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Parental Emotion Coaching and Child Emotion Regulation as Protective Factors for Children with Oppositional Defiant Disorder

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Abstract

We assessed linkages of mothers' emotion coaching and children's emotion regulation and emotion lability/negativity with children's adjustment in 72 mother-child dyads seeking treatment for Oppositional Defiant Disorder (ODD). Dyads completed questionnaires and discussed emotion-related family events. Maternal emotion coaching was associated with children's emotion regulation, which in turn was related to higher mother-reported adaptive skills, higher child-reported internalizing symptoms, and lower child-reported adjustment. When children were high in emotion lability/negativity, mothers' emotion coaching was associated with lower mother and child reports of externalizing behavior. Results suggest the role of emotion regulation and emotion lability in child awareness of socio-emotional problems and support the potential of maternal emotion coaching as a protective factor for children with ODD, especially for those high in emotion lability.

Keywords

emotion coaching; emotion regulation; emotion lability; Oppositional Defiant Disorder

Oppositional Defiant Disorder (ODD) is a disruptive behavior disorder in children that often involves conduct problems inside and outside of the home (Murrihy, Kidman, & Ollendick, 2010; Pfiffner, McBurnett, Rathouz, & Judice, 2005). Prevalence rates for ODD range from 1% to 13% in children aged 6 years to 17 years (Kessler et al., 2005; Maughan, Rowe, Messer, Goodman & Meltzer, 2004). Rather than occasional outbursts resulting from intermittent frustration or negative events, persistent resistance, argumentation, and acts of aggression that disrupt interactions with peers and family members are common problems for children with ODD (DSM-IV-TR, American Psychiatric Association, APA 2000). This behavioral disorder is associated with difficulties in children's abilities to communicate using emotion-based messages, establish and maintain friendships with peers, and succeed in domains that require cooperation with others (Salmon, Dadds, Allen, & Hawes, 2009).

Research strongly demonstrates pervasive deficits in emotion-related social problem-solving skills in aggressive and oppositional children (e.g., Dodge & Coie, 1987; Kendall, 1993;

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Lochman, White, & Wayland, 1991; Ollendick, Greene, Weist, & Oswald, 1990; Wolff & Ollendick, 2010). Though less studied, deficits in emotion regulation have been suggested as a central contributor to the development of ODD (Greene & Doyle, 1999) and are implied in the diagnostic criteria for ODD. These deficits in children's emotion regulation and emotion understanding may be ameliorated by parental emotional communication placing value on children's appropriate expression of emotion, emphasizing awareness of one's own and others' emotions, and engaging in direct instruction about emotional language and coping strategies (Applegate, Burleson, Delia & Sigel, 1992; Denham et al., 1997; Dunsmore & Karn, 2004; Eisenberg et al., 1998; Gottman, Katz & Hooven, 1996, 1997; Ramsden & Hubbard, 2002). This style of parental emotional communication, called emotion coaching, is less common in mothers of children with conduct problems than mothers of children without conduct problems. Importantly, when mothers of children with conduct problems engage in emotion coaching, their children begin to display more positive patterns of peer interaction (Katz & Windecker-Nelson, 2004).

The purpose of this study was thus to examine maternal emotion coaching and child emotion regulation as potential protective factors for children with oppositional defiant disorder. Children's externalizing symptoms were an outcome of interest given the characteristics of ODD. We were also interested in children's internalizing symptoms because of the high rate of comorbidity of conduct problems and internalizing disorders, particularly depression and anxiety (Cunningham & Ollendick, 2010; Wolff & Ollendick, 2006). Finally, we chose to examine children's adjustment as an index of adaptive socio-emotional functioning. In the sections below, we first discuss child emotion regulation and emotion lability in relation to behavior problems. We then describe research on emotion coaching before providing an overview of the current study.

Emotion Regulation and Emotion Lability

In this section we focus on two related but separate aspects of emotion regulatory processes believed to be important for socio-emotional development. First is children's ability to manage their emotional experiences and expressions to function well within the current situation (Shields & Cicchetti, 1998). This ability, called emotion regulation, may involve either increasing or decreasing the experience of particular emotions, depending on the context (Gross, 2002). With the development of emotion regulation skills, children learn to cope with stressful emotional experiences and to express their emotions in ways that fit with social expectations and are developmentally appropriate (Cole, Michel, & Teti, 1998; Saarni, 1990).

The second aspect of emotion regulatory processes we focused on is children's sensitivity to emotion-inducing events (Pietromonaco & Barrett, 2009). Children who have higher sensitivity or reactivity experience greater emotional and physiological responses to different situations and respond emotionally to a greater number of cues, for both positive and negative emotions (Barrett, 1998, 2006; Pietromonaco & Barrett, 2009). This tendency, often referred to as emotion lability, is thought to be related to deficits in effortful control and may be described as children's rapidity in responding to emotion eliciting stimuli and simultaneous difficulty in recovering from emotional reactions, especially negative emotional reactions (Shields & Cicchetti, 1998). A commonly used measure of emotion lability, the Emotion Regulation Checklist (Shields & Cicchetti, 1997), incorporates elements both of rapidly changing emotions and of frequent expression of negative emotions in the lability/negativity subscale. Therefore, when referring to research using this subscale in particular we will use the term emotion lability/negativity, and when referring to the broader theoretical construct we will use the term emotion lability.

In samples of typically-developing and maltreated children, emotion regulation and emotion lability/negativity as determined by the Emotion Regulation Checklist show a large negative correlation (Kim, Cicchetti, & Rogosch, 2011; Lunkenheimer, Shields & Cortina, 2007; Shields & Cicchetti, 1998). However, as will be discussed further below, examination of outcomes suggests that emotion regulation and emotion lability are not simply opposite ends of the same dimension. Furthermore, longitudinal data show that earlier emotion lability/negativity predicts later emotion regulation, but not vice versa (Kim et al., 2011). Emotion lability may be more strongly connected to temperament or individual differences. As such, being more labile may hinder children's learning of emotion regulation skills whereas emotion regulation may have little effect on children's tendency to react swiftly and strongly to emotion-related stimuli.

Outcomes related to emotion regulation

Extant literature supports positive associations between emotion regulation and children's adaptive outcomes. For preschool and kindergarten age children, better emotion regulation is related to less anxiety, better social skills, and academic success (Graziano et al., 2007; Miller et al., 2006; Trentacosta & Izard, 2007). With children followed from 2 years of age through 7 years of age, Blandon and colleagues (2010) found concurrent relations of emotion regulation to better social skills and less externalizing symptoms, and longitudinal relations of early emotion regulation to later decreases in externalizing symptoms. Southam-Gerow and Kendall (2002) note that two different patterns of deficits in emotion regulation seem characteristic of children at risk for psychological maladjustment: excessive inhibition of emotions, and undercontrol of emotions. For children at risk for disruptive behavior disorders such as ODD, undercontrol of emotions is typical. Thus, emotion regulation may serve as a protective factor for children with ODD because of its association with lower externalizing problems and with positive social and academic outcomes.

Outcomes associated with emotion lability

Emotion lability is associated with difficulties in interpersonal interaction and school performance. Eisenberg and colleagues (1995) found that children with more intense emotional reactions were less socially skilled and more likely to engage in antisocial behaviors in the school setting, both concurrently and longitudinally. Silk, Steinberg, and Morris (2003) found that youth who reported greater emotion lability through experience sampling methods were also more likely to report depressive symptoms and problem behaviors involving lying, arguing, theft, and truancy. Emotion lability may also be associated with greater aggression and difficulty with social situations, including social anxiety, by disrupting children's ability to perceive and correctly interpret social cues (Bierman, 2004; Dodge, 1986, 2003; Gross, 2002; Hanish et al., 2004). These youth may also be more likely to be overwhelmed by emotions and to respond with antisocial behavior, such as aggression (van Goozen et al., 1998).

In children with ODD, three symptom dimensions have been examined: hurtful (revenge-seeking), headstrong (opposing authority), and irritable (negative emotionality and reactivity). Irritable symptoms, which may reflect emotion lability, are the most strongly associated with emotional problems and difficulty with peer relations (Stringaris & Goodman, 2009b). Furthermore, children's temperamental emotionality at 3 years of age predicts greater odds of being diagnosed with comorbid ODD and internalizing disorder at about 7 ½ years (Stringaris, Maughan, & Goodman, 2010). Thus, in contrast to emotion regulation, emotion lability may serve as a risk factor for children with ODD because of its association with both externalizing and internalizing problems. Furthermore, because emotion lability is related to difficulties with emotional skills, children high in emotion lability may be especially likely to benefit from supportive parental emotion coaching.

Emotion Coaching

Gottman and colleagues (1996, 1997) developed the concept of parental meta-emotion philosophies or styles. An *emotion coaching* philosophy is characterized by parents' accepting attitude toward their child's emotions, active acknowledgement of their child's emotions, and verbal coaching to help their child understand, appropriately express, and cope with his or her own emotions. Research with preschoolers, elementary school age children, and adolescents demonstrates positive associations of parents' emotion coaching style with children's social behavior, internalizing symptoms, and behavior problems (Katz & Hunter, 2007; Katz & Windecker-Nelson, 2006; Shipman et al., 2007; Stocker, Richmond, Rhoades & Kiang, 2007). In a 3-year longitudinal study, Katz and Gottman (1997) found that parents' emotion coaching beliefs buffered preschool-age children from the negative effects of their parents' marital distress on child behavior and peer problems and school achievement. Though none of this research has been conducted with children with disruptive behavior disorders, it suggests that we might expect mothers' emotion coaching to be associated with children's greater adaptive behavior and lower externalizing and internalizing symptoms.

In regard to emotion regulation, both concurrent (Ramsden & Hubbard, 2002) and longitudinal (Cunningham, Kliewer, & Garner, 2009; Gottman et al., 1996) research suggest that emotion coaching may have indirect effects on child outcomes through its direct effect on emotion regulation. With typically-developing 4th graders, Ramsden and Hubbard (2002) found that mothers' emotion coaching was not directly related to children's teacher-rated aggression, but was indirectly associated with aggression through its direct association with a mother- and teacher-rating composite for children's emotion regulation. With 9- to 13-year-old children living in violent neighborhoods, Cunningham and colleagues (2009) found that, for boys, initial maternal emotion coaching predicted change in grades, internalizing and externalizing behaviors, and social skills six months later through the mediator of emotion regulation. With typically-developing preschoolers followed up three years later, Gottman and colleagues (1996) found that parents' emotion coaching at preschool was associated with academic achievement and teacher-rated peer relations three years later through physiological (vagal tone) and parent rating indices of child emotion regulation. Thus, we expected to find indirect associations of emotion coaching with child outcomes through child emotion regulation.

Only one prior study, to our knowledge, has examined emotion coaching in families with a child with a disruptive behavior disorder. Katz and Windecker-Nelson (2004) compared preschool-age children who met diagnostic criteria for ODD or for conduct disorder (CD) with matched control children with no diagnoses. Mothers of children with ODD or CD were lower in emotion coaching compared with mothers of control children, and children with ODD or CD were higher in aggression and showed lower quality peer interaction compared with control children. Moreover, across both groups of children, mothers' awareness of and coaching of children's emotions were related to better quality peer interactions.

Katz and Windecker-Nelson (2004) also found that children's level of aggression moderated associations of maternal emotion coaching with the quality of child peer interactions, though direction of effects was somewhat mixed. When children were high in aggression compared with low in aggression, there was a weaker positive association between mothers' awareness of children's emotions and children's quality of peer play, and a stronger positive association between mothers' coaching of children's emotions and children's negative affect during peer play. They suggest that children lower in aggression may be more receptive to mothers' emotion coaching style. They also propose that children higher in aggression, who

are likely to experience more negative emotions and more lability in regard to both positive and negative emotions, may be learning how to appropriately express emotions within the peer context from their mothers' active coaching about emotions.

Our sample of 7 – 14 year-old childen was older than Katz and Windecker-Nelson's (2004), and all were diagnosed with ODD. Nonetheless, their results suggested that we might expect children's emotion lability to moderate effects of mothers' emotion coaching on children's externalizing and internalizing symptoms and adjustment. It is possible that children lower in emotion lability would be more receptive to mothers' emotion coaching and, therefore, show stronger associations of maternal emotion coaching with child outcomes compared with children higher in emotion lability. However, our sample in the current study was composed of children in middle childhood and early adolescence and typically would be expected to have mastered basic emotion understanding and to have developed strategies for coping with emotions (Pons, Harris & deRosnay, 2004). As a result, we tentatively hypothesized that children higher in emotion lability, who might struggle more than their peers with interpreting socio-emotional cues and feeling overwhelmed by emotional experience, would need more parental scaffolding with emotions and therefore benefit more from maternal emotion coaching compared with children lower in emotion lability.

The Present Study

In the present study, parents' beliefs about emotions were measured using a self-report questionnaire and parent's emotion coaching behaviors were measured during mother-child discussions of family events. Parents also reported children's emotion regulation, emotion lability/negativity, externalizing and internalizing symptoms, and adaptive behavior. Children self-reported disruptive behavior, internalizing symptoms, and adaptive behavior. We expected that parents' emotion coaching would be directly related to children's emotion regulation and indirectly related to children's outcomes through emotion regulation. We also expected an interaction between children's emotion lability/negativity and parents' emotion coaching such that associations of emotion coaching with outcomes would be stronger for children high in emotion lability/negativity.

Method

Participants

Participants were 72 mother-child dyads (24 daughters, 48 sons; *M* child age = 9.69 years, *SD* = 1.78, range = 7 – 14 years; *M* mother age = 38.66 years, *SD* = 6.67, range = 26 – 58 years). Eight children (11.11%) were African-American, two (2.78%) were Asian-American, 56 (77.78%) were European-American, and three (4.17%) were Hispanic-American. One child (1.39%) was reported as having an "other" ethnic background, and for two children ethnic background was not reported. Most mothers were married to their child's father (56.94%); one (1.39%) was unmarried but living with her child's father. Twelve mothers (16.67%) were separated or divorced, four (5.56%) were married to the child's stepfather, and seven (9.72%) were single mothers. Three mothers (4.17%) were adoptive or foster parents. Four mothers (5.56%) reported other family structures. Most mothers had completed high school or trade school (98.57%). Twenty-two mothers had also completed college (31.43%) and 13 mothers had completed post-graduate education (18.57%). Although the mean family income was $60,982, it was highly variable ranging from a minimum income of $4,000 to a maximum income of $180,000.

Procedures

Families came to a university-based research clinic seeking treatment for children's oppositional behavior. As part of a two-session assessment process, parents completed a semi-structured diagnostic interview, questionnaires regarding their emotion-related beliefs, their child's emotion regulation and adjustment, and demographics. Children also completed questionnaires regarding their adjustment. Parents and children also engaged in a nine-minute discussion of emotion-related family events. Each of the two assessment sessions lasted approximately 2 hours.

Materials

The Anxiety Disorders Interview Schedule for *DSM-IV*, Parent Version (ADIS-P; Silverman & Albano, 1996)—The ADIS-P was used to determine diagnostic status in this clinic-referred sample of youth. The ADIS-P is a semi-structured interview designed for the diagnosis of most psychiatric disorders seen in childhood and adolescence. During the interview, the clinician assessed symptoms and obtained frequency, intensity, and interference ratings (0–8 scale). These symptoms and ratings were used by the clinician to identify diagnostic criteria and to develop a clinician's severity rating (CSR). A CSR of 4 or above (0–8) indicates a diagnosable condition.

The ADIS-P has yielded acceptable to excellent 7 to 14-day test-retest reliability estimates regarding parent-derived diagnoses, especially for the internalizing disorders (κ = .65–1.00; Silverman, Saavedra, & Pina, 2001). Subsequently, Grills and Ollendick (2003) demonstrated the reliability of the ADIS for both internalizing and externalizing disorders in youth whereas Jarrett, Wolff, and Ollendick (2007) demonstrated its concurrent validity in the diagnosis of these problems.

Trained graduate-student clinicians enrolled in an American Psychological Association-approved doctoral program in clinical psychology conducted the diagnostic interviews. In addition, all assessment interviews were videotaped; 35% of the interviews were reviewed to compute Kappa coefficients (κ = .89 for the diagnosis of ODD). Over 80% of the youth in this study met criteria for a second disorder (59.7% for ADHD; 58.3% for an anxiety disorder; 1.4% for a depressive disorder; 37.5% met criteria for both ADHD and an anxiety or depressive disorder in addition to ODD, per cents exceed 100% because some children had multiple disorders).

Behavior Assessment System for Children, 2nd edition (BASC-2; Reynolds & Kamphaus, 2004)—The BASC-2 is a system of instruments that evaluates behaviors, thoughts, and emotions of children and adolescents. Parent, teacher, and child reports are available. Each report yields t-scores adjusted for child age and sex. For the present study only the parent and child versions were used.

The parent report contains the following 15 subscales: Adaptability, Aggression, Anxiety, Attention Problems, Atypicality, Conduct Problems, Depression, Functional Communication, Hyperactivity, Leadership, Learning problems, Social Skills, Somatization, Study Skills, and Withdrawal (a measure of social impairment). In the present study, we used three composite scales from the parent report: Externalizing (Aggression, Conduct Problems, Hyperactivity), Internalizing (Anxiety, Depression, Somatization), and Adaptive Skills (Adaptability, Functional Communication, Leadership, Social Skills, Study Skills).

The child report contains the following 14 subscales: Anxiety, Attention Problems, Attitude to School, Attitude to Teachers, Atypicality, Depression, Hyperactivity, Interpersonal Relations, Locus of Control, Relations with Parents, Self-Esteem, Self-Reliance, Sense of

Inadequacy, and Social Stress. In the present study, we used two composite scales from the child report: Internalizing (Anxiety, Depression, Locus of Control, Sense of Inadequacy, Somatization, Social Stress) and Personal Adjustment (Interpersonal Relations, Relations with Parents, Self-Esteem, Self-Reliance).

The BASC Rating Scales have good to excellent internal consistency (.70s–.90s; Kamphaus & Frick, 2005) and test-retest reliability over a 2- to 8-week period (.74 .94; Reynolds & Kamphaus, 2004). Research also provides evidence that the BASC demonstrates good convergent and discriminant validity (Merrell, Blade, Lund, & Kempf, 2003), as well as acceptable criterion validity (Reynolds & Kamphaus, 2004).

Beck Youth Inventories (2nd Edition) for Children and Adolescents (Beck, Beck, Jolly, & Steer, 2005)—Children self-report their symptoms and thoughts about themselves on this 100-item questionnaire using a 4-point Likert-type scale (0=never, 3=always). Five 20-item subscales are included: anger, anxiety, depression, disruptive behavior, and self-concept. Each subscale yields a t-score adjusted for age and sex. The subscales show good internal consistency (αs = .85 or greater) and test-retest reliability over a 7-day period (*r*s = .74 or greater). In the present study only the disruptive behavior subscale was included, because children's internalizing symptoms and adjustment were measured by the BASC.

Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997)—The ERC consists of 24 items describing children's emotion-related behavior. Parents rate how frequently their child shows the behavior described on a 4-point Likert-type scale (1=never, 4=almost always). The ERC includes two subscales: (a) emotion regulation (8 items; sample item: "Displays appropriate negative emotion (for example, anger, fear, frustration, distress) in response to hostile, aggressive, or intrusive acts by peers"; α = .56 for this sample) and (b) emotion lability/negativity (15 items; sample item: "Exhibits wide mood swings (for example, the child's emotional state is difficult to anticipate because s/he moves quickly from very positive to very negative emotional states)"; α = .79 for this sample). We note that the internal consistency of the subscales for this sample is lower than has been found in previous work with maltreated and nonmaltreated children (αs ≈ .95 for emotion lability/ negativity and .82 for emotion regulation, Kim et al., 2011; Shields & Cicchetti, 1997). However, the internal consistency for the emotion regulation subscale is similar to that found in previous work with children living in high violence neighborhoods (α = .62, Cunningham et al., 2009; the emotion lability/negativity subscale was not used in the Cunningham et al. study).

Parents' Beliefs about Children's Emotions questionnaire (PBACE, Halberstadt et al., 2008)—On this measure parents rate their agreement with statements about beliefs about children's emotions on a 6-point Likert-type scale (1= strongly disagree, 6= strongly agree). In this study the short version of the questionnaire was used, which consists of 61 items. Subscales of interest for this study were (a) value of positive emotions (5 items; sample item: "It is important for children to be able to show when they are happy"; α =.74 for this sample), (b) value of negative emotions (7 items; sample item: "It is useful for children to be angry sometimes"; α =.88 for this sample), and (c) parents' role in guiding children's emotions (5 items, sample item: "It's a parent's job to teach their children how to handle their emotions," α =.81 for this sample).

Parent-Child Emotion Talk Task—Each dyad engaged in a 9-minute video-recorded conversation about family memories. Three cards were used to prompt a range of emotion-related discussion: (a) describe something fun you did last week with the other person, (b)

describe a time in the last week when you were with the other person and got upset, mad, sad, or scared, and (c) describe something you did last Sunday. Cards were shuffled before the dyad began. Parents and children were instructed to turn over cards one by one and to each respond to all three cards. They were instructed to feel free to discuss memories described by each other just as they would at home. If they finished before time was up, they could use any remaining time to go back to any of the cards they wished. However, only the first response to each card was coded.

Videotapes were coded for parents' encouragement and coaching of their child's emotions when the child was responding to each card. A 4-point scale was used: 0 = no encouragement, 1 = acknowledgement of the event described, 2 = acknowledgement of the child's emotion, and 3 = emotion coaching. Encouragement of positive and negative emotions was coded separately, yielding two scores for each card. For descriptive purposes, we also coded children's reference to their own positive and negative emotions on a 3-point scale, with 0 = none, 1 = use of emotion term or nonverbal indicator of emotion, 2 = multiple references to emotion (verbal or nonverbal). Parental encouragement and child reference to emotion were each averaged across all three cards. When families did not finish all three cards within the 9-minute time limit, scores for positive and negative encouragement were pro-rated according to number of cards completed. At least 25% of all videotapes were coded for reliability by independent coders and reliability was maintained at ICC > 0.80 throughout the study.

Results

Preliminary Analyses

First, scores for mothers' beliefs about the value of positive emotions, value of negative emotions, and their role in guiding their child's emotions, and mothers' behaviors encouraging positive and negative emotions were examined. Please see Table 1 for descriptive statistics and correlations among variables. Children's references to positive and negative emotions are included in this table for descriptive purposes. Means for mothers' beliefs about the value of positive and negative emotions and their role in guiding their child's emotions are consistent with those found with parents of children aged 5 to 12 years who have experienced separation or divorce (Buonomano, Her, Foster, Whitmore, & Dunsmore, 2011) and with Latina mothers of preschool-age children (Perez-Rivera & Dunsmore, 2011). These means indicate generally strong beliefs in the value of positive emotions and the need for parental guidance about emotions, and moderately strong beliefs in the value of negative emotions. Correlations show that mothers who more strongly believe positive emotions are valuable also tend to believe that negative emotions are valuable and that their guidance of their child's emotions is important.

The mean for mothers' encouragement of children's positive emotions is consistent with those found with parents who have experienced separation or divorce, whereas that for mothers' encouragement of children's negative emotions is higher than that found with parents who have experience separation or divorce (Buonomano et al., 2011). These means indicate a general tendency to at least sometimes acknowledge the child's version of events, for both positive and negative emotions. Conversely, the mean for children's reference to negative emotions is consistent with that found with children who have experienced separation or divorce, whereas that for children's reference to positive emotions is lower than that found with children who have experienced separation or divorce (Buonomano et al., 2011). These means indicate that children generally refer to a negative emotion about once across all three cards. Because one card prompts for a negative emotional experience, at least one reference to negative emotion would be expected. Children's references to positive emotions are virtually absent, perhaps not surprising in a treatment-seeking sample.

Correlations show that mothers who believe negative emotions are valuable have children who make fewer references to negative emotions. Mothers who encourage positive emotions more during the task have children who refer to positive emotions more during the task, and mothers who encourage negative emotions more during the task have children who refer to both positive and negative emotions more during the task.

We standardized and summed scores for mothers' belief that positive emotions are valuable, mothers' belief that negative emotions are valuable, mothers' belief in parental guidance, and mothers' encouraging of children's positive and negative emotions to form an emotion coaching composite. This composite therefore took advantage of multiple sources of information and was formed in order to provide a parsimonious measure of mothers' emotion coaching that included both beliefs and behaviors that are key elements of the emotion coaching construct.

Second, missing values were imputed using maximum likelihood estimates. Five cases were affected. Descriptive data for all study variables are reported in Table 2.

Hypothesis Testing

Direct and indirect associations—Correlations are reported in Table 3. Consistent with hypotheses, emotion coaching was positively associated with emotion regulation and negatively associated with children's report of disruptive behavior. Also consistent with hypotheses, emotion regulation was positively associated with children's adaptive skills reported by parents. Contrary to hypotheses, emotion regulation was positively associated with children's report of internalizing symptoms and negatively associated with children's report of personal adjustment. Emotion lability/negativity was positively associated with parents' report of children's externalizing and internalizing symptoms and negatively associated with parents' report of children's adaptive skills.

We hypothesized that emotion coaching might be indirectly associated with child outcomes through its relation to emotion regulation. Indirect associations of emotion coaching with child outcomes through emotion regulation were tested using Preacher and Hayes' (2004) SAS macro to bootstrap the estimate of the indirect effect. Number of bootstrap resamples was set to 1000.

There was no evidence for an indirect effect of emotion coaching on externalizing symptoms, as the 95% confidence intervals included 0. The mean indirect effect of emotion coaching on mothers' report of children's externalizing symptoms was .05, standard error = .18, 95% confidence interval = −.30 – .45. The mean indirect effect of emotion coaching on children's report of disruptive behavior was .03, standard error = .10, 95% confidence interval = −.15 – .24.

There was also no evidence for an indirect effect of emotion coaching on mothers' report of children's internalizing symptoms, mean indirect effect = −.07, standard error = .17, 95% confidence internal = −.47 – .28. However, there was evidence for an indirect effect of emotion coaching children's report of internalizing symptoms, as the 95% confidence interval did not include 0. The mean indirect effect of emotion coaching on children's report of internalizing symptoms was .44, standard error = .17, 95% confidence interval = .12 – .82.

Finally, there was evidence for an indirect effect of emotion coaching on both mother and child reports of children's adjustment, as the 95% confidence intervals did not include 0. The mean indirect effect of emotion coaching on mothers' report of children's adaptive skills was .29, standard error = .16, 95% confidence interval = .04 – .66. The mean indirect

effect of emotion coaching on children's report of adaptive skills was −.28, standard error = .19, 95% confidence interval = −.74 to −.005.

Moderation analyses—We hypothesized that emotion coaching might have greater impact for children high in emotion lability/negativity. We first conducted a multivariate regression, using the general linear models procedure in SAS to retain the continuous nature of the between-subjects predictor variables while accounting for within-subjects variability in the criterion variables (SAS Institute Inc., 2008). Within-subjects factors were type of outcome (externalizing, internalizing, adjustment) and reporter (mother, child). Between subjects predictors were children's emotion lability/negativity, mothers' emotion coaching, and their interaction.

A main effect was found for children's emotion lability/negativity, $F(1, 68) = 20.15$, $p < .0001$. Two significant two-way interactions were found: the interaction of reporter and emotion lability/negativity ($F(1, 68) = 6.85$, $p < .05$) and the interaction of type of outcome and emotion lability/negativity ($F(2, 67) = 6.31$, $p < .01$). These effects were subsumed within the three-way interaction of type of outcome, reporter, and emotion lability/negativity, $F(2, 67) = 7.30$, $p < .01$. Unrelated to the hypothesis that emotion coaching and emotion lability/negativity would interact, these effects reflect the correlation findings that children's emotion lability/negativity was related to outcomes reported by mothers, but not by children, and that emotion lability/negativity was positively related to externalizing and internalizing symptoms and negatively related to adjustment.

Finally, the three-way interaction of type of outcome, emotion lability/negativity, and emotion coaching was significant, $F(2, 67) = 3.38$, $p < .05$. Univariate tests showed that externalizing symptoms were predicted by the main effect of emotion lability/negativity, the main effect of emotion coaching and the interaction of emotion lability/negativity and emotion coaching (omnibus $F(3, 68) = 7.49$, $p < .001$, $R^2 = .25$; effect of emotion lability/negativity $t(68) = 3.84$, $p < .001$, effect of emotion coaching $t(68) = 2.15$, $p < .05$, effect of interaction $t(68) = -2.41$, $p < .05$). Internalizing symptoms were predicted only by the main effect of emotion lability/negativity, omnibus $F(3, 68) = 4.90$, $p < .01$, $R^2 = .18$; effect of emotion lability/negativity $t(68) = 3.59$, $p < .001$, effect of emotion coaching $t(68) = .10$, *ns*, effect of interaction $t(68) = -.25$, *ns*. Adjustment was not predicted, omnibus $F(3, 68) = 1.66$, *ns*.

To illustrate these two-way interactions, we first formed three groups for mothers' emotion coaching: (a) those whose scores were more than one standard deviation below the mean, (b) those whose scores were more than one standard deviation above the mean, and (c) those whose scores were within one standard deviation of the mean (Aiken & West, 1991). We then conducted a median split on children's emotion lability/negativity. Last, we plotted means for externalizing symptoms and disruptive behavior for each group. These are shown in Figures 1 and 2, respectively.

As Figure 1 shows, when children were high in emotion lability/negativity, mothers higher in emotion coaching reported fewer child externalizing symptoms ($\beta = -.40$). When children were low in emotion lability/negativity, mothers higher in emotion coaching reported more child externalizing symptoms (($\beta = .24$).

As Figure 2 shows, when children were high in emotion lability/negativity, children of mothers higher in emotion coaching reported less disruptive behavior ($\beta = -.34$). When children were low in emotion lability/negativity, there was no association between mothers' emotion coaching and children's report of disruptive behavior ($\beta = -.08$).

Discussion

The purpose of this study was to investigate associations of mothers' emotion coaching and children's emotion regulation with positive (adjustment) and negative (externalizing and internalizing symptoms) outcomes for children with ODD. We aimed to examine whether patterns of associations suggested roles as potential protective factors. Specifically, we expected that mothers' emotion coaching would be directly related to children's emotion regulation and indirectly associated through emotion regulation with children's fewer externalizing and internalizing symptoms and better adjustment. We also expected that for children higher in emotion lability, associations of maternal emotion coaching with child outcomes would be stronger, whereas for children lower in emotion lability, associations of maternal emotion coaching with child outcomes would be weaker.

In regard to direct associations among our variables of interest, findings were largely consistent with hypotheses. Maternal emotion coaching was associated with children's greater emotion regulation and lower child report of their own disruptive behavior. Children's emotion regulation was also related to parents' report of greater child adaptive skills. Children's emotion lability/negativity was positively related to their mother's report of their externalizing and internalizing symptoms, and negatively related to their mother's report of their adaptive skills.

Contrary to expectation, however, children's emotion regulation was associated with children's own reports of more internalizing symptoms and lower personal adjustment. We first considered whether the emotion regulation subscale was performing as a measure of internalizing symptoms for this sample. Examination of item content suggested that some items might be related to *lack* of internalizing symptoms (cheerful; not sad or listless; not showing flat affect) and others seemed, in regard to face validity, unrelated to internalizing symptoms (labeling feelings; showing empathy; showing appropriate negative emotions). We also considered the relatively low internal consistency of the emotion regulation subscale for this sample. However, these potential explanations would suggest either an absence of association of emotion regulation with internalizing and adjustment (because of "noise" in the measurement of emotion regulation) or a negative association of emotion regulation with internalizing and positive association with adjustment (because some item content appears to portray lack of internalizing symptoms).

We therefore next considered how emotion regulation might sometimes appear to be a deficit. Perhaps children with better emotion regulation skills have more insight into their socio-emotional difficulties or are more willing to report these problems. Children with better emotion regulation are typically more likely to make efforts to correct emotional difficulties, once they are aware of them (Stegge & Terwogt, 2007). We note that children's emotion regulation was unrelated to their own reports of their disruptive behavior. However, disruptive behavior is more readily observable and may carry more concrete consequences for children compared with internalizing symptoms, and so children's awareness of their emotional experiences may play less of a role in their reports of disruptive behavior compared with internalizing symptoms and positive socio-emotional experiences. Consistent with previous research, children's and mothers' reports of children's externalizing behaviors were correlated in this sample, whereas children's and mothers' reports of children's internalizing symptoms and adjustment were not (Kolko & Kazdin, 1993).

Furthermore, perceived ability to cope with events eliciting fear and sadness, which would be related to internalizing symptoms, is lower than with events eliciting anger (Scherer, 1997). Thus, the ability to identify vulnerable emotional experiences such as those associated with internalizing symptoms may call on greater emotion regulation skill

compared with the ability to identify emotional experiences associated with anger and externalizing behavior. Alternatively, engaging in emotion regulation, especially regulation of emotions such as fear and sadness, may lead to anxiety because of the perception that doing so is hard and that success is not assured, thereby increasing likelihood of experiencing internalizing symptoms.[1]

In sum, though children's emotion regulation skill may help them display more adaptive behavior, as their mothers report, it may at the same time sensitize them to their problems or help them be more comfortable acknowledging problems, thereby resulting in their own higher report of internalizing symptoms and lower report of adjustment. In the short term, this may appear to be a detrimental correlate of emotion regulation; in the long term, however, greater acknowledgement of problems may be beneficial for treatment success.

In regard to the hypothesized indirect associations of maternal emotion coaching with child outcomes through emotion regulation, three indirect effects were found to be significant. Mothers' emotion coaching had an indirect effect on mothers' and children's report of children's adaptive skills and on children's report of internalizing symptoms through emotion regulation. Because emotion coaching focuses on increasing children's awareness and acceptance of their own negative emotions as well as teaching appropriate expression and coping skills, its effect through emotion regulation may be specific to internalizing rather than externalizing symptoms in this sample of children who tend to act out when facing socio-emotional stresses. In other words, by facilitating children's recognition of their sad and anxious feelings as well as their anger, emotion coaching may enhance children's emotion regulation skills specifically in regard to negative self-focused feelings, which then promotes recognition and reporting of internalizing symptoms.

In regard to adaptive skills, better emotion regulation would facilitate children's adaptive behavior, and mothers' emotion coaching might not only foster children's emotion regulation but may also help mothers to be more aware of their children's strengths and positive behavior. Conversely, as mentioned above, children with ODD who have better emotion regulation may have more insight into how their behavior compares with that of their peers and therefore rate their adaptive skills as lower than do children with ODD who have less emotion regulation skill.

We note that emotion regulation and emotion lability/negativity were not significantly related in our sample. This is in contrast to past literature that has shown large negative associations between these constructs (e.g., Kim et al., 2011; Shields & Cicchetti, 1998). This absence of negative association between emotion lability/negativity and emotion regulation might be related to the lower internal consistency found for this sample. Despite the noise in their measurement, however, we found significant and theoretically-consistent associations of emotion lability/negativity and emotion regulation with child outcomes. Thus, we speculate that our focus on a sample of children with ODD may be responsible for the lack of significant negative association between emotion lability/negativity and emotion regulation.

Previous research has not examined the relation between emotion regulation and emotion lability/negativity in children with ODD. The nature of the deficits characteristic of ODD may intensify separation between these two constructs. Children with ODD are unlikely to possess low emotion lability/negativity simply because they are calm and cheerful. Rather, when they are low in emotion lability/negativity, they may show a more cold and strategic pattern of aggression, tending to hold grudges and enact revenge for slights. Indeed, when

[1]We thank an anonymous reviewer for suggesting this alternate interpretation.

examining irritable, headstrong, and hurtful dimensions of ODD symptoms, Stringaris and Goodman (2009a) found that the hurtful symptoms at baseline were the strongest predictor of aggressive conduct disorder symptoms at three-year follow-up. Better emotion regulation skills would, perhaps counterintuitively, make these youth who show more cold and callous revenge-seeking even better at planning disruption and harm.

Children with ODD who are high in emotion lability/negativity (and therefore, perhaps, high in irritable symptoms) may show a lack of emotion regulation skill, impulsively acting out. Thus, the negative affect component of lability/negativity may be especially important in the greater externalizing and internalizing symptoms and lesser adjustment reported by parents. Alternatively, some children high in emotion lability/negativity may show brittle emotion regulation, seeming to be well-regulated much of the time but displaying "breakthrough" episodes of intense anger and hostility. We note that the lability/negativity subscale had acceptable internal consistency, suggesting that for our sample, both components (reactivity and tendency to show negative emotions) cohere. Perhaps the experience of rapid changeability in emotions and negative valence of emotions may go together for children with ODD, thereby placing even greater demands on emotion regulation skills. Further research examining symptom profiles and pathways to ODD may illuminate these possibilities.

We had also hypothesized that children's emotion lability would moderate associations of emotion coaching with outcomes. No moderation effects were found for children's internalizing symptoms or adjustment. However, both parent and child reports of externalizing were predicted by the interaction of emotion coaching and emotion lability/negativity and showed patterns that were largely consistent with hypotheses. Across parent and child reporters, there was a negative association of maternal emotion coaching with child externalizing symptoms for children high in emotion lability/negativity.

For children low in emotion lability/negativity, no association between maternal emotion coaching and child externalizing was found when using children's report, whereas the association was positive when using parents' report. For children low in emotion lability/negativity, it may be that parents' emotion coaching exacerbates externalizing symptoms, perhaps by causing rumination or extending the experience of anger about problems. Because these children tend to display relatively little negative affect compared with children high in emotion lability/negativity, parental emotion coaching may introduce reflection on negative emotion with which children are less prepared to cope. However, because this finding was limited to parents' report, we think it more likely that parents who engage in more emotion coaching may be more aware of their children's problem behavior and therefore report higher externalizing symptoms. Although this may seemingly undermine an argument that it is beneficial to encourage parental emotion coaching, when parents are more aware of their children's problems, they may be in a better position to help them. Thus, in the short-term the association between emotion coaching and externalizing may be detrimental for children low in lability/negativity, whereas in the long-term there may be benefits of emotion coaching for children low in lability/negativity. Longitudinal research demonstrates benefits of emotion coaching for children's greater adjustment and for boys' lower internalizing and externalizing symptoms through the mediator of emotion regulation (Cunningham et al., 2009; Gottman et al., 1996).

For children high in emotion lability/negativity, across both parent and child reports, less externalizing symptoms were reported when parents were higher in emotion coaching. This suggests that maternal emotion coaching may be an especially important protective factor for children who are at risk for more externalizing problems due to lability in emotional responsiveness and tendency to express negative affect.

We note three strengths of our study in particular. First, our sample was relatively large given our focus on a treatment-seeking population, and the diagnostic process was rigorous, relying on well-established measures administered by well-trained assessors. Second, our measure of maternal emotion coaching combined both parent self-report of relevant beliefs and naturalistic observation of parental behavior. This composite thus relied on multiple methods and indexed critical elements of the emotion coaching construct. Third, our measures of children's outcomes relied on well-used and well-validated parent and child reports.

These positive features notwithstanding, a major limitation of our study is its reliance on a correlational design. Child characteristics and emotional expressive styles may influence parents' tendency to engage in emotion coaching and, as our results suggest, may moderate the efficacy of parental emotion coaching. Indeed, examination of the components of our emotion coaching composite highlights the transactional nature of parent-child emotional communication. Despite holding beliefs about children's emotions that, on average, are similar to those of parents of typically-developing children, the parents in our sample engaged in more encouragement of their child's negative emotions than did parents of typically-developing children in previous work (Buonomano et al., 2011). Children's reference to their own negative emotions was, on average, consistent with that of typically-developing children, whereas their reference to their own positive emotions was not only lower than that of typically-developing children but was almost absent. These patterns may set up a self-perpetuating dynamic, in which children's tendency to focus predominantly on negative emotions elicits parental attempts to support healthy coping with negative emotions, and this parental encouragement maintains the child's focus on negative rather than positive emotions.

We note that parents in our sample were engaging in equivalent encouragement of positive compared with negative emotions, which may seem to represent balance. However, a positivity ratio of 2.9 (experiencing 2.9 positive emotions to every one negative emotion over time) has been identified as a critical point above which people flourish and below which people show distress (Fredrickson & Losada, 2005). Thus, more encouragement of positive compared with negative emotions may be necessary for effective emotion coaching, especially for children with ODD, who tend to focus on negative affect (in our sample, 4:1 negative:positive emotion references) Conversely, the tendency of children with ODD to focus on negative affect may make it more difficult for parents to effectively encourage positive emotions in their children.

In our future work, we plan to follow families through treatment to examine how initial emotion coaching may relate to treatment response and whether trajectories of change in emotion coaching over the course of treatment are associated with long-term outcomes for children with ODD. Controlled intervention studies, in which parents are randomly assigned to be trained in emotion coaching, will also be critical for determining causal links between emotion coaching and child outcomes. In regard to study limitations, we also briefly note that, though our sample was representative of children with ODD in regard to its gender distribution, it was largely European-American and drew relatively more families from rural areas.

Overall, our pattern of results suggests a key role of child emotion regulation for internalizing symptoms and adaptive outcomes for children with ODD, with maternal emotion coaching indirectly contributing to the prediction of these outcomes. For externalizing symptoms, our pattern of results suggests that maternal emotion coaching may serve a protective function for children with ODD, and that benefits may be greater for children high in emotion lability. These results provide a promising contribution both for

basic research on emotion socialization processes and for intervention and prevention research aimed at improving outcomes for children at risk for disruptive behavior disorders. This is especially important for children in middle childhood and early adolescence, as in our sample, who show more mixed responses to treatment compared with younger children (Kazdin, 2009).

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References

Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage; 1991.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-IV-TR. Washington, DC: American Psychiatric Association; 2000.

Applegate, JL.; Burleson, BR.; Delia, JG.; Sigel, IE. Reflection-enhancing parenting as an antecedent to children's social-cognitive and communicative development. In: McGillicuddy-Delisi, AV.; Goodnow, J., editors. Parental belief systems: The psychological consequences for children. 2. Hillsdale, NJ: Lawrence Erlbaum Associates; 1992. p. 3-39.

Barrett, KC. A functionalist perspective to the development of emotions. In: Mascolo, MF.; Griffin, S., editors. What develops in emotional development? Emotions, personality, and psychotherapy. New York, NY: Plenum Press; 1998. p. 109-133.

Barrett LF. Valence as a basic building block of emotional life. Journal of Research in Personality. 2006; 40:35–55.

Beck, JS.; Beck, AT.; Jolly, J.; Steer, R. Beck youth inventories of emotional and social impairment. 2. San Antonio: Psychological Corporation; 2005. manual

Bierman, KL. Peer rejection: Developmental processes and intervention strategies. New York: Guilford Press; 2004.

Blandon AY, Calkins SD, Grimm KJ, Keane SP, O'Brien M. Testing a developmental cascade model of emotional and social competence and early peer acceptance. Development and Psychopathology. 2010; 22:737–748. [PubMed: 20883578]

Buonomano, LC.; Her, P.; Foster, K.; Whitmore, C.; Dunsmore, JC. Linkages of parents' beliefs about emotions with coparenting and children's socio-emotional competence in the context of divorce. Poster presented at the Society for Research in Child Development; Montreal, Québec, Canada. Apr. 2011

Cole PM, Michel MK, Teti LOD. The development of emotion regulation and dysregulation: A clinical perspective. Monographs of the Society for Research in Child Development. 1994; 59:73–102. [PubMed: 7984169]

Cunningham JN, Kliewer W, Garner PW. Emotion socialization, child emotion understanding and regulation, and adjustment in urban African American families: Differential associations across child gender. Development and Psychopathology. 2009; 21:261–283. [PubMed: 19144233]

Cunningham NR, Ollendick TH. Comorbidity of anxiety and conduct problems in children: Implications for clinical research and practice. Clinical Child and Family Psychology Review. 2010; 13:333–347. [PubMed: 20809124]

Denham SA, Blair KA, DeMulder E, Levitas J, Sawyer K, Auerbach-Major S, Queenan P. Preschool emotional competence: Pathway to social competence. Child Development. 1997; 74:238–256. [PubMed: 12625448]

Dodge, KA. Social information processing variables in the development of aggression and altruism in children. In: Zahn-Waxler, C.; Cummings, M.; Radke-Yarrow, M., editors. The development of altruism and aggression: Social and biological origins. New York: Cambridge University Press; 1986. p. 280-302.

Dodge, KA. Do social information-processing patterns mediate aggressive behavior?. In: Lahey, BB.; Moffitt, TE.; Caspi, A., editors. Causes of conduct disorder and juvenile delinquency. New York: Guilford Press; 2003. p. 254-274.

Dodge KA, Coie JD. Social-information-processing factors in reactive and proactive aggression in children's peer groups. Journal of Personality and Social Psychology. 1987; 53:1146–1158. [PubMed: 3694454]

Dunsmore JC, Karn MA. The influence of peer relationships and maternal socialization on kindergartners' developing emotion knowledge. Early Education and Development. 2004; 15:39–56.

Eisenberg N, Fabes RA, Murphy B, Maszk P, Smith M, Karbon M. The role of emotionality and regulation in children's social functioning: A longitudinal study. Child Development. 1995; 66:1360–1384. [PubMed: 7555221]

Eisenberg N, Guthrie IK, Fabes RA, Reiser M, Murphy BC, Holgren R, Maszk P, Losoya S. "The relations of regulation and emotionality to resiliency and competent social functioning in elementary school children": Erratum. Child Development. 1998; 69:767–790. [PubMed: 9680684]

Fredrickson BL, Losada MF. Positive affect and the complex dynamics of human flourishing. American Psychologist. 2005; 60:678–686. [PubMed: 16221001]

van Goozen SHM, Matthys W, Cohen-Kettenis PT, Gispen-de Wied C, Wiegant VM, van Engeland H. Salivary cortisol and cardiovascular activity during stress in Oppositional-Defiant Disorder boys and normal controls. Society of Biological Psychiatry. 1998; 43:531–539.

Gottman JM, Katz LF, Hooven C. Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. Journal of Family Psychology. 1996; 10:284–291.

Gottman, JM.; Katz, LF.; Hooven, C. Meta-emotion: How families communicate emotionally. Mahwah, N.J: Lawrence Erlbaum Associates; 1997.

Graziano PA, Keane SP, Calkins SD. The role of emotion regulation in children's early academic success. Journal of School Psychology. 2007; 45:3–19. [PubMed: 21179384]

Greene RW, Doyle AE. Toward a transactional conceptualization of oppositional defiant disorder: Implications for assessment and treatment. Clinical Child and Family Psychology Review. 1999; 2:129–148. [PubMed: 11227071]

Grills AE, Ollendick TH. Multiple informant agreement and the Anxiety Disorders Interview Schedule of Parents and Children. Journal of the American Academy of Child and Adolescent Psychiatry. 2003; 42:30–40. [PubMed: 12500074]

Gross JJ. Emotion regulation: Affective, cognitive, and social consequences. Psychophysiology. 2002; 39:281–291. [PubMed: 12212647]

Halberstadt AG, Dunsmore JC, Parker AE, Beale KS, Thompson JA, Bryant A Jr. Unpublished questionnaire. 2008

Hanish LD, Eisenberg N, Fabes RA, Spinrad TL, Ryan P, Schmidt S. The expression and regulation of negative emotions: Risk factors for young children's peer victimization. Development and Psychopathology. 2004; 16:335–353. [PubMed: 15487599]

Jarrett MA, Wolff JC, Ollendick TH. Concurrent validity and informant agreement of the ADHD module of the Anxiety Disorders Interview Schedule for DSM IV. Journal of Psychopathology and Behavioral Assessment. 2007; 29:159–168.

Kamphaus, RW.; Frick, PJ. Clinical assessment of child and adolescent personality and behavior. 2. New York: Springer; 2005.

Katz LF, Gottman JM. Bufferring children from marital conflict and dissolution. Journal of Clinical Child Psychology. 1997; 26:157–171. [PubMed: 9169376]

Katz LF, Hunter EC. Maternal meta-emotion philosophy and adolescent depressive symptomatology. Social Development. 2007; 16:343–360.

Katz LF, Windecker-Nelson B. Parental meta-emotion philosophy in families with conduct-problem children: Links with peer relations. Journal of Abnormal Child Psychology. 2004; 32:385–398. [PubMed: 15305544]

Katz LF, Windecker-Nelson B. Domestic violence, emotion coaching, and child adjustment. Journal of Family Psychology. 2006; 20:56–67. [PubMed: 16569090]

Kazdin AE. Understanding how and why psychotherapy leads to change. Psychotherapy Research. 2009; 19:418–428. [PubMed: 19034715]

Kendall PC. Cognitive-behavioral therapies with youth: Guiding theory, current status, and emerging developments. Journal of Consulting and Clinical Psychology. 1993; 61:235–247. [PubMed: 8473577]

Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. Archives of General Psychiatry. 2005; 62:593–602. [PubMed: 15939837]

Kim, J.; Cicchetti, D.; Rogosch, F. A longitudinal study of emotion regulation, lability/negativity, and internalizing symptomatology in maltreated and nonmaltreated children. 2011. Manuscript submitted for publication

Kolko DJ, Kazdin AE. Emotional/behavioral problems in clinic and nonclinic children: Correspondence among child, parent and teacher reports. Journal of Child Psychology & Psychiatry. 1993; 34:991–1006. [PubMed: 8408380]

Lochman, JE.; White, KJ.; Wayland, KK. Cognitive-behavioral assessment and treatment with aggressive children. In: Phillip, PC., editor. Child and adolescent therapy: Cognitive-behavioral procedures. New York: Guildford Press; 1991. p. 25-65.

Lunkenheimer ES, Shields AM, Cortina KS. Parental emotion coaching and dismissing in family interaction. Social Development. 2007; 16:232–248.

Maughan B, Rowe R, Messer J, Goodman R, Meltzer H. Conduct disorder and oppositional defiant disorder in a national sample: Developmental epidemiology. Journal of Child Psychology and Psychiatry. 2004; 45:609–621. [PubMed: 15055379]

Merrell KW, Blade RL, Lund J, Kempf KKG. Convergent and discrimination construct validity of the Internalizing Symptoms Scale for Children with the BASC-SRP-C. Psychology in the Schools. 2003; 40:139–144.

Miller AL, Fine SE, Gouley KK, Seifer R, Dickstein S, Shields A. Showing and telling about emotions: Interrelations between facets of emotional competence and associations with classroom adjustment in Head Start preschoolers. Cognition and Emotion. 2006; 20:1170–1192.

Murrihy, RC.; Kidman, AD.; Ollendick, TH. Epilogue: Future directions in research and practice. In: Murrihy, RC.; Kidman, AD.; Ollendick, TH., editors. Clinical Handbook of Assessing and Treating Conduct Problems in Youth. New York, NY: Springer Science Business Media, LLC; 2010. p. 517-530.

Ollendick TH, Greene RW, Weist MD, Oswald DP. The predictive validity of teacher nominations: A five-year follow-up of at-risk youth. Journal of Abnormal Child Psychology. 1990; 18:699–713. [PubMed: 2074347]

Perez-Rivera MB, Dunsmore JC. Mothers' acculturation and beliefs about emotions, mother-child emotion discourse, and children's emotion understanding in Latino families. Early Education and Development. 2011; 22:324–354.

Pietromonaco PR, Barrett LF. Valence focus and self-esteem lability: Reacting to hedonic in the social environment. Emotion. 2009; 9:406–418. [PubMed: 19485618]

Pfiffner LJ, McBurnett K, Rathouz PJ, Judice S. Family correlates of oppositional and conduct disorders in children with attention deficit/hyperactivity disorder. Journal of Abnormal Child Psychology. 2005; 33:551–563. [PubMed: 16195950]

Pons F, Harris PL, de Rosnay M. Emotion comprehension between 3 and 11 years: Developmental periods and hierarchical organization. European Journal of Developmental Psychology. 2004; 1:127–152.

Preacher KJ, Hayes AF. SPSS and SAS procedures for estimating indirect effects in simple mediation models. Behavior Research Methods, Instruments, & Computers. 2004; 36:717–731.

Ramsden SR, Hubbard JA. Family expressiveness and parental emotion coaching: Their role in children's emotion regulation and aggression. Journal of Abnormal Child Psychology. 2002; 30:657–667. [PubMed: 12481978]

Reynolds, CR.; Kamphaus, RW. BASC-2: Behavior assessment system for children. 2. Circle Pines, MN: American Guidance Service; 2004. manual

Saarni, C. Emotional competence: How emotions and relationships become integrated. In: Thompson, R., editor. Nebraska symposium on motivation. Lincoln, NE: University of Nebraska Press; 1990. p. 115-182.

Salmon K, Dadds MR, Allen J, Hawes DJ. Can emotional language skills be taught during parent training for conduct problem children? Child Psychiatry & Human Development. 2009; 40:485–498. [PubMed: 19373551]

SAS Institute, Inc. SAS/STAT 9.2 User's Guide. Cary, NC: SAS Institute, Inc; 2008.

Scherer KR. Profiles of emotion-antecedent appraisals: Testing theoretical predictions across cultures. Cognition and Emotion. 1997; 11:113–150.

Shields A, Cicchetti D. Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. Developmental Psychology. 1997; 33:906–916. [PubMed: 9383613]

Shields A, Cicchetti D. Reactive aggression among maltreated children: The contributions of attention and emotion dysregulation. Journal of Clinical Child Psychology. 1998; 27:381–395. [PubMed: 9866075]

Shipman KL, Schneider R, Fitzgerald MM, Sims C, Swisher L, Edwards A. Maternal emotion socialization in maltreating and non-maltreating families: Implication for children's emotion regulation. Social Development. 2007; 16:268–285.

Silk JS, Steinberg L, Morris AS. Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. Child Development. 2003; 74:1869–1880. [PubMed: 14669901]

Silverman, WK.; Albano, AM. Anxiety disorders interview schedule for DSM-IV: Parent version. Boston: Graywind; 1996.

Silverman WK, Saavedra LM, Pina AA. Test-retest reliability of anxiety symptoms and diagnoses with anxiety disorders interview schedule for DSM-IV: Child and parent versions. Journal of the American Academy of Child & Adolescent Psychiatry. 2001; 40:937–944. [PubMed: 11501694]

Southam-Gerow MA, Kendall PC. Emotion regulation and understanding: Implications for child psychopathology and therapy. Clinical Psychology Review. 2002; 22:189–222. [PubMed: 11806019]

Stegge, H.; Terwogt, MM. Awareness and regulation of emotion in typical and atypical development. In: Gross, JJ., editor. Handbook of emotion regulation. New York: The Guilford Press; 2007. p. 269-286.

Stocker CM, Richmond MK, Rhoades GK, Kiang L. Family emotional processes and adolescents' adjustment. Social Development. 2007; 16:310–325.

Stringaris A, Goodman R. Longitudinal outcome of youth oppositionality: Irritable, headstrong, & hurtful behaviors have distinctive predictions. Journal of the American Academy of Child & Adolescent Psychiatary. 2009a; 48:404–412.

Stringaris A, Goodman R. Three dimensions of oppositionality in youth. Journal of Child Psychology & Psychiatry. 2009b; 50:216–223. [PubMed: 19166573]

Stringaris A, Maughan B, Goodman R. What's in a disruptive disorder? Temperamental antecedents of Oppositional Defiant Disorder: Findings from the Avon Longitudinal Study. Journal of the American Academy of Child & Adolescent Psychiatry. 2010; 49:474–483. [PubMed: 20431467]

Trentacosta CJ, Izard CE. Kindergarten children's emotion competence as a predictor of their academic competence in first grade. Emotion. 2007; 7:77–88. [PubMed: 17352565]

Wolff JA, Ollendick TH. The comorbidity of conduct problems and depression in childhood and adolescence. Clinical Child and Family Psychology Review. 2006; 9:201–220. [PubMed: 17053962]

Wolff, JC.; Ollendick, TH. Conduct problems in youth: Phenomenology, classification, and epidemiology. In: Murrihy, RC.; Kidman, AD.; Ollendick, TH., editors. Clinical handbook of assessing and treating conduct problems in youth. New York: Springer; 2010. p. 3-20.

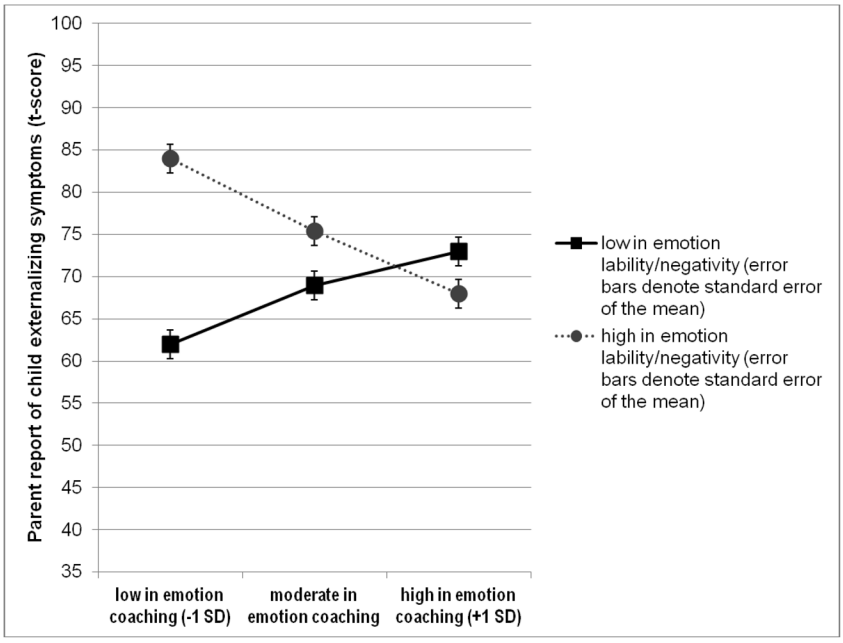

Figure 1.
Parents' Report of Children's Externalizing Symptoms as a Function of Emotion Coaching and Lability/Negativity

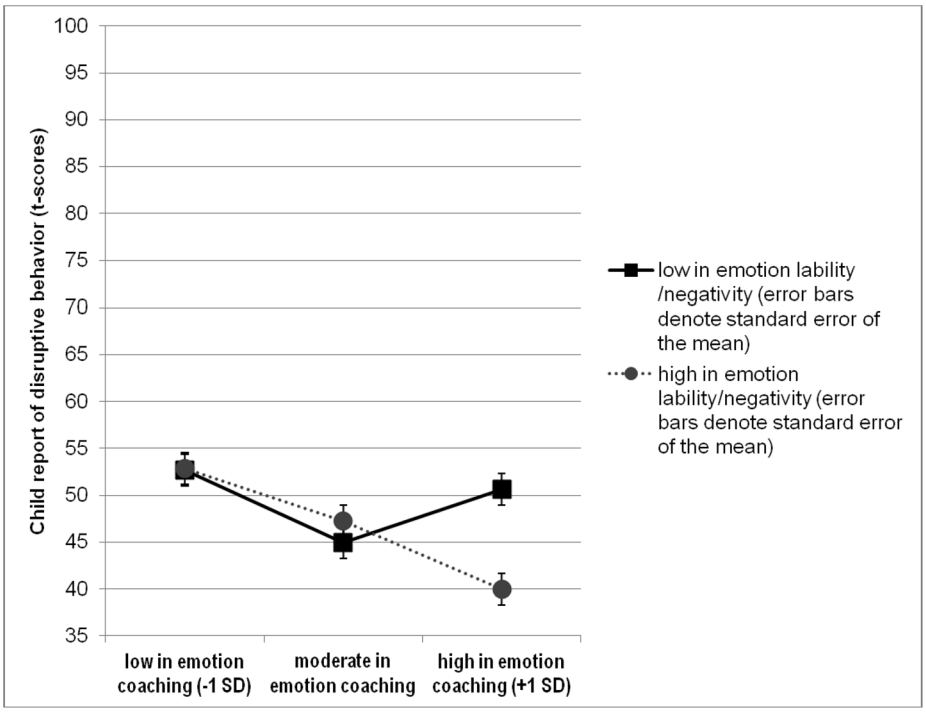

Figure 2.
Children's Report of Disruptive Behavior as a Function of Emotion Coaching and Lability/ Negativity

Table 1

Descriptive Statistics and Correlations for Emotion Coaching Components

Variables	2	3	4	5	6	7	M (SD)
1. Mother belief: Positive emotions valuable	.30*	.46****	−.19	.08	−.04	.08	5.90 (.24)
2. Mother belief: Negative emotions valuable	---	.09	−.11	−.15	−.12	−.27*	4.60 (.95)
3. Mother belief: Parental guidance		---	.15	.04	.03	−.08	5.67 (.49)
4. Mother behavior: Encourage positive emotions			---	.17	.36**	−.20†	.54 (.35)
5. Mother behavior: Encourage negative emotions				---	.39***	.46****	.51 (.51)
6. Child behavior: Reference to positive emotions					---	.21†	.08 (.17)
7. Child behavior: Reference to negative emotions						---	.32 (.28)

Note:

† $p<.10$,

* $p<.05$,

** $p<.01$,

*** $p<.001$,

**** $p<.0001$

Table 2

Means, Standard Deviations (SD), and Ranges for All Study Variables

Variables	Mean	SD	Range
1) Emotion coaching composite	.02	2.56	−7.50 – 5.74
2) Emotion regulation	2.95	.39	2.00 – 3.88
3) Lability/negativity	2.44	.42	1.47 – 3.40
4) Parent report: externalizing symptoms	72.58	11.50	48 – 99
5) Parent report: internalizing symptoms	60.98	14.30	34 – 98
6) Parent report: adaptive skills	35.67	8.83	2 – 62
7) Child report: disruptive behavior	46.84	8.25	35 – 80
8) Child report: internalizing symptoms	49.82	9.17	36 – 78
9) Child report: personal adjustment	45.54	9.60	20 – 62

Table 3

Correlations among Study Variables

Variables	2	3	4	5	6	7	8	9
1. Emotion coaching composite	.26*	−.10	−.11	−.17	.18	−.24*	−.02	−.01
2. Emotion regulation	---	−.13	−.01	−.10	.34**	−.04	.43***	−.25*
3. Lability/negativity		---	.50***	.42***	−.33**	.08	.14	.08
4. Parent report: externalizing			---	.45***	−.51***	.30*	.28*	−.11
5. Parent report: internalizing				---	−.45***	−.09	.13	−.07
6. Parent report: adaptive skills					---	−.00	.07	−.03
7. Child report: disruptive behavior						---	.20†	−.20†
8. Child report: internalizing							---	−.56***
9. Child report: personal adjustment								---

Note:

† p<.10,

* p<.05,

** p<.01,

*** p<.001