

MATERNAL CHILDHOOD MALTREATMENT HISTORY AND CURRENT PARENTING  
BEHAVIORS: THE MODERATING ROLE OF MATERNAL EMOTION REGULATION

by

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(Under the Direction of Anne Shaffer)

ABSTRACT

This study examined the moderating role of maternal emotion dysregulation on the relationship between retrospectively reported maternal childhood maltreatment history and emotion and behavioral parenting behaviors. Data were collected from 103 caregiver-child dyads with children ages 3-5. Results indicated maternal emotion dysregulation did not moderate the relationship between retrospectively reported maternal childhood maltreatment and emotion parenting behaviors, nor did it moderate the relationship between retrospectively reported maternal childhood maltreatment and maternal structure and limit setting. Exploratory post hoc analyses indicated maternal emotion dysregulation mediated the relationship between retrospectively reported maternal childhood maltreatment and emotion parenting behaviors but not between retrospectively reported maternal childhood maltreatment and maternal structure and limit setting. Results addressed the importance of emotion regulation in understanding the risk of increased unsupportive emotion parenting and decreased supportive emotion parenting among parents with sustained childhood maltreatment histories.

INDEX WORDS: Parenting, Emotion dysregulation, Childhood maltreatment

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## DEDICATION

This thesis is dedicated to my husband, Andy, who has been my greatest source of support and strength. I would also like to thank my parents, Maura and Ted, for their love and encouragement over the years.

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## CHAPTER 1

### MATERNAL CHILDHOOD MALTREATMENT HISTORY AND CURRENT PARENTING BEHAVIORS: THE MODERATING ROLE OF MATERNAL EMOTION REGULATION

It is well established that parents' emotion socialization practices play a significant role in the development of children's healthy emotion regulation skills (Thompson & Meyer, 2007). Parents help children manage, cope with, and regulate emotions through direct intervention (Lamb & Malkin, 1986) as well as through modeling, validation, social referencing (i.e., using parental facial cues to assess threat potential in uncertain situations), and explaining emotion regulation strategies (Malatesta-Magai, 1991; Walden, 1991). Conversely, parents may influence children's development of emotion regulation difficulties through controlling or hostile parenting, as well as through parents' own emotion dysregulation (Jaffe, Gullone, & Hughes, 2010; Morris et al., 2002). More specifically, parents who engage in child maltreatment increase their children's risk of emotion dysregulation, including limited emotional awareness, dysregulated anger, and decreased adaptive emotion regulation skills (Maughan & Cicchetti, 2002; Shipman, Zeman, Penza, & Champion, 2000).

Few studies have examined the long-term consequences of child maltreatment history for emotion dysregulation in adulthood, and particularly how it might affect parenting one's own children. Given that the ability to manage emotions is essential to adequate parenting, parents who experience childhood maltreatment may be less likely to provide effective parenting and more likely to engage in maltreating behaviors (Dix, 1991), in part because they experience emotion dysregulation resulting from their maltreatment histories.

The current study examined the importance of emotion regulation as an adaptive component of parenting and investigated the potential for emotion dysregulation to exacerbate unsupportive emotion parenting in the context of a parent's maltreatment history and show an inverse relation between supportive emotion parenting and parent's maltreatment history. It is hypothesized that emotion dysregulation will exacerbate the relationship between prior maltreatment history and current unsupportive emotion parenting and show an inverse relationship between retrospectively reported maternal childhood maltreatment and supportive emotion parenting. Additionally, emotion dysregulation is expected to show an inverse relationship between retrospectively reported maternal childhood maltreatment and observations of maternal structure and limit setting.

### **Childhood Maltreatment and Later Parenting Behaviors**

While the intergenerational continuity of maltreatment is a clear and persistent issue, researchers have a limited understanding of the ways in which a history of maltreatment relates to negative parenting behaviors, more broadly defined. Research and theory suggest sustained maltreatment histories can increase the risk of negative parenting behaviors. For example, mothers with a history of physical abuse may be less skilled and have more difficulties in their role as parents (Daro, 1988). Using structural equation modeling, Newcomb and Locke's (2001) latent factor analysis found that retrospective reports of childhood maltreatment were associated with self-reports of poor parenting behaviors, including low warmth, high aggression, rejection, and indifference/neglect.

Additionally, parents with maltreatment histories may be less likely to support their children's autonomy and openness to new experiences (Susman, Trickett, Iannotti, Hollenbeck, & Zahn-Waxler, 1985), thwarting the healthy development of self. These parents may have

unrealistic and developmentally inappropriate expectations of their children (Pianta, Egeland, & Erickson, 1989). In a clinical outpatient sample, Rusico (2001) found maternal reports of high permissive parenting and low authoritarian parenting were a unique combination of parenting behaviors endorsed by mothers with a history of sexual abuse. These findings suggest mothers with a history of child sexual abuse may find it more difficult to provide their children with adequate structure and discipline.

Identification of the factors that exacerbate or mitigate the risk of unsupportive emotionparenting behaviors among parents with histories of childhood maltreatment is an area in need of future research to guide effective intervention and prevention efforts. For example, research suggests that childhood maltreatment may negatively affect the development of self-regulatory systems that enable individuals to tolerate challenging emotional states (Cicchetti & Toth, 2005; Hein, Cohen, & Campbell, 2005; Turkheimer & Gottesman, 1991). Elevated stress, combined with maladaptive emotion regulation related to childhood maltreatment, may translate to increases in unsupportive emotion parenting behaviors, but empirical studies are still needed to test these links.

### **Childhood Maltreatment and Emotion Dysregulation**

Problems with emotion regulation following childhood maltreatment have received considerable attention within the extant literature, with findings of emotion regulation deficits in the recognition, expression, communication, and understanding of emotions subsequent to maltreatment experiences (Beeghly & Cicchetti, 1994; Camras, Sachs-Alter, & Ribordy, 1996; Shipman et al., 2000). The majority of these studies have focused on children, with only a few examining adult survivors of abuse (Burns, Jackson, & Harding, 2010; Gratz, Bornovalova, Delany-Brumsey, Nick, & Lejuez, 2007; Manzeske & Stright, 2009). However, findings from

studies utilizing adult samples have suggested that child maltreatment may have long-term implications for emotion dysregulation. For example, Gratz et al. (2007) examined the relationship between retrospectively reported childhood maltreatment (moderate to severe physical, sexual, and emotional abuse), and two aspects of emotion dysregulation: experiential avoidance (indicated by unwillingness to persist on two psychologically distressing laboratory tasks), and self-reported emotional non-acceptance. In their sample of 76 treatment-seeking substance users, those with moderate to severe sexual, physical, or emotional abuse evidenced increased experiential avoidance and emotional non-acceptance.

A study of 912 female college students revealed that women who reported a history of sexual, physical, or emotional abuse endorsed greater emotion regulation difficulties compared to women without abuse histories, with emotional abuse as the strongest predictor of emotion dysregulation (Burns et al., 2010). Manzeske and Stright (2009) examined the relationship between maternal reports of parenting styles (including warmth, behavioral control, and psychological control) and young adults' self-reports of emotion regulation in a sample of 246 young adults and their mothers. Results indicated that higher levels of maternal control, particularly psychological control, were related to lower levels of young adults' emotion regulation.

### **Emotion Regulation and Parenting**

Emotions serve an adaptive role in parenting both by helping parents prioritize goals and by guiding parents' motivation and behavior (Dix, 2000; Oatley & Jenkins, 1998). Parenting is an inherently emotional experience that involves both positive and negative affect, requiring parents to choose how to express or control the negative emotions they experience toward their children (Dix, 1991; Eisenberg et al., 2001). The ability to regulate negative emotions is thus a

normal and important component of the parenting process that appears to be subject to regulation more often than are positive emotional responses (Dix, 1991). Since parents' own emotion regulation is likely to affect their children's development of healthy emotion regulation and expression (Denham, 1998; Eisenberg et al., 2001), it is important to understand how emotion regulation impacts parenting behaviors.

Although the Affective Organization of Parenting (AOP) model (Dix, 1991) was proposed over 20 years ago, little research has examined emotion regulation in parents. It has been well established that parenting behaviors contribute to parents' ability to model and teach their children effective emotion regulation. However, it is less clear how parents' own emotion regulation may impact parenting behaviors and discipline. Dix's (1991) AOP model accounts for when and why parents experience emotions and, once aroused, how emotions alter parenting. This model clarifies how parents' emotions are fused with the quality of parenting and with children's development through (a) contextual factors that activate parents' emotions, (b) the organizing and motivating effects of emotions, once aroused, on parenting, and (c) processes parents use to understand and control emotions. Dix (1991) specifically identifies a parent's inability to control a negative emotion as an important determinant of abusive and coercive parenting.

The AOP model focuses on activation, engagement, and emotion regulation as key components of the affective structure of parenting. More specifically, the model describes the processes through which parental emotions are elicited and, in turn, through which these emotions motivate parents to respond to the needs of their children. For example, if a parent is getting a child ready for school and the child refuses to eat breakfast, this may activate feelings of frustration for the parent and motivate them to make sure the child is not late for school.

Emotion regulation processes may allow the parent to modulate feelings of frustration, so instead of fighting with the child about eating breakfast, the parent may simply explain that the child will not have another chance to eat until lunch. Here, the ability to regulate emotions allows parents to modulate and control emotional responses in a manner that is appropriate to parenting. The AOP model is important because it defines emotion regulation as an integral part of the parenting process. Yet despite this theoretical understanding, very little empirical research has examined how emotion dysregulation may impact parenting behaviors.

Parental emotion activation happens during parent-child interactions. Here, the parent is concerned about the outcomes of these interactions. While varied, these concerns may be goal directed, empathetic, values about the way children should act, or alleviating a child's pain. Here the emotions experienced by the parent depend on how compatible they are with their children's concerns. If both the child and parent have compatible concerns (i.e., promoting social interactions by having the child invite a friend over) the parent will experience more positive emotions; however, when the child and parent do not share compatible concerns (i.e., telling a child to stop teasing their sibling) the parent may experience conflict and increased negative affect. During difficult, noncompatible interactions parents can adopt cooperative (i.e., asking the child for cooperation or compromising) or forceful strategies. While forceful strategies are sometimes needed they often elicit more negative affect for the parent because the child's concerns are not met and cooperation will be less likely to occur (Dix, 1991).

Once activated, parents begin to experience emotions based on their children's cooperation or lack of cooperation in addressing parental concerns. Parental emotional engagement can help motivate parents to promote their concerns by mobilizing parents' responses to children and influencing communication and cognition. While at times this may be beneficial,



there are moments when a parent's emotions can also undermine their parenting behaviors. Dix (1991) explains that strong positive and negative emotions may interfere with the parent's ability to control their emotions and emotion related behaviors, adopting strategies that promote their concerns but ignore their child's perspective and needs. Additionally, emotions brought into the parent-child interaction that are not related (i.e., anger at a spouse) can also interfere with parent-child cooperation and ultimately achieving concerns that are important to both the parent and child.

Last, the ability for a parent to understand and regulate their emotions is important to parenting. Difficulties in emotion regulation can lead a parent to experience excessive or insufficient emotion and/or express emotions in a way that is not beneficial for the child. Emotion regulation is an important component of Dix's (1991) model because it allows the parents to recognize their concerns and also those of their child. A parent who does not let emotions promote their concerns over child-centered concerns will ultimately benefit the child's development and the parent-child relationship.

*Parental Emotion Regulation Difficulties and Parenting Behaviors.* Researchers have begun to explore how parents' emotion regulation impacts parenting and children's emotion regulation. For example, parents' difficulties in emotion regulation after family conflict, as well as inappropriate responses to their children's emotions, have been associated with poor social, behavioral, and emotional competence in children (Carson & Parke, 1996; Compton, Snyder, Schrepferman, Bank, & Shortt, 2003; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997). In a multi-method study analyzing mothers and their children (ages 8-11), Morelen (in revision) found that maternal emotion dysregulation was positively associated with unsupportive emotion parenting and children's emotion dysregulation. Additionally, unsupportive emotion parenting (i.e., punitive or minimizing reactions to child's negative

emotions) partially mediated the link between maternal emotion regulation and child emotion regulation (Morelen, in revision).

Two recent studies have examined the ways in which parents' emotion dysregulation increases the risk of negative parenting behaviors. Utilizing a hierarchical linear regression model, Rodriguez and Green (1997) reported both parenting stress and anger expression as predictors of increased child abuse potential. In a more recent study of mother-toddler dyads, self-reports of emotion regulation revealed that mothers who more actively sought to manage their emotions tended to use less overreactive and/or lax discipline with their children (Lorber, 2012), although emotion dysregulation was more consistently associated with overreactive than lax discipline. Future research needs to utilize multi-method approaches to explore the role of emotion regulation in parenting practices.

The current study examined maternal emotion dysregulation as a moderator of the relationship between maternal retrospective reports of childhood maltreatment and current self-reported and observed parenting behaviors. It is hypothesized that a retrospective maternal history of child maltreatment will increase the risk for current self-reports of unsupportive emotion parenting and reduced self-reports of supportive emotion parenting. It is further hypothesized that retrospective maternal histories of child maltreatment will be associated with observations of lower maternal structure and limit-setting for their child during a mother-child interaction task. Moderation analyses tested whether the presence of maternal emotion dysregulation exacerbated the hypothesized associations between maternal maltreatment history and current negative parenting behaviors (e.g., higher reported unsupportive responses) and created an inverse relationship between maternal maltreatment history and current positive

parenting behaviors (lower reported supportive responses, and lower observed structure and limit-setting).

## CHAPTER 2

### Method

#### **Sample**

The current multi-method study comprises data collected from 103 ethnically diverse mothers and their 36- to 60-month-old children ( $M = 3.49$  years,  $SD = .52$ ), recruited from the local community of a college town in the southeastern U.S. Due to missing data, 12 participants were excluded from the sample; thus, data from a total of 91 mother-child dyads were analyzed for this study. Of the children in the study, 42.40% were female. The mothers ranged in age from 20 to 43 ( $M = 30.66$ ;  $SD = 6.05$ ). The mothers were ethnically diverse, with 50% identifying as African American, 46.6% as White non-Hispanic, 1.7% as Hispanic, and 3.3% as multiracial. In this sample, 52.1% of families reported a total household income of \$20,000-\$29,999 or lower and 17.7% reported a total income above \$80,000.

Almost half (45.1%) of the mothers indicated that they were married, with 44% reporting they had never been married. Additionally, 22% of the mothers indicated that they had graduate school training, 26.1% were college graduates, 21.7% had some college training, 12% were high school graduates, 16.3% had their General Equivalency Diploma (GED), 1.1% were junior high school graduates, and 1.1% identified their education level as “other.”

#### **Procedure**

Participants were recruited through flyers posted around the university and at stores, libraries, schools, and community settings. During a phone screening, research assistants verified that mothers had a child between three and five years of age, that both she and the child were

fluent in English, and that the child had lived with the mother for at least the past two years. During the lab visit, mothers provided written informed consent and children provided written assent.

Each mother and child came to the lab for a one-time assessment. Mother and child completed both interaction and individual tasks designed to elicit observations of cooperation, parental sensitivity, and mother and child emotion regulation, as well as to evoke feelings of anxiety and stress. After concluding the individual and interaction tasks, mothers completed a series of self-report and child-report questionnaires. All families received \$100 for their time and each child received a small toy. All procedures were approved by the University Institutional Review Board.

## **Measures**

*Maternal childhood history of emotional maltreatment.* Mothers completed the 28-item Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) as a measure of their history of childhood maltreatment. The study utilized the emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual abuse subscales of the *CTQ*. Participants rated the extent to which they experienced each item using a 5-point Likert-type scale (1 = never true to 5 = very often true). Continuous total scores of the subscales and total maltreatment scores were utilized for this study.

*Maternal emotion parenting.* Unsupportive emotion parenting was assessed by averaging the Minimizing, Punitive, and Distress subscales of the Coping with Children's Negative Emotions Scale (CCNES; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Supportive emotion parenting was assessed by averaging Emotion-Focused Reactions, Problem-Focused Reactions, and Encouraging the Child to Express Emotion subscales. This self-report measure

includes 12 situations in which children typically experience distress and negative affect (e.g., falling off a bike). Mothers rated, on 7-point Likert-type scale (1 = never true to 7 = very often true), the likelihood she would react to each of these situations in different ways (i.e., "If your child loses some prized possession and reacts in tears, how likely are you to: tell your child he/she is overreacting, distract your child by talking about happy things, tell him/her it is OK to cry when you feel unhappy..."). The scales have been shown to have good reliability and construct validity (see Fabes et al., 2002).

*Maternal observations of structure and limit setting.* A stress-inducing task had mother and child work together (each had control of one knob of an Etch-A Sketch) to create a difficult image on the Etch-A-Sketch screen. During this task, maternal observations of structure and limit setting (see Appendix 1) were coded using a 1-5 point Likert-type scale (1 = very low , 5 = very high). This scale reflects how adequately the mother attempted to establish her expectations for the child's behavior versus not communicating her expectations adequately. Mother's structure and limit setting behavior depended on whether the child was compliant or not compliant to mother's attempts to set limits. A low score indicates a mother who failed to communicate her expectations for the child by making very few demands on child's behavior and/or pleading with the child to behave. A high score indicates a mother who accomplishes her goals by responding consistently and authoritatively to compliance problems while maintaining acceptable leadership and discipline. All observations were coded by a team of trained researchers and assessed for reliability. Reliability was assessed using individual coders' scores for 39% of the sample; intra-class correlation coefficient is .697.

*Maternal report of emotion dysregulation.* The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item self-report measure that provides both a

comprehensive assessment of mothers' overall emotion regulation difficulties and an assessment of six specific dimensions (e.g., difficulty controlling impulsive behaviors when experiencing negative emotions). The current study utilized the total score for overall emotion regulation difficulties. Parents rated the extent to which each item (e.g., "When I am upset, it takes me a long time to feel better") applied to them, using a 1-5 point Likert-type scale (1 = almost never, 5 = almost always).

## CHAPTER 3

### Results

#### Preliminary Analyses

The means, standard deviations, and ranges of the focal variables are presented in Table 1. Intercorrelations of the focal variables and continuous contextual variable (maternal age) are shown in Table 2. Inercorrelations indicate maternal retrospective reports of childhood maltreatment were not positively associated with supportive emotion parenting ( $r = .13, p > .1$ ), unsupportive emotion parenting ( $r = .06, p > .05$ ), or maternal structure and limit setting ( $r = .02, p > .05$ ); however, maternal retrospective reports of childhood maltreatment were positively associated with maternal emotion dysregulation ( $r = .39, p < .01$ ). Maternal emotion dysregulation, in turn, was positively associated with unsupportive emotion parenting ( $r = .33, p < .01$ ), and negatively associated with supportive emotion parenting ( $r = -.21, p < .05$ ). Among the contextual variables analyzed, maternal age was positively associated with observations of maternal structure and limit setting ( $r = .28, p < .05$ ). To examine additional categorical contextual variables a series of ANOVAs were conducted to test whether focal variables differed depending on maternal education, total household income, or maternal race. There were significant group differences for maternal education and maternal emotion dysregulation [ $F(1, 89) = 2.67, p > .05$ ]. In order to facilitate post hoc tests, both junior high school ( $n = 1$ ) and other ( $n = 1$ ) were eliminated. Post hoc comparisons indicated that, compared to mothers whose highest level of education was graduate school training, mothers whose highest level of education was high school showed higher rates of emotion dysregulation ( $p = .042$ ). Additionally, when



compared to mothers whose highest level of education was partial college training, mothers whose highest level of education was high school showed higher rates of emotion dysregulation ( $p = .010$ ), as well as mothers whose highest level of education was a GED ( $p = .017$ ). There were no significant group differences among the remaining contextual variables. Based on these preliminary analyses, maternal education was included as a control variable in further analyses.

### **Test of Moderation**

Moderation analyses tested three hypotheses. The first moderation analysis tested the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and unsupportive emotion parenting would be moderated by the presence of maternal emotion dysregulation (Figure 1). The overall model that examined maternal emotion dysregulation as a moderator was significant, [ $F(4, 86) = 3.89, p = .012; R^2 = .36$ ] as well as the main effects for maternal emotion dysregulation [ $t = 2.82, p = .01$ ]. The main effects of maternal retrospective reports of childhood maltreatment, [ $t = 1.87, p = .08$ ] and maternal education [ $t = 2.34, p = .02$ ] were not significant. The interaction between maternal retrospective reports of childhood maltreatment and maternal emotion dysregulation were not significant [ $t = 1.88, p = .07$ ].

The second moderation analysis tested the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and supportive emotion parenting would be moderated by maternal emotion dysregulation (Figure 2). The overall model that examined maternal emotion dysregulation as a moderator was not significant, [ $F(4, 84) = 2.36, p = .078; R^2 = .30$ ]. The main effects of maternal retrospective reports of childhood maltreatment, [ $t = 2.02, p = .05$ ] were significant; however, the main effects for maternal emotion dysregulation [ $t = .34, p = .73$ ] and maternal education [ $t = -.37, p = .71$ ] were not significant. The interaction

between maternal retrospective reports of childhood maltreatment and maternal emotion dysregulation was not significant [ $t = -1.70, p = .09$ ].

The third moderation analysis tested the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and observations of maternal structure and limit setting would be moderated by the presence of maternal emotion dysregulation (Figure 3). The overall model that examined maternal emotion dysregulation as a moderator was significant, [ $F(4, 82) = 9.44, p = .001; R^2 = .59$ ]. The main effects for maternal retrospective reports of childhood maltreatment were not significant, [ $t = -.71, p = .48$ ] nor were the main effects for maternal emotion dysregulation [ $t = -.37, p = .71$ ]. The main effects for maternal education [ $t = 6.08, p = .01$ ] were significant. The interaction between maternal retrospective reports of maltreatment and maternal emotion dysregulation were not significant [ $t = .81, p = .41$ ].

### **Post Hoc Exploratory Analyses**

Post hoc analyses tested an alternative hypothesis that maternal emotion dysregulation could serve as a mediator, rather than a moderator, of the relations between childhood maltreatment and emotion parenting behaviors. A mediating variable is one that specifies the mechanism in which a given effect occurs between a predictor variable and an outcome variable (Hayes, 2013). Preliminary intercorrelations indicated maternal retrospective reports of childhood maltreatment were positively associated with maternal emotion dysregulation and maternal emotion dysregulation was positively associated with unsupportive emotion parenting and negatively associated with supportive emotion parenting. Based on these preliminary findings it was plausible that maternal emotion regulation may mediate the relationship between maternal retrospective reports of childhood maltreatment and current parenting behaviors by

increasing the risk of unsupportive emotion parenting behaviors and reducing the likelihood of supportive emotion parenting behaviors. A series of mediation analyses using least ordinary squares path analysis were performed. Bootstrapping analyses were conducted using the SPSS Process Macro (Preacher & Hayes, 2010) utilizing a bias-corrected bootstrap confidence interval, based on 5,000 bootstrap samples in order to generate 95% confidence intervals that estimated the size and significance of the indirect effect. Bootstrapping methods are considered advantageous for testing mediation in samples in which assumptions of normality may be violated. Maternal education was entered as a covariate for both analyses.

The first mediation analysis tested whether retrospective reports of maternal childhood maltreatment indirectly predicted unsupportive emotion parenting behaviors through its effect on maternal emotion dysregulation. As can be seen in Table 3, mothers who reported higher levels of childhood maltreatment also reported higher levels of emotion dysregulation ( $a$  path = .437), and higher levels of maternal emotion dysregulation were associated with higher levels of unsupportive emotion parenting ( $b$  path = .026). A bias-corrected bootstrap confidence interval for the indirect effect ( $ab$  path = .012) based on 5,000 bootstrap samples was entirely above zero (.002 to .028 ). There was no evidence that retrospective reports of maternal childhood maltreatment influenced unsupportive emotion parenting behaviors independent of its effect on maternal emotion dysregulation.

A second mediation analysis examined whether retrospective reports of maternal childhood maltreatment indirectly predicted supportive emotion parenting behaviors through its effect on maternal emotion dysregulation (Table 3). Mothers who reported higher levels of childhood maltreatment also reported higher levels of emotion dysregulation ( $a$  path = .438 ), and higher levels of maternal emotion dysregulation were associated with lower levels of

supportive emotion parenting ( $b$  path =  $-.040$ ). A bias-corrected bootstrap confidence interval for the indirect effect ( $ab$  path =  $-.0175$ ) based on 5,000 bootstrap samples was entirely below zero ( $-.038$  to  $-.004$ ). There was no evidence that retrospective reports of maternal childhood maltreatment influenced supportive emotion parenting behaviors independent of maternal emotion dysregulation.

A third mediation analysis indicated retrospective reports of maternal childhood maltreatment indirectly predicted observations of maternal structure and limit setting through its effect on maternal emotion dysregulation. As seen in Table 3, mothers who reported higher levels of childhood maltreatment also reported higher levels of emotion dysregulation ( $a$  path =  $.438$ ), and higher levels of maternal emotion dysregulation were not associated with lower levels of maternal structure and limit setting ( $b$  path =  $.006$ ). A bias-corrected bootstrap confidence interval for the indirect effect ( $ab$  path =  $.003$ ) based on 5,000 bootstrap samples included zero ( $-.036$  to  $.011$ ) indicating maternal emotion regulation had no indirect effect on the relationship between retrospective reports of maternal childhood maltreatment and maternal structure and limit setting.

## CHAPTER 4

### Discussion

It is well established that child maltreatment puts children at increased risk for emotion regulation difficulties; however, not until recently have the long-term consequences of childhood maltreatment on emotion dysregulation in adulthood been examined empirically (Burns et al., 2010; Manzeske & Stright, 2009). A small but growing body of research indicates adults with a history of childhood maltreatment are at increased risk for ongoing emotion regulation difficulties (Burns et al., 2010; Gratz et al., 2007; Manzeske & Stright, 2009). Despite such acknowledgments concerning the long-term consequences of childhood maltreatment on emotion regulation, very little is known regarding the potential impact of these difficulties on parenting behaviors. Theoretical models such as Dix's (1991) Affective Organization of Parenting have addressed the important role parents' own emotion regulation has on parenting behaviors; however, only a handful of empirical studies have examined this issue (Lorber, 2012 ; Morelen, in review; Rodriguez & Green, 1997). The present study addresses this gap in the literature by examining the role of maternal emotion dysregulation on the relationship between maternal retrospective reports of childhood maltreatment and current self-reports and observations of parenting behaviors (unsupportive emotion parenting, supportive emotion parenting, and maternal structure and limit setting).

The first moderation analysis examined the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and maternal unsupportive emotion parenting would be moderated by the presence of maternal emotion dysregulation. While

maternal emotion dysregulation did not moderate this relationship, main effects of both maternal retrospective reports of childhood maltreatment and maternal emotion regulation were significant. The second moderation analysis examined the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and supportive emotion parenting would be moderated by the presence of maternal emotion dysregulation. Once again, maternal emotion dysregulation did not moderate the relationship between maternal retrospective reports of childhood maltreatment and supportive emotion parenting. Main effects for maternal retrospective reports of childhood maltreatment were significant. The last moderation analysis examined the hypothesis that the relationship between maternal retrospective reports of childhood maltreatment and maternal structure and limit setting would be moderated by the presence of maternal emotion dysregulation. Maternal emotion regulation did not moderate this relationship. Main effects of the contextual variable of maternal education were significant.

Baron and Kenny (1986) state moderation is a causal model where the moderator variable changes the strength of a relationship between two variables. Results of the current study showed maternal emotion dysregulation did not increase or decrease the strength of the relationship between maternal retrospective reports of childhood maltreatment and current parenting behaviors. Theoretically, maternal emotion regulation could function as a moderator based on the strong body of research linking parents' own history of childhood maltreatment and negative parenting behaviors (Susman et al., 1985; Pianta et al., 1989; Rusico, 2001). Here, a parent's ability to regulate emotions may buffer them from negative parenting behaviors; however, prior research also corroborates maternal emotion regulation functioning as a mediator. Here, causal links have been established concerning the relationship between childhood maltreatment history

and emotion regulation difficulties, as well as the relationship between maternal emotion dysregulation and parenting behaviors (Burns et al., 2010; Gratz et al., 2007; Lorber, 2012; Rodriguez & Green, 1997). Applying a mediation model to the current study explored the hypothesis that maternal emotion dysregulation may function as a mediator variable that links a cause and effect. A mediation analysis attempts to identify the intermediary process that leads from the independent variable to the dependent variable (Muller, Judd, & Yzerbyt, 2005). If this is the case, maternal reports of childhood maltreatment may cause maternal emotion dysregulation, and in turn maternal emotion dysregulation may cause increased unsupportive emotion parenting and decreased supportive emotion parenting and observations of maternal structure and limit setting. While maternal emotion dysregulation was initially proposed as a moderator of the relationship between maternal retrospective reports of childhood maltreatment and current parenting behaviors, exploratory analyses indicated maternal emotion dysregulation instead functioned as a mediator, with evidence of an indirect pathway between maternal retrospective reports of childhood maltreatment and current parenting behaviors.

Maternal emotion dysregulation may function better as a mediator rather than a moderator of the relationship between maternal retrospective reports of childhood maltreatment and current parenting behaviors for the following reasons. First, a mediating variable has a dual role. In the current mediation model, maternal emotion regulation functions as the dependent variable for maternal retrospective reports of childhood maltreatment and an independent variable for emotion parenting behaviors. In the moderation model, maternal emotion dysregulation functions as an auxiliary independent variable for maternal retrospective reports of childhood maltreatment. These results are consistent with the literature that childhood maltreatment may have long-term implications for emotion dysregulation, and parental emotion

dysregulation is associated with unsupportive emotion parenting and overreactive discipline (Gratz et al., 2007; Manzeske & Stright, 2009; Morelen, under review; Lorber, 2012).

Correlations between maternal retrospective reports of childhood maltreatment and maternal emotion dysregulation, as well as maternal emotion dysregulation and emotion parenting (unsupportive and supportive), also corroborate mediation as a better fitting model.

Full mediation was only evident for maternal reports of supportive and unsupportive emotion parenting, and not for observations of maternal structure and limit setting. One explanation for why maternal emotion dysregulation did not mediate the relationship between maternal reports of childhood maltreatment and observations of maternal structure and limit setting may reside in the nature of the parenting behavior itself. While there is support linking emotion dysregulation to emotion focused parenting and overreactive discipline (Lorber, 2012; Morelen, in press), there is no research examining parents' own emotion regulation and structure and limit setting of their child's behavior. Taking into consideration the complex nature of parenting, there may be certain aspects of parenting that are more influenced by emotion regulation difficulties than others. For example, emotion parenting directly deals with the parents' response to a child's negative emotion and could create a more emotionally arousing environment for the parent, while structure and limit setting may be less emotionally arousing. Additionally, structure and limit setting may be a more frequent parenting behavior, especially for preschool aged children, which parents are more practiced and comfortable with.

### **Limitations, Future Directions, and Conclusions**

There are a number of limitations in the study that should be noted. First, maternal emotion dysregulation and supportive/unsupportive emotion parenting were assessed using mothers' reports, which raise several methodological issues related to possible reporter bias.



Future research examining emotion regulation and parenting may utilize observational and self-report measures in order to foster a better understanding of parents' emotion regulation and parenting processes. Many studies addressing emotion regulation have incorporated self-report measures such as the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) which has reported good psychometric properties, such as internal consistency reliability, construct validity, and test-retest reliability; however, utilizing both observational and self-report measures promotes stronger statistical analyses. In some instances, self-report measures may be necessary for acquiring knowledge concerning parents' internal experiences, while other emotion constructs, such as emotion expression, can be measured objectively to reduce self-report bias.

Second, the small community sample, consisting of mothers, may not adequately represent the moderating/mediating effects of parent emotion dysregulation on the relationship between parents' retrospective reports of childhood maltreatment and current parenting behaviors. The scant amount of research concerning parents' own emotion regulation and how it impacts parenting behaviors has exclusively examined mothers. While the relationship between fathers' emotion regulation and parenting behaviors is unknown, there is evidence for gender differences concerning emotion expression and emotion socialization. Differences in culture and gender roles indicate females are more likely to express emotions that support relationships and engage in forms of relational aggression, while males endorse emotions that support assertive goals (Chaplin, Cole, & Zahn-Waxler, 2005). For example, if emotion regulation is different for men versus women, fathers and mothers may respond differently to stressful or emotionally arousing environments which in turn could affect parenting in different ways. Withstanding limitations, strengths of this study included a diverse sample and the use of self-report and observational data. While diverse, this sample did not differ on focal variables for most of the

contextual/demographic factors that were tested. Future research is warranted to examine these models in larger samples of both mothers and fathers.

Third, there are a number of theoretical problems in applying moderation and mediation models to cross-sectional data. For example, causal relationships in mediation analyses develop over time and the use of cross-sectional data implies these effects are instantaneous (Gollob & Reichardt, 1987). Additionally, without longitudinal analyses, effects of maternal emotion dysregulation as a moderator or mediator may be underestimated or overestimated in cross-sectional samples (Maxwell & Cole, 2007). Future longitudinal research is needed to tease apart questions of moderation versus mediation.

Last, emotion regulation is increasingly being incorporated into models of psychopathology (Greenberg, 2002). For example, maternal depressive symptoms have been consistently related to more negative parenting behaviors (Cohen, Campbell, Matias, & Hopkins, 1990; Goodman & Brumley, 1990; Nelson, Hammen, Brennan, & Ullman, 2003) and a recent meta-analysis examining whether emotion regulation strategies were strongly associated with psychopathology found medium to large effect sizes for rumination, avoidance, suppression, and problem solving (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Due to the fact that individuals with maltreatment histories are at increased risk for both emotion regulation difficulties and psychopathology (Kim & Cicchetti, 2010; Knutson, 1995), further examination of the relationship between emotion regulation and psychopathology could be advantageous in creating specific interventions aimed at parenting. While this particular model did not incorporate maternal psychopathology due to limitations in measurement and statistical power, future research should examine more complex models (i.e., moderated mediation) involving parental

retrospective reports of childhood maltreatment, parent psychopathology, parental emotion regulation difficulties, and current parenting behaviors.

In conclusion, the present study adds to the growing body of literature linking retrospective reports of childhood maltreatment, maternal emotion dysregulation, and parenting behaviors. More specifically, these findings address maternal emotion dysregulation as a mediator on the relationship between maternal reports of childhood maltreatment and emotionparenting. It is clear from the results that mothers' emotion dysregulation played a significant role in linking parents' childhood maltreatment history to risk for higher self-reports of unsupportive emotion parenting and lower self-reports of supportive emotionparenting. This research may have significant implications for targeting intervention and prevention efforts as well as educating parents about the importance of coping and identifying emotions in relation to interactions with their children.

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Figure 1

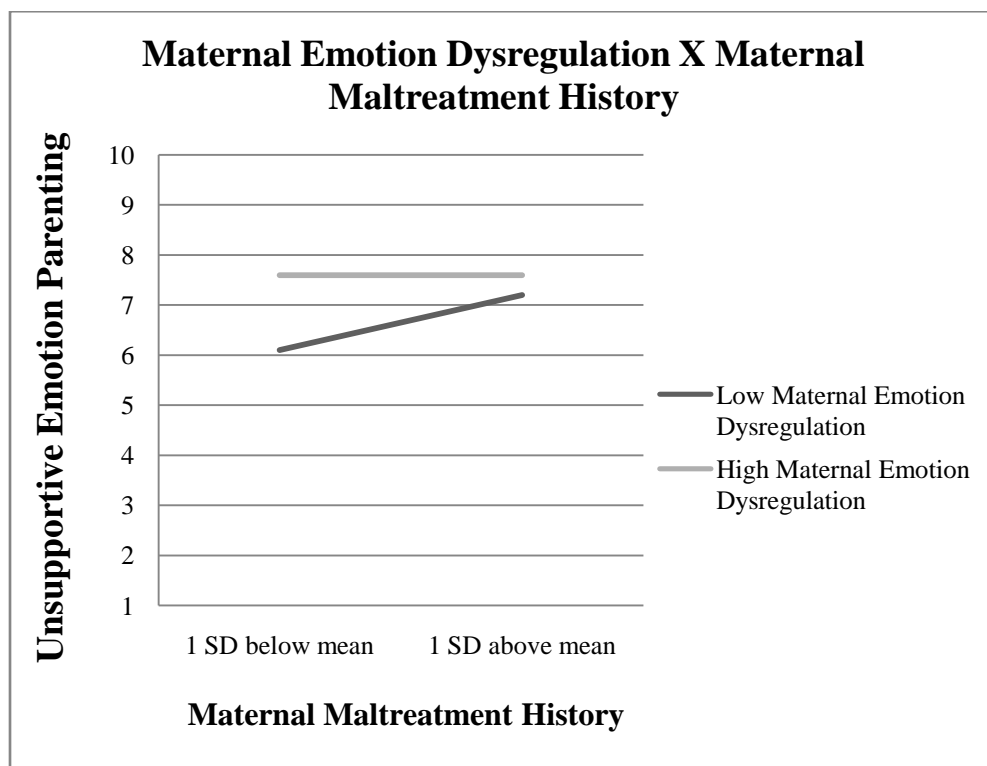


Figure 2

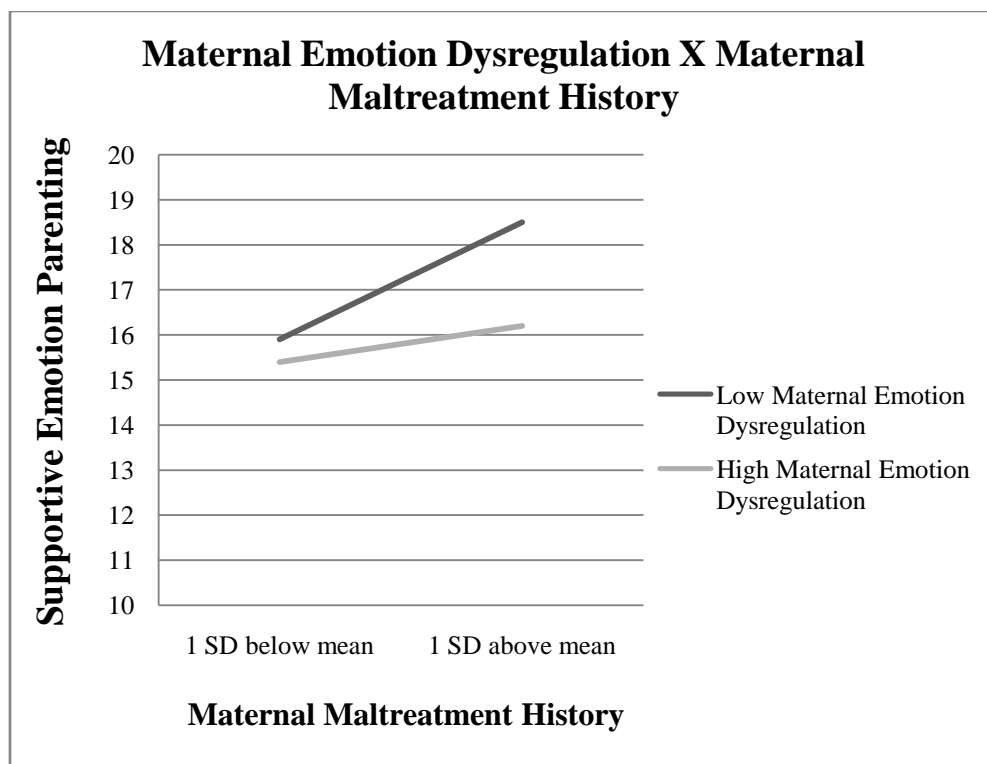


Figure 3

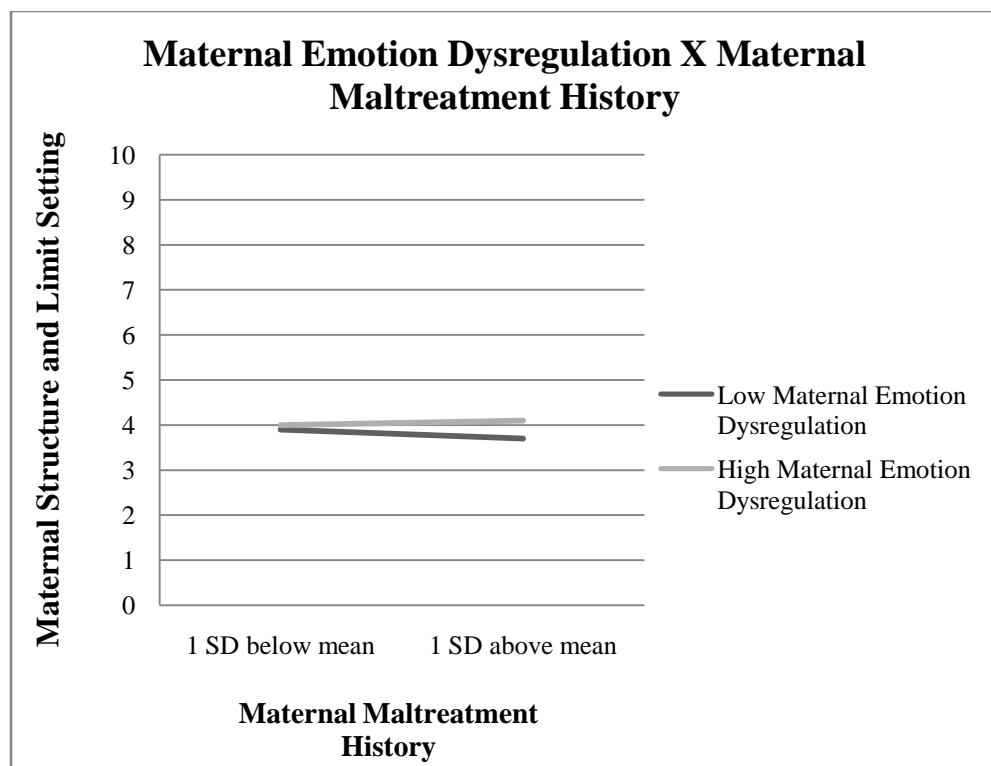


Table 1

*Means and Standard Deviations for Major Variables*

Variable	Mean	Standard Deviation	Range
Maternal Childhood Maltreatment History (CTQ)	37.4	15.5	25.0 -100.0
Maternal Emotion Dysregulation (DERS)	66.9	21.1	36.0 – 152.0
Unsupportive Emotion Parenting (CCNES)	7.1	1.8	3.8 -12.0
Supportive Emotion Parenting (CCNES)	16.5	2.4	7.9 – 21.0
Maternal Structure and Limit Setting (Observations)	3.9	1.3	1.0 – 5.0
Maternal Age	30.7	6.1	20.0 – 43.0

Table 2

*Correlations among major variables and continuous contextual variables*

	1	2	3	4	5	6
Maternal Childhood Maltreatment History	-----					
Maternal Emotion Dysregulation	.386**	-----				
Maternal Negative Emotion Focused Parenting	.125	.331**	-----			
Maternal Positive Emotion Focused Parenting	.064	-.209*	-.052	-----		
Maternal Structure and Limit Setting	.017	.006	.140	-.063	-----	
Maternal Age	-.105	-.187	-.027	.028	.276*	-----

\* $p < .05$ ; \*\* $p < .01$

Table 3

*Model coefficients for the influence of maternal emotion dysregulation on self-report and observations of parenting*

Antecedent	Consequent						
	Maternal emotion regulation			Unsupportive emotional parenting			
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>	
Maternal childhood maltreatment	<i>a</i>	.437	.118	<.001	<i>c'</i>	.007	.012 .949
Maternal emotion regulation	-----	-----	-----	<i>b</i>	.026	.011	.014
	$R^2 = .158, F(2, 89) = 7.288, p = .001$			$R^2 = .131, F(3, 88) = 3.89, p = .012$			
Maternal childhood maltreatment	Maternal emotion regulation			Supportive emotional parenting			
	<i>a</i>	.437	.120	.001	<i>c'</i>	.025	.017 .152
	-----	-----	-----	<i>b</i>	-.040	.015	.011
Maternal emotion regulation	$R^2 = .156, F(2, 89) = 7.067, p = .002$			$R^2 = .086, F(3, 88) = 7.288, p = .056$			
Maternal childhood maltreatment	Maternal emotion regulation			Maternal structure and limit setting			
	<i>a</i>	.480	.126	<.001	<i>c'</i>	.003	.083 .766
	-----	-----	-----	<i>b</i>	.006	.007	.421
Maternal emotion regulation	$R^2 = .172, F(2, 88) = 7.717, p = .001$			$R^2 = .338, F(3, 87) = 12.419, p = .00$			

## MATERNAL STRUCTURE/LIMIT-SETTING

Instructions: Provide a global rating of mother's structure and limit-setting after watching the Etch-A-Sketch task.

This scale reflects how adequately the mother attempted to establish her expectations for the child's behavior versus not communicating her expectations and not enforcing her agenda adequately. Scoring mother's behavior here depends on whether the child was compliant or not compliant to mother's attempts to set limits.

- A. If the child was noncompliant to mother's agenda, a mother high on structure would increase her efforts to set limits before the child's behavior became totally unacceptable and prompted a high magnitude response. Limit-setting, which is tentative and pleading (instead of authoritative) or awkward and ineffective in style, would be cause to lower a mother's score substantially. Additionally, a mother who sets strong limits which are inconsistent and sporadic in the absence of other structuring cues would get a low score even though her occasional limit-setting was done forcefully.
- B. If the child is compliant, a mother's limit-setting must be judged by her ability to structure the situation with her agenda. A mother may do so in a variety of styles and may or may not be sensitive and responsive to the child's interests. The criterion is whether she can establish structure in the session that reflects the purposes of the session and an agenda for the child's behavior. Conversely, a mother who is hesitant to establish leadership and retreats from difficulties with the child (perhaps using persuasion or distraction to get compliance in ways that suggest lack of leadership in the relationship) would get a lower score.



Thus, whether or not the child is compliant, the issue underlying this scale is whether the mother is in charge, or willing to take charge as necessary, to accomplish the tasks. Within this criterion, mothers may, by a variety of styles, accomplish their leadership (and may even decide with a very noncompliant child not to continue trying to force the child to perform some task), but the sense of mother providing structure and setting necessary limits should be present consistently during the session to get a high score.

- 1      Very Low. Mother fails to communicate her expectations for the child except in minimal ways and shows no effective leadership. Thus, mother makes very few demands on child's behavior and seems powerless to affect the child's agenda.
- 2      Low. Mother exerts some leadership but without consistency. Thus, few of her efforts have much effect on the child and she reacts to the child's agenda more than she tries to communicate her agenda for the child. Her attempts to influence the child are sporadic and convey a sense of powerlessness over the child even before the child has been noncompliant to direct control efforts. She may collapse in her demands and revert to pleading with the child ("Won't you please do this?") when the child is noncompliant and generally shows great inconsistency in her approach and a lack of control techniques in this session. She readily lets the child have control, and her structuring behaviors lose by failure to follow through on her expectations.
- 3      Moderate. Mother establishes reasonable structure for the child during much of the session and seems to have some leadership in the session. She shows some ability to insist on her structuring of the situation, but her behavior shows inconsistency across tasks and at critical points when the child has begun to deviate unreasonably from her schedule.

Note: Code ineffective but persistent limit setting techniques as moderate, showing that limits are applied but mother is not good at it. Thus, a 3 is a good score for a mother who strongly keeps her agenda before the child, but without the necessary skills for effective leadership (e.g., little flexibility in techniques, poor timing in responding to deviation, but done with authority).

- 4 High. Mother establishes her agenda adequately in the session and makes authoritative efforts to have the child follow it. Even if there are a few lapses in leadership, the mother provides adequate and consistent structure to keep her agenda before the child. If the child is noncompliant, the mother tries more vigorously to establish her expectations. Although the timing or style of these efforts may be somewhat inadequate to maintain the sense of her leadership, there should only be minor instances in which she seems not to be in charge and aware of the flow of events and/or able to respond to the child's needs for more structure of limits. Thus, this mother seems effectively to be in control although not necessarily always exercising control.
- 5 Very High. This mother meets all the criteria of this scale. She establishes a structure for the session in which her goals will be accomplished, she responds consistently and authoritatively to compliance problems, and she maintains adequate leadership and discipline to be in charge of events (even if the child is noncompliant, the mother could retain leadership of the session by the way she handles this issue). The mother may be strict or gentle, intrusive or respectful of the child's autonomy, but achieves this level of structure and limit setting.