
AS → PP	.08	-.01	.63
AS → AS	.19**	.47***	9.01**
AS → Dep	.12	.02	1.49
Dep → PP	-.01	-.10	.60
Dep → AS	.09	.10	.01
Dep→ Dep	.75***	.84***	1.50
PP←→AS	-.15	-.19*	.06
PP ←→Dep	-.37***	-.39***	.02
AS←→Dep	-.09	.16*	3.34

Note. PP = Positive Parenting; AS = Attributional Style; Dep = Depressive Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

CHAPTER IV

DISCUSSION

Three major findings emerged from this investigation examining children's attributional style as a mediator of the relation between positive and negative parenting behaviors and children's depressive symptoms, as well as possible moderational processes in the mediational model. First, when using child-reported measures, we found some support for partial mediation in the cross-sectional analyses, in which children's attributional style partially mediated the relation between negative parenting behaviors and children's depressive symptoms for younger children. Second, utilizing half-longitudinal and fully longitudinal tests of mediation, we found weak support for longitudinal mediation. We found some support for partial mediation with one approach for half-longitudinal tests of mediation, but results of another approach for half-longitudinal designs and the fully longitudinal tests were not significant. Third, we found no evidence of moderated mediation when examining negative life events, age, or gender as possible moderators, with two exceptions. First, we found moderate support that age interacted with positive parenting behaviors to predict children's attributional style, though in the opposite direction than expected. Second, we found that gender moderated the auto-regressive path of attributional style, where the path was stronger in females than in males.

Our first finding pertained to a cross-sectional examination of mediation. Only one study (Whisman & Kwon, 1992) explicitly tested this mediational model, so we

examined this model cross-sectionally to build upon this important area of research. The results in the current study are similar to the findings of previous research (e.g., Pineda & Cole, submitted; Whisman & Kwon, 1992), where we found some support for partial mediation for younger children when using child-report measures. The current study extended the work by Whisman and Kwon, in that this study included a sample of children and adolescents, whereas Whisman and Kwon's study used a college sample and assessed the participants' retrospective account of the parenting they received during their first 16 years of life. By assessing children and adolescents between 6 to 13 years of age, we were able to examine the age at which attributional style may begin to mediate the relation between parenting behaviors and children's depressive symptoms.

When using all child-report measures to assess the three constructs of interest, we found some evidence for partial mediation in 3rd graders but not for older children. The indirect effect of negative parenting behaviors on depressive symptoms was significant for Cohort 1 when they were in the 3rd grade. This provides some evidence of partial mediation for younger, but not older, children. These results differ from our hypotheses, where we expected mediation to be evident in older, but not younger, children. These results suggest that negative parenting behaviors may have their affect on children's attributional style and depressive symptoms when children are young. Consistent with previous research, we speculate that, at older ages, children may be more influenced by their peers than by their parents (Cauce, Reid, Landesman, & Gonzales 1990; Furman & Buhrmester, 1992; Helsen, Vollebergh, & Meeus, 2000; Meeus, 1989; 1993).

These results are consistent with previous literature, where some support for mediation was found when the constructs were assessed by child-report. Interestingly, no

support for mediation was found when the variables of interest were assessed by both child- and parent-report measures. These results suggest that the strongest support for cross-sectional mediation is found when utilizing self-report measures, which corresponds to previous literature (e.g., Whisman & Kwon, 1992). However, when tests of mediation go beyond self-report measures and include measures from additional informants, support for mediation is no longer evident.

Although we fulfilled the criteria outlined by Baron and Kenny (1986), these results do not reflect true mediation, because the causal relations implied by mediation cannot be assessed with cross-sectional data (Cole & Maxwell, 2003; Maxwell & Cole, in press). These results suggest that negative parenting behaviors, attributional style, and depressive symptoms relate to each other but not necessarily in a causal fashion. Nevertheless, these results have important clinical implications; all three constructs are likely important facets of the clinical picture of depression. A child diagnosed with depression would likely demonstrate negative cognitions (e.g., depressive attributional style) and experience high degrees of negative parenting, such as criticism and rejection. The current results suggest these three constructs significantly relate to one another; thus, all three areas are important targets of clinical intervention. For example, addressing symptoms of depression and a depressive attributional style are important areas to focus on in individual therapy, and work to improve parenting practices and parent-child interactions are important pieces to incorporate into family therapy.

Our second finding refers to longitudinal tests of mediation. Using half-longitudinal designs, we examined whether eight two-wave, latent variable half-longitudinal models supported Baron and Kenny's (1986) criteria to test mediation. We

examined two approaches to test the half-longitudinal models. The first method involved assessing parenting behaviors and attributional style at Time 1 and depressive symptoms at Time 2 (Figure 3). In order to test mediation, we examined if both paths *a* and *b* were significant, because they comprise the test of the indirect effect. Of 24 tests of mediation, 1 was significant, in which the paths were significant for younger, but not older, children. These significant paths were found in the model comprised of child-reported positive parenting - child-reported attributional style - child-reported depressive symptoms. We tested Baron and Kenny's fourth criteria in order to determine if the evidence of mediation involved partial or complete mediation. The results indicated that path *c* decreased but did not become zero, indicating partial mediation. Although some support was found for partial mediation, these results provide weak support for the mediational hypotheses, given that only 1 out of 24 tests provided any evidence of mediation.

The second method to test half-longitudinal mediation involved parenting behaviors at Time 1 and attributional style and depressive symptoms at Time 2 (Figure 4). As with the first method of testing half-longitudinal designs, we examined if paths *a* and *b* were both significant for any of the three cohorts in any of the eight models (with four models including negative parenting and the other four models including positive parenting behaviors). None of the eight half-longitudinal models indicated significant paths for both *a* and *b*, providing no support for mediation.

For the fully longitudinal tests of mediation, we examined the eight multi-wave, latent variable longitudinal models to determine if support for the longitudinal counterparts to Baron and Kenny's (1986) criteria existed. In order to examine for evidence of mediation, we focused on Baron and Kenny's second and third criteria, i.e.,

paths *a* and *b*, which provides the indirect effect of parenting on depressive symptoms. Fully longitudinal models enabled us to examine the longitudinal paths of both *a* and *b*, rather than only one in the half-longitudinal models. Examination of these two longitudinal paths for each of the eight models indicated no evidence of mediation. None of the eight models indicated that both paths *a* and *b* were significant. These fully longitudinal tests of mediation provided no support for the mediational hypotheses.

Our third finding refers to the tests of moderation. We examined negative life events, age, and gender as possible moderators of the three relations on interest. Regarding negative life events, results in the current study did not provide evidence that negative life events moderated the relation between attributional style and depressive symptoms. These results are consistent with Cole et al.'s (2007) findings that attributional style did not interact with negative life events to predict depressive symptoms until children were between 8th and 9th grade, suggesting this proposed interaction may hold in older, but not younger, children. The oldest children in the current study were in the 8th grade, so these results are consistent with Cole et al.'s finding that attributional style does not serve as a diathesis to predict subsequent depressive symptoms in grades 2-8.

Alternatively, shortcomings of the actual measures of negative life events may influence the findings. First, the type of negative life events assessed may influence the degree to which they may interact with attributional style. Some studies assess relatively minor stressors (e.g., peer rejection, receiving a poor grade on a report card; Dixon & Ahrens, 1992; Panak and Garber, 1992), while other studies assess major life events (e.g., parental divorce, death in the family; Joiner, 2000). Second, the questionnaires assess the presence of a negative life event occurring over the past six months. The questionnaires

do not address whether the stressor is resolved or ongoing. A resolved or short-lived stressor may not be as salient to a child as chronic or recurring stressors. This delineation may be an important aspect to consider when assessing negative life events and would likely affect the outcome of studies. Third, we used the LEC to assess negative life events because it is particularly sensitive to stressors often experienced by inner-city youth; however, it is a paper-and-pencil questionnaire, which is subject to response bias sometimes associated with such measures. Research utilizing interview-based assessments of negative life events, such as the Life Events and Difficulties Schedule (Brown & Harris, 1978) or the Life Events Interview for Adolescents (Garber & Robinson, 1997) would address such limitations of the LEC (and other similar measures of negative life events) and provide valuable contributions to the current literature.

We also examined whether age moderated any of the three prospective relations that comprise the mediational model. Contrary to our hypotheses, we did not find age differences in the relation between attributional style and depressive symptoms. That is, the prospective relation of attributional style on subsequent depressive symptoms did not differ significantly between children in different grades. These results do not necessarily contradict the diathesis-stress models of depression, where the relation between depressive attributional style and depressive symptoms may exist in the presence, but not the absence, of negative life events (Abramson et al., 1989; Metalsky et al., 1982, 1987, 1993). That is, the relation between attributional style and depressive symptoms may be significant only for those children experiencing high degrees of negative life events. Given that no evidence for an interaction was found in this study (described previously),

the results of this study suggest that the interaction of attributional style and negative life events may not emerge until after the 8th grade.

Similarly, age did not moderate the relation of negative parenting behaviors on attributional style, indicating that the relation of negative parenting on attributional style did not differ significantly at different ages. However, we found some support that age interacted with positive parenting behaviors to predict later attributional style. These results are contrary to our hypotheses, where the results suggest that the prospective relation of positive parenting behaviors on attributional style was significant in the youngest of the three cohorts but not significant in the older cohorts. These results suggest that high degrees of supportive and warm parenting behaviors directed towards young children may protect them from developing a depressive attributional style. When children are young and their attributional style is not yet stable, receiving positive and nurturing parental responses and behaviors, particularly in the presence of negative events, may contribute to children developing a healthy attributional style.

We also expected the relation between parenting behaviors and depressive symptoms to be moderated by age, where the relation would be stronger in older children compared to younger children, because parenting may be characterized by more critical behaviors during adolescence. Results provided no support for our hypothesis. These results suggest that the effect of negative and positive parenting behaviors on children's depressive symptoms did not differ significantly at different ages.

With considerable literature demonstrating that gender differences in depression arise in late childhood/early adolescence, in which females exhibit greater levels of depressive symptoms compared to males (e.g., Avison & McAlpine, 1992; Gjerde et al.,

1991; Stice et al., 2004), we examined gender as a possible moderator of the three prospective relations in the mediational model. The results were not significant, indicating that none of the three relations differed significantly between males and females. These results are not necessarily inconsistent with research demonstrating gender differences in depression, because main effects of gender on depression do not imply that gender will moderate any particular relation. These results indicate no gender differences among the three prospective relations of interest. However, although not one of our hypotheses, the auto-regressive path of attributional style significantly interacted with gender. The path was significantly stronger for females compared to males. Further research is needed to examine this interaction more fully.

In addition to the shortcomings already noted, several additional limitations and caveats about the current study suggest avenues for future research. First, evidence of mediation may be more difficult to detect in children with sub-clinical levels of depression. The current study focused on non-referred children, rather than clinic-referred children or those clinically diagnosed with depression. While understanding these processes in the current sample provides informative contributions to the current literature, replication of the current study with more seriously depressed children and adolescents would be an important area to explore. Second, although many of the models we tested utilized data from multiple informants (i.e., child- and parent-report measures), each construct included only child- or parent-report. For example, one model included parent-reported parenting behaviors, child-reported attributional style, and child-reported depressive symptoms. Further research utilizing multiple methods to assess each

construct (e.g., multiple informants, behavioral observations, clinical interview) would help to ensure that the constructs of interest are assessed adequately.

In summary, no study has longitudinally examined whether children's attributional style mediates the relation between parenting behaviors and children's depressive symptoms. The current study suggests some evidence that the three constructs significantly relate to each other cross-sectionally when they are assessed by child-report. These results correspond to previous literature (e.g., Whisman & Kwon, 1992), indicating evidence of partial mediation when using self-report measures. These results suggest that the three constructs correlate with each other but do not necessarily cause one another. Of important note, however, evidence of cross-sectional mediation disappeared when utilizing measures from additional informants (i.e., parent-report measures). Nevertheless, these cross-sectional results suggest important implications for intervention, such as the importance of therapeutically addressing each of the three constructs, i.e., parenting skills, depressive cognitions, and depressive symptoms, with children and parents. Each of these constructs relate to one another, so all three are important areas to target in individual and family interventions. Examination of mediation using half-longitudinal and fully longitudinal data demonstrated no evidence of mediation. With this study being the only study thus far to prospectively examine this mediational model, further research would provide valuable contributions to our understanding of these possible causal processes. Additionally, negative life events, age, nor gender moderated any of the three prospective relations comprising the mediational model. To our knowledge, no study has examined these proposed moderated mediational hypotheses so replication of this study would contribute to our growing knowledge and

understanding of these potential relations. Taken together, the results of this study provide a better understanding of these possible mediational and moderated mediational processes.

Footnotes

[1] Whisman and Kwon (1992) also examined dysfunctional attitudes (another cognitive variable) as another possible mediator of the relation between parenting behaviors and depressive symptoms. They found no support for mediation. Additionally, they examined parental overprotection as a parenting variable and found that overprotection was associated with greater depressive symptoms but found no evidence of cognitive mediation.

[2] We obtained two estimates of correlations based on slightly different models for two of the relations, i.e., between parenting behaviors and attributional style and between attributional style and depressive symptoms. The mean difference between the two correlations for the relation between parenting behaviors and attributional style was .05 (range = .01-.06), and the mean difference between the two correlations for the relation between attributional style and depressive symptoms was .06 (range = .00-.15). Due to the consistently negligible discrepancies between the two estimates, we averaged the correlations.

Appendix A
PPI

The following questions ask about your mom (or the woman that takes care of you the most). For each question, circle the number that describes how often she does each thing.

How often does she…

	Not at All	Not Often	Some-times	A Lot	All the time
1. Tell you she likes what you did?	1	2	3	4	5
2. Take away toys or games when you're bad?	1	2	3	4	5
3. Talk to you when you feel bad to help you feel better?	1	2	3	4	5
4. Tell you you're no good?	1	2	3	4	5
5. Have a good talk with you?	1	2	3	4	5
6. Order you around?	1	2	3	4	5
7. Let you help decide what to do?	1	2	3	4	5
8. Spank you?	1	2	3	4	5
9. Spend time with you?	1	2	3	4	5
10. Get mad at you?	1	2	3	4	5
11. Say nice things to you?	1	2	3	4	5
12. Threaten you or say she's going to punish you?	1	2	3	4	5
13. Let you do what other kids your age do?	1	2	3	4	5
14. Send you to your room or put you in the corner when you do something wrong?	1	2	3	4	5
15. Help you with your homework?	1	2	3	4	5
16. Nag you, or tell you what to do over and over again?	1	2	3	4	5

17. Hug you?	1	2	3	4	5
How often does she…	Not at All	Not Often	Some-times	A Lot	All the time
18. Pay attention to you?	1	2	3	4	5
19. Give you something or let you do something special when you're good?	1	2	3	4	5
20. Take away fun things to do when you're bad?	1	2	3	4	5
21. Help you with a problem?	1	2	3	4	5
22. Criticize you, or say you're doing things wrong?	1	2	3	4	5
23. Ask about your day?	1	2	3	4	5
24. Tell you what to do?	1	2	3	4	5
25. Ask, "What should we do today?"	1	2	3	4	5
26. Slap you?	1	2	3	4	5
27. Do things with you that you like to do?	1	2	3	4	5
28. Yell at you?	1	2	3	4	5
29. Say something nice about you?	1	2	3	4	5
30. Tell you that you'll get into trouble if you do something wrong?	1	2	3	4	5
31. Let you do things on your own?	1	2	3	4	5
32. Make you go by yourself when you've been bad?	1	2	3	4	5
33. Help you with a hard job when you need it?	1	2	3	4	5
34. Keep after you to do things?	1	2	3	4	5
35. Smile at you?	1	2	3	4	5

36. Listen to you?	1	2	3	4	5

Appendix B
PBI

Think about how you and your child *generally* get along. Mark how true each of the following sentences is about you and your child.

not at all true (I do not do this)
a little true
somewhat true
moderately true
quite a bit true
very true (I often do this)

1.	I lose my temper when my child doesn't do something I ask him/her to do.	0	1	2	3	4 5
2.	I have pleasant conversations with my child.	0	1	2	3	4 5
3.	I grab or handle my child roughly	0	1	2	3	4 5
4.	I try to teach my child new things	0	1	2	3	4 5
5.	I demand that my child does something	0	1	2	3	4 5
	(or stop doing something) right away.	0	1	2	3	4 5
6.	My child and I hug and/or kiss each other.	0	1	2	3	4 5
7.	I complain about my child's behavior or tell my child	0	1	2	3	4 5
	I don't like what s/he is doing.	0	1	2	3	4 5
8.	I laugh with my child about things we find funny.	0	1	2	3	4 5
9.	When my child misbehaves, I let him/her know what will happen if s/he doesn't behave.	0	1	2	3	4 5
10.	My child and I spend time playing games, doing crafts, or doing other activities.	0	1	2	3	4 5
11.	I listen to my child's feelings and try to understand them.	0	1	2	3	4 5
12.	I thank or praise my child.	0	1	2	3	4 5
13.	I spank or use physical punishment with my child.	0	1	2	3	4 5

14. I offer to help, or help my child with things s/he is doing.	0	1	2	3	4
5					
15. I threaten my child.	0	1	2	3	4
5					
16. I comfort my child when s/he seems scared, upset or unsure.	0	1	2	3	4
5					
17. I say mean things to my child that can make him/her feel bad.	0	1	2	3	4
5					
18. I hold or touch my child in an affectionate way.	0	1	2	3	4
5					
19. When I am disappointed in my child's behavior, I remind him/her about what I've done for him/her	0	1	2	3	4
5					
20. When my child asks for help or attention, I ignore him/her or make him/her wait until later.	0	1	2	3	4
5					

Appendix C

CASI
Instructions

Today you are going to read some stories and pretend that you are the child in the story. After you read the story, you are to think of a REASON for why things in the story happened. Now things can happen for LOTS of different reasons, and there are no right or wrong answers. What matters is why YOU think it might have happened to YOU.

After reading the story, there is a space for you to write down the one main reason why this happened to you. Then there are three questions about your reason for you to circle a number from 1 to 7.

You say something to some kids at school, and they make fun of you.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because of me 1 2 3 4 5 6 7 Because of me

2) Would this <u>reason</u> be true again?

Just this time 1 2 3 4 5 6 7 Again and again

3) Would this <u>reason</u> make other bad things happen?

Just this ONE thing 1 2 3 4 5 6 7 Again and again

You're painting a picture of a horse, but it doesn't turn out.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT								Because
Because of me	1	2	3	4	5	6	7	of me

2) Would this <u>reason</u> be true again?

Just this								Again
time	1	2	3	4	5	6	7	and again

3) Would this <u>reason</u> make other bad things happen?

Just this								Again
ONE thing	1	2	3	4	5	6	7	and again

You're playing with toys at home, and your mom yells at you.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT								Because
Because of me	1	2	3	4	5	6	7	of me

2) Would this <u>reason</u> be true again?

Just this								Again
time	1	2	3	4	5	6	7	and again

3) Would this <u>reason</u> make other bad things happen?

Just this								Again
ONE thing	1	2	3	4	5	6	7	and again

_____

You do a math worksheet, but you get a lot wrong.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because
Because of me 1 2 3 4 5 6 7 of me

2) Would this <u>reason</u> be true again?

Just this Again
time 1 2 3 4 5 6 7 and again

3) Would this <u>reason</u> make other bad things happen?

Just this Again
ONE thing 1 2 3 4 5 6 7 and again

You're lining up for lunch and you get pushed.

What is <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because
Because of me 1 2 3 4 5 6 7 of me

2) Would this <u>reason</u> be true again?

Just this Again
time 1 2 3 4 5 6 7 and again

3) Would this <u>reason</u> make other bad things happen?

Just this Again
ONE thing 1 2 3 4 5 6 7 and again

_____

After one day, your teacher says she's disappointed in you.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because of me 1 2 3 4 5 6 7 Because of me

2) Would this <u>reason</u> be true again?

Just this time 1 2 3 4 5 6 7 Again and again

3) Would this <u>reason</u> make other bad things happen?

Just this ONE thing 1 2 3 4 5 6 7 Again and again

You're playing on a sports team and you play poorly.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because of me 1 2 3 4 5 6 7 Because of me

2) Would this <u>reason</u> be true again?

Just this time 1 2 3 4 5 6 7 Again and again

3) Would this <u>reason</u> make other bad things happen?

Just this ONE thing 1 2 3 4 5 6 7 Again and again

_____

After you and your mom go to the toy store, you have a fight.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because
Because of me 1 2 3 4 5 6 7 of me

2) Would this <u>reason</u> be true again?

Just this Again
time 1 2 3 4 5 6 7 and again

3) Would this <u>reason</u> make other bad things happen?

Just this Again
ONE thing 1 2 3 4 5 6 7 and again

You run a race at school and you win.

What is the <u>one main reason</u> why this happened to you?

_____

_____

1) How much of this reason is because of you?

NOT Because
Because of me 1 2 3 4 5 6 7 of me

2) Would this <u>reason</u> be true again?

Just this Again
time 1 2 3 4 5 6 7 and again

3) Would this <u>reason</u> make other bad things happen?

Just this Again
ONE thing 1 2 3 4 5 6 7 and again

Appendix D
ACSQ

Directions

Please try to imagine yourself clearly in each of the situations that follow. Place yourself in each situation and decide what you think would have caused the event if it actually happened to you. We want you to choose only one cause for the event—the main cause if the event actually happened to you. For each situation, you will write down this cause in the blank at the top of the page. Then we will ask you some questions about what it would mean to you if the situation actually happened to you. It is important to remember there are no right or wrong answers to the questions. The important thing is to answer the questions how you would think and feel if the situations actually were occurring in your life.

1. You take a test and get a bad grade.

a. Write down why you think you got a bad grade.

_____

b. Did you get a bad grade because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason for getting a bad grade will cause you to get bad grades in the future? (Circle one number).

Will never again cause me to get a bad test grade	1	2	3	4	5	6	7	Will also cause me to get bad test grades in the future

d. Do you think the reason for your bad grade will cause problems in other parts of your life? (Circle one number).

Will only cause problems with my test grades	1	2	3	4	5	6	7	Will cause problems in all areas of my life

2. You want a boyfriend/ girlfriend but you don't have one.

a. Write down why you think you don't have a boyfriend/ girlfriend.

_____

b. Do you not have a boyfriend/ girlfriend because of something about you or because of something else? (Circle on number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason you don't have a boyfriend/ girlfriend will cause you to not have a boyfriend/ girlfriend in the future? (Circle one number).

Will never again cause me not to have a boyfriend/ girlfriend	1	2	3	4	5	6	7	Will also cause me not to have a boyfriend girlfriend in the future

d. Do you think the reason you don't have a boyfriend/ girlfriend will cause problems in other parts of your life? (Circle one number).

Will only cause problems in my love life	1	2	3	4	5	6	7	Will cause problems in all areas of my life

3. You want to go to a big party, but nobody invites you.

a. Write down <u>why</u> you think you weren't invited to the party.

_____

b. Were you not invited to the party because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason you weren't invited to the party will also cause you not to be invited to parties in the future? (Circle one number).

Will never again cause me to not get invited to parties	1	2	3	4	5	6	7	Will also cause me to not get invited to parties in the future

d. Do you think the reason you weren't invited to the party will cause problems in other parts of your life? (Circle one number).

Will only cause problems in my social life	1	2	3	4	5	6	7	Will cause problems in all areas of my life

4. You get a bad report card for the semester.

a. Write down <u>why</u> you think you got a bad report card.

_____

b. Did you get a bad report card because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason you got a bad report card will also cause you to get bad report cards in the future? (Circle one number).

Will never again cause me to get bad report cards	1	2	3	4	5	6	7	Will also cause me to get bad report cards in the future

d. Do you think the reason you got a bad report card will cause problems in other parts of your life? (Circle one number).

Will only cause problems with my report cards	1	2	3	4	5	6	7	Will cause problems in all areas of my life

5. You get in a big fight with your parents.

a. Write down <u>why</u> you think you got in a big fight with your parents.

_____

b. Did you get in the fight with your parents because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason you got in the fight will also cause you to get in fights with your parents in the future? (Circle one number).

Will never again cause me to get in a fight with my parents	1	2	3	4	5	6	7	Will also cause me to get in fights with my parents in future

d. Do you think the reason you got in the fight with your parents will cause problems in other parts of your life? (Circle one number).

Will only cause problems with my parents	1	2	3	4	5	6	7	Will cause problems in all areas of my life

6. Your teacher yells at you at school.

a. Write down <u>why</u> you think your teacher yelled at you at school.

_____

b. Did your teacher yell at you because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason your teacher yelled at you will also cause your teacher to yell at you in the future? (Circle one number).

Will never again cause the teacher to yell at me	1	2	3	4	5	6	7	Will always cause my teacher to yell at me in the future

d. Do you think the reason your teacher yelled at you will cause problems in other parts of your life? (Circle one number).

Will only cause problems with my teacher	1	2	3	4	5	6	7	Will cause problems in all areas of my life

7. You didn't make the honor roll but you wanted to.

a. Write down <u>why</u> you didn't make the honor roll.

_____

b. Did you not make the honor roll because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason you didn't make the honor roll will also cause you not to make the honor roll in the future? (Circle one number).

Will never again cause me to miss the honor roll	1	2	3	4	5	6	7	Will also cause me to miss honor roll again in the future

d. Do you think the reason you didn't make the honor roll will cause problems in other parts of your life? (Circle one number).

Will only cause problems with my academics	1	2	3	4	5	6	7	Will cause problems in all areas of my life

8. Someone says something bad about how you look.

a. Write down <u>why</u> you think they said something bad about your looks.

_____

b. Did someone say something bad about your looks because of something about you or because of something else? (Circle one number).

Totally caused by something else	1	2	3	4	5	6	7	Totally caused by something about me

c. Do you think the reason someone said something bad about your looks will cause people to say bad things about your looks in the future? (Circle one number).

Will never again cause people to say bad things about my looks	1	2	3	4	5	6	7	Will also cause people to say bad things about my looks in the future

d. Do you think the reason someone said something bad about your looks will cause problems in other parts of your life? (Circle one number).

Will only cause problems with what people say about my looks	1	2	3	4	5	6	7	Will cause problems in all areas of my life

Appendix E
CDI

Pick one sentence from each group that best fits you for the past two weeks. There are no right or wrong answers.
Just be as honest as possible.

1. ___ I am sad once in a while
___ I am sad many times
___ I am sad all the time

2. ___ Nothing will ever work out for me
___ I am not sure if things will work out for me
___ Things will work out for me O.K.

3. ___ I do most things O.K.
___ I do many things wrong
___ I do everything wrong

4. ___ I have fun in many things
___ I have fun in some things
___ Nothing is fun at all

5. ___ I am bad all the time
___ I am bad many times
___ I am bad once in a while

6. ___ I think about bad things happening to me once in a while
___ I worry that bad things will happen to me
___ I am sure that terrible things will happen to me

7. ___ I hate myself
___ I do not like myself
___ I like myself

8. ___ All bad things are my fault
___ Many bad things are my fault
___ Bad things are not usually my fault

9. ___ I feel like crying everyday
___ I feel like crying many days
___ I feel like crying once in a while

10. ___ Things bother me all the time
___ Things bother me many times
___ Things bother me once in a while

11. ___ I like being with people
___ I do not like being with people many times

___ I do not want to be with people at all

12. ___ I cannot make up my mind about things
___ It is hard to make up my mind about things
___ I make up my mind about things easily

13. ___ I look O.K.
___ There are some bad things about my looks
___ I look ugly

14. ___ I have to push myself all the time to do my schoolwork
___ I have to push myself many times to do my schoolwork
___ Doing schoolwork is not a big problem

15. ___ I have trouble sleeping every night
___ I have trouble sleeping many nights
___ I sleep pretty well

16. ___ I am tired once in a while
___ I am tired many days
___ I am tired all the time

17. ___ Most days I do not feel like eating
___ Many days I do not feel like eating
___ I eat pretty well.

18. ___ I do not worry about aches and pains
___ I worry about aches and pains many times
___ I worry about aches and pains all the time

19. ___ I do not feel alone
___ I feel alone many times
___ I feel alone all the time

20. ___ I never have fun at school
___ I have fun at school only once in a while
___ I have fun at school many times

21. ___ I have plenty of friends
___ I have some friends but I wish I had more
___ I do not have any friends

22. ___ My schoolwork is alright
___ My schoolwork is not as good as before
___ I do very badly in subjects I used to be good in

23. ___ I can never be as good as other kids
___ I can be as good as other kids if I want to
___ I am just as good as other kids

24. ___ Nobody really loves me
___ I am not sure if anybody loves me
___ I am sure that somebody loves me

25. ___ I usually do what I am told
___ I do not do what I am told most times
___ I never do what I am told

26. ____ I get along with people
____ I get into fights many times
____ I get into fights all the time

Appendix F
CDI-PR

For this questionnaire, please pick one sentence from each group that best fits your child for the past two weeks. After you pick a sentence from the first group, go on to the next group. There are no right or wrong answers. Just be as honest as possible.

1. ___ My child is sad once in a while
___ My child is sad many times
___ My child is sad all the time

2. ___ My child thinks nothing will ever work out for him/her
___ My child is not sure if things will work out for him/her
___ My child believes things will work out for him/her

3. ___ My child thinks he/she does most things O.K.
___ My child thinks he/she does many things wrong
___ My child thinks he/she does everything wrong

4. ___ My child has fun in many things
___ My child has fun in some things
___ Nothing for my child is fun at all

5. ___ My child thinks he/she is bad all the time
___ My child thinks he/she is bad many times
___ My child thinks he/she is bad once in a while

6. ___ My child thinks about bad things happening to him/her once in a while
___ My child worries that bad things will happen to him/her
___ My child is sure that terrible things will happen to him/her

7. ___ My child hates himself/herself
___ My child does not like himself/herself
___ My child likes himself/herself

8. ___ My child thinks all bad things are his/her fault
___ My child thinks many bad things are his/her fault
___ My child thinks bad things are not usually his/her fault

9. ___ My child feels like crying everyday
___ My child feels like crying many days
___ My child feels like crying once in a while

10. ___ Things bother my child all the time
___ Things bother my child many times
___ Things bother my child once in a while

11. ___ My child likes being with people
___ My child does not like being with people many times
___ My child does not want to be with people at all

12. ___ My child cannot make up his/her mind about things
___ It is hard for my child to make up his/her mind about things
___ My child makes up his/her mind about things easily

13. ___ My child thinks he/she looks O.K.
___ My child thinks there are some bad things about his/her looks
___ My child thinks he/she looks ugly

14. ___ My child has to push himself/herself all the time to do his/her schoolwork
___ My child has to push himself/herself many times to do his/her schoolwork
___ Doing schoolwork is not a big problem for my child

15. ___ My child has trouble sleeping every night
___ My child has trouble sleeping many nights
___ My child sleeps pretty well

16. ___ My child is tired once in a while
___ My child is tired many days
___ My child is tired all the time

17. ___ Most days my child does not feel like eating
___ Many days my child does not feel like eating
___ My child eats pretty well

18. ___ My child does not worry about aches and pains
___ My child worries about aches and pains many times
___ My child worries about aches and pains all the time

19. ___ My child does not feel alone
___ My child feels alone many times
___ My child feels alone all the time

20. ___ My child never has fun at school
___ My child has fun at school only once in a while
___ My child has fun at school many times

21. ___ My child has plenty of friends
___ My child has some friends but wishes he/she had more
___ My child does not have any friends

22. ___ My child's schoolwork is alright
___ My child's schoolwork is not as good as before
___ My child does very badly in subjects he/she used to be good in

23. ___ My child thinks he/she can never be as good as other kids
___ My child thinks he/she can be as good as other kids if he/she wants to
___ My child thinks he/she is just as good as other kids

24. ___ My child believes that nobody really loves him/her

___ My child is not sure if anybody loves him/her
___ My child is sure that somebody loves him/her

25. ___ My child usually does what he/she is told
___ My child does not do what he/she is told most times
___ My child never does what he/she is told

26. ____ My child gets along with people
____ My child gets into fights many times
____ My child gets into fights all the time

Appendix G
LEC-Parent

This is a list of things that sometimes happen to families. Please tell me whether or not each has happened to your family in the past 6 months. When we say a "close family member," it means a child, spouse, a parent, or relative living in your home.

Did this happen to your family?			How much did this upset your child?		
			Not Much	Some	A Lot
Yes	No	1. A close family member was away from home a lot.	1	2	3
Yes	No	2. Your family had to move a lot.	1	2	3
Yes	No	3. A close family member was sick, or had an accident and was in the hospital.	1	2	3
Yes	No	4. A close family member was very sick or badly hurt but not in the hospital.	1	2	3
Yes	No	5. A close family member was arrested or in jail.	1	2	3
Yes	No	6. A case worker came to your home.	1	2	3
Yes	No	7. Your child was upset by family arguments.	1	2	3
Yes	No	8. A close family member was robbed.	1	2	3
Yes	No	9. A pet your child loved very much died.	1	2	3
Yes	No	10. Your child saw someone get badly hurt.	1	2	3
Yes	No	11. A close family member lost their job, or has not had a job.	1	2	3
Yes	No	12. A close family member had a drinking or drug problem.	1	2	3
Yes	No	13. You or your spouse has been sad a lot.	1	2	3
Yes	No	14. Your family had serious problems with money.	1	2	3
Yes	No	15. A close family member is handicapped.	1	2	3
Yes	No	16. Your child has been involved in serious family fights.	1	2	3
Yes	No	17. A close family member died.	1	2	3
Yes	No	18. Another relative died.	1	2	3
Yes	No	19. Sometimes your family had little food to eat.	1	2	3
Yes	No	20. Different people have moved in and out of your home.	1	2	3
Yes	No	21. Close family members have yelled at each other.	1	2	3
Yes	No	22. Sometimes your child had few clothes to wear.	1	2	3
Yes	No	23. Your child had to take care of others in your family.	1	2	3
Yes	No	24. Your child has been in a foster home.	1	2	3
Yes	No	25. You were separated or divorced.	1	2	3
Yes	No	26. Your child had to live with a relative or friend for a while.	1	2	3
Yes	No	27. It has been very crowded where you live.	1	2	3

Yes	No	28. It hasn't been safe around where you live.	1	2	3
Yes	No	29. Your child's best friend moved away.	1	2	3
Yes	No	30. Your child has been upset by people getting hurt around where you live.	1	2	3

Appendix H
LEC-Child

Here are some things that sometimes happen to families. Please tell me whether or not each has happened to your family in the past 6 months.

Did this happen to you?			How much did this upset you? Not Much 	Some 	A Lot 
Yes	No	1. A close family member was away from home a lot.	1	2	3
Yes	No	2. Your family had to move a lot.	1	2	3
Yes	No	3. A close family member was sick, or had an accident and was in the hospital.	1	2	3
Yes	No	4. A close family member was very sick or badly hurt but not in the hospital.	1	2	3
Yes	No	5. A close family member was arrested or in jail.	1	2	3
Yes	No	6. A case worker came to your home.	1	2	3
Yes	No	7. You were upset by family arguments.	1	2	3
Yes	No	8. A close family member was robbed.	1	2	3
Yes	No	9. A pet you loved very much died.	1	2	3
Yes	No	10. You saw someone get badly hurt.	1	2	3
Yes	No	11. One of your parents lost their job, or has not had a job.	1	2	3
Yes	No	12. A close family member had a drinking or drug problem.	1	2	3
Yes	No	13. Mom or dad has been sad a lot.	1	2	3
Yes	No	14. Your family had serious problems with money.	1	2	3
Yes	No	15. A close family member is handicapped.	1	2	3
Yes	No	16. You have been involved in serious family fights.	1	2	3
Yes	No	17. A parent, brother, or sister died.	1	2	3
Yes	No	18. Another relative, who you were very close to died.	1	2	3
Yes	No	19. Sometimes your family has little food to eat.	1	2	3
Yes	No	20. Different people have moved in and out of your home.	1	2	3
Yes	No	21. Close family members have yelled at each other.	1	2	3
Yes	No	22. Sometimes you have had few clothes to wear.	1	2	3
Yes	No	23. You have had to take care of others in your family.	1	2	3
Yes	No	24. You have been in a foster home.	1	2	3
Yes	No	25. Your parents aren't together anymore.	1	2	3
Yes	No	26. You had to live with a relative or friend for a while.	1	2	3
Yes	No	27. You have been very crowded where you live.	1	2	3
Yes	No	28. It hasn't been safe around where you live.	1	2	3
Yes	No	29. Your best friend moved away.	1	2	3
Yes	No	30. You have been upset by people getting hurt around where you live.	1	2	3

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