

MATERNAL EMOTION REGULATION:
LINKS TO EMOTION PARENTING AND CHILD EMOTION REGULATION

by

DIANA MORELEN

(Under the Direction of Cynthia Suveg and Anne Shaffer)

ABSTRACT

The primary goal of the present study is to examine relations between maternal emotion regulation (ER) and emotion parenting behaviors and child ER. The present study is novel in its investigation of the link between maternal ER and emotion parenting behaviors. Further, this study adds a unique contribution to the literature in its multi-method assessment of maternal ER (i.e., self-report, semi-structured interview). Participants included 64 maternal caregiver-child (8-11 years old) dyads. Participants completed self-report questionnaires and engaged in a conflict discussion task. Maternal caregiver and child ER was coded from the behavioral observations. Results revealed that unsupportive emotion parenting behaviors were negatively related to adaptive maternal ER and positively related to maternal emotion dysregulation. Further maternal ER and emotion parenting behaviors related to child ER. Unsupportive emotion parenting behaviors were found to significantly mediate the link between maternal and child ER. Basic research and applied implications are discussed.

INDEX WORDS: Emotion regulation, Emotion socialization, Child Development

MATERNAL EMOTION REGULATION:
LINKS TO EMOTION PARENTING AND CHILD EMOTION REGULATION

by

DIANA MORELEN

B.A., College of William and Mary, 2008

M.S., University of Georgia, 2011

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial
Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

ATHENS, GEORGIA

2014

© 2014

Diana Morelen

All Rights Reserved

MATERNAL EMOTION REGULATION:
LINKS TO EMOTION PARENTING AND CHILD EMOTION REGULATION

by

DIANA MORELEN

Major Professor:

Cynthia Suveg

Committee:

Anne Shaffer
Ronald Blount

Electronic Version Approved:

Maureen Grasso
Dean of the Graduate School
The University of Georgia
August 2014

ACKNOWLEDGEMENTS

This dissertation reflects the collaborative nature of Dr. Cynthia Suveg's Development and Psychopathology lab and Dr. Anne Shaffer's Families, Relationships, Emotions, Stress, and Health (FRESH) lab at the University of Georgia. I would like to acknowledge the monumental role that both Dr. Suveg and Dr. Shaffer played in making this project possible. They both provided valuable guidance at every stage in the research process and encouraged me to persevere when obstacles arose. Dr. Suveg and Dr. Shaffer challenged me to think critically about children's emotional development and modeled how to approach research within a developmental psychopathology framework. I would also like to acknowledge the other member of my committee, Dr. Ronald Blount, for his thoughtful comments and suggestions during my proposal, defense, and throughout. I would also like to thank the graduate and undergraduate research assistants in the FRESH lab for their hard work from data collection to data coding. Last but far from least, I would like to acknowledge the unconditional love and support from my parents, sister, grandparents, husband, and extended family. Without them, I would not be the woman that I am today.

TABLE OF CONTENTS

| | Page |
|---|------|
| ACKNOWLEDGEMENTS..... | iv |
| LIST OF TABLES..... | vi |
| LIST OF FIGURES | vii |
| CHAPTER | |
| 1 INTRODUCTION | 1 |
| Maternal Emotion Regulation and Emotion Parenting..... | 1 |
| Maternal Emotion Regulation and Child Emotion Regulation..... | 4 |
| Summary and Hypotheses | 6 |
| 2 METHOD | 8 |
| Participants | 8 |
| Procedure | 8 |
| Coding and Reliability..... | 9 |
| Measures | 10 |
| 3 RESULTS..... | 16 |
| 4 DISCUSSION..... | 20 |
| Summary, Limitations, and Future Directions | 23 |
| REFERENCES | 26 |
| APPENDICES | |
| A META EMOTION INTERVIEW CODING SHEET | 31 |

LIST OF TABLES

| | Page |
|---|------|
| Table 1: Means, Standard Deviations, and Ranges of Paper and Pencil Measures..... | 14 |
| Table 2: Correlations between Study Variables | 15 |

LIST OF FIGURES

| | Page |
|---|------|
| Figure 1: Non-significant Results of Mediation Model 1: Maternal emotion dysregulation, unsupportive emotion parenting, and child ER | 18 |
| Figure 2: Significant Results of Mediation Model 2: Maternal emotion dysregulation, unsupportive emotion parenting, and child emotion dysregulation..... | 19 |

CHAPTER 1

INTRODUCTION

Decades of research have examined ways in which parents, and mothers in particular, shape children's emotional and behavioral competencies (see Morris, Silk, Steinberg, Myers, & Robinson, 2007 for a review). There has been a growing emphasis on children's development of emotion regulation (ER) abilities and the implications for healthy psychosocial development (e.g., Cicchetti, Ackerman, & Izard, 1995; Suveg, Hoffman, Zeman, & Thomassin, 2009). Similarly, there is ample literature examining adaptive and maladaptive emotion parenting behaviors that promote or hinder children's ER development (e.g., Gottman, Katz, & Hooven, 1996; Morris et al., 2007). What has not been studied; however, is how mothers' own ER contributes to this process. The primary goal of the present study is to examine the link between maternal ER and emotion parenting behaviors and child ER. The present study is novel in its investigation of the link between maternal ER and emotion parenting behaviors. Further, this study adds a unique contribution to the literature in its multi-method assessment of maternal and child ER (i.e., self-report, behavioral observation).

Maternal Emotion Regulation and Emotion Parenting

The current study defines ER as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals," (Thompson, 1994; pp. 27-28). Observing maternal ER is one way that children learn about ER (Morris et al., 2007), but direct modeling is only one method of emotion socialization. Emotion parenting encompasses many behaviors

such as discussing emotions and responding to children's emotional displays (Eisenberg et al., 1999). A plethora of studies have investigated emotion parenting behaviors and associated outcomes (e.g., Eisenberg et al., 1999; Gottman et al., 1996). From this literature, two broad categories of emotion parenting have been identified – supportive and unsupportive. Supportive emotion parenting behaviors provide a comfortable environment in which children can learn about emotions and are associated with adaptive child emotion and psychological outcomes (Gottman et al., 1996; McDowell, Kim, O'Neil, & Parke, 2002; Rothbaum & Weisz, 1994). Conversely, unsupportive emotion parenting behaviors create an uncomfortable emotion climate where emotions are not discussed, deemed as insignificant, are discouraged, or where negative emotions are expressed at high levels (Denham, Zoller, & Couchoud, 1994). Unsupportive emotion parenting behaviors have been linked with child emotion dysregulation and symptomology (Eisenberg et al., 1999; Ramsden & Hubbard, 2002).

Though much is known regarding emotion parenting and links to youth outcomes, much less is known about the relation between maternal ER and emotion parenting behaviors. No known studies have specifically examined how (and whether) maternal ER influences emotion parenting behaviors. From the broader emotion literature, Gottman and colleagues' (1996) notion of parental meta-emotion philosophy offers valuable explanations about how mothers' own feelings may influence their emotion parenting behaviors. According to their model of parental meta-emotion, parents' thoughts and feelings about emotions (including their ability to regulate their own emotions) influence parenting behaviors and parenting behaviors influence child outcomes (e.g., child ER, child mental/physical health; Gottman et al., 1996). Results of the Gottman and colleagues' study (1996) demonstrated that parents who were aware of their own emotions engaged in more emotion parenting behaviors associated with adaptive child

outcomes compared to parents who were less aware of their own emotions. Thus emotional awareness, one component of effective ER, appears to positively influence emotion parenting behaviors.

The current study builds upon this work by examining relations between maternal ER and emotion parenting behaviors. It is hypothesized that maternal maladaptive ER (i.e., emotion dysregulation), will impede her ability to engage in supportive emotion parenting behaviors and increase the likelihood of unsupportive emotion parenting behaviors. For example, imagine a child is discussing feelings about getting in trouble at school. The child reports feeling sad and embarrassed that the teacher scolded him front of classmates. A mother with ER difficulties may be so intensely focused on her own feelings of frustration about the situation that she fails to engage in supportive emotion parenting (e.g., validation, empathy). Additionally, this hypothetical mother may instead take her anger out on the child and subsequently engage in unsupportive emotion parenting behaviors (e.g., “It’s your fault that you felt sad because you shouldn’t have misbehaved!”). Conversely, it is hypothesized that maternal adaptive ER will facilitate mothers’ ability to engage in supportive emotion parenting behaviors and decrease the risk for unsupportive emotion parenting behaviors. A mother who is readily able to regulate her own emotional experiences under times of stress will have more resources available to assist her child with appropriate regulatory strategies. Using the same example about a boy getting in trouble at school, a mother who is able to regulate her own feelings of anger and disappointment regarding her child’s misbehavior seems more likely to perspective-take and help her child explore his feelings than the mother with ER difficulties. Subsequently, children are more likely to discuss and explore that emotional experience in a supportive versus unsupportive context, and that exploration provides valuable learning experiences in which children gain a better

understanding of the causes and consequences of emotions as well as adaptive coping strategies for managing emotions.

Maternal Emotion Regulation and Child Emotion Regulation

The Tripartite Model of the Impact of the Family on Children's Emotion Regulation and Adjustment posits that children's healthy emotional/psychological development is dependent on a dynamic model consisting of family factors such as emotion parenting practices, parental modeling of emotion displays, and parents' own ER (Morris et al., 2007). The present study focuses on the parental contributions to that model, by specifically examining how maternal ER relates to emotion parenting behaviors (as reviewed in the previous section) and child ER. The only known published study that has examined the direct link between parent and child (aged 9-19) ER found that self-reported maternal emotion suppression was positively related to self-reported child emotion suppression (Bariola, Gullone, & Hughes, 2011). Though not examining maternal ER specifically, a study by Muris and colleagues supports the notion that maternal emotional experiences are related to child emotional experiences (Muris, Steerneman, Merckelbach, & Meesters, 1996). This study examined the relations between child (aged 9-12) and mother trait anxiety and child and mother expressed fear. Results demonstrated positive relations between maternal experience of fearfulness and child experience of fearfulness and between maternal expression of fear and child expression of fear. The authors concluded that the findings support the theoretical notion of maternal modeling of emotional expression.

Commensurate with Morris and colleagues' Tripartite Model, recent research has documented the interconnected nature of emotion parenting behaviors, child ER, and other child outcomes (e.g., Morelen & Suveg, in press; Morris et al., 2011; Suveg, Shaffer, Morelen, & Thomassin, 2011). For example, behavioral observations of parents and children (aged 7-12) in

emotion discussions revealed that children were more likely to use adaptive ER if parents engaged in supportive emotion parenting behaviors compared to unsupportive emotion parenting behaviors (Morelen & Suveg, in press). Additionally, negative cycles of interactions in which mothers responded to children's maladaptive ER with unsupportive emotion parenting behaviors were positively related to child symptomology. Another study with children aged 7-12 found that child ER mediated the link between maternal caregiver and child psychopathology, but the indirect effect was moderated by maternal caregiver emotion parenting (Suveg et al., 2012). Specifically, the indirect effect of maternal caregiver psychopathology on child externalizing symptoms was stronger in the context of unsupportive reactions and weaker in the context of supportive reactions. The authors concluded that supportive emotion parenting buffered the potentially negative effects of parental psychopathology whereas unsupportive emotion parenting exacerbated the risk.

Another study that examined the interconnected nature of emotion parenting behaviors and child ER (ages 4-9) examined how maternal emotion parenting behaviors influence child ER and emotional displays in laboratory tasks designed to solicit child anger and sadness (Morris et al., 2011). Results demonstrated that when mothers engaged children in adaptive ER strategies (i.e., attention refocusing, cognitive reframing), children displayed low intensity anger and sadness. Additionally, there were age effects such that maternal caregiver attentional refocusing was more successful with younger compared to older children. Though the authors did not examine maternal factors that predicted ability to engage child in adaptive ER strategies, it seems that mothers would need to regulate their own emotions first before being able to assist with child ER. Given the foundation of literature demonstrating a link between emotion parenting

behaviors and child ER, emotion parenting behaviors are likely one mechanism through which maternal ER influences child ER.

Summary and Hypotheses

Overall, the literature review reveals that parents are important socialization agents for children's emotional development and children's ability to regulate their emotions relates to emotional, social, and psychological outcomes. No known studies have examined the implications of maternal ER on emotion parenting behaviors. Further, only one known study has examined the relation between maternal and child ER strategies. Additional research is needed to further establish whether and/or how maternal ER, emotion parenting behavior, and child ER relate.

The primary goal of the present study is to examine the relations between maternal caregiver ER, emotion parenting behavior, and child ER using multiple methods of assessment. Further, the study will examine emotion parenting behavior as one mechanism through which maternal caregiver ER influences child ER. This study will add to basic research by examining maternal caregiver ER and its relations with emotion parenting behavior and child ER. Additionally, this study adds a unique contribution to the literature in its multi-method assessment of ER including self-report and behavioral observations.

The following hypotheses are put forth:

1. Maternal caregiver emotion dysregulation will be negatively related to supportive emotion parenting behaviors and child adaptive ER and positively related to unsupportive emotion parenting behaviors and child emotion dysregulation.

2. Conversely, maternal caregiver ER will be positively related to supportive emotion parenting behaviors and child adaptive ER and negatively related to unsupportive emotion parenting behaviors and child emotion dysregulation.
3. Emotion parenting behaviors will mediate the link between maternal caregiver and child ER. Though the mediation models tested will be based on the patterns of relations between the variables, the following models are proposed based on the literature review:
 - Unsupportive emotion parenting will mediate the link between (high) maternal caregiver emotion dysregulation and (high) child emotion dysregulation
 - Unsupportive emotion parenting will mediate the link between (high) maternal caregiver emotion dysregulation and (low) child ER
 - Supportive emotion parenting will mediate the link between (high) maternal caregiver ER and (low) child emotion dysregulation
 - Supportive emotion parenting will mediate the link between (high) maternal caregiver ER and (high) child ER

CHAPTER 2

METHOD

Participants

Participants included 64 maternal caregiver-child dyads. Children included 26 boys and 38 girls ranging in age from 8 to 11 ($M = 9.5$; $SD = 1.04$). Caregivers included a primary, maternal caregiver figure (e.g., biological mothers, adoptive mother, grandmother) with whom the child was residing. Of the 64 maternal caregivers, 59 (92%) self-identified as the biological mother. The majority of maternal caregivers (95%) graduated from high school or completed equivalent requirements, and 33% completed college. The sample was racially and ethnically diverse with 52% of the families identifying as African American, 41% Caucasian, 3% Latino, and 2% Asian. Additionally, 47% of families reported an income less than \$20,000 per year, and 23% reported income greater than \$60,000 per year. Regarding the maternal caregiver's relationship status, 44% were married or cohabiting, 20% were divorced or separated, and 36% were never married.

Procedure

Newspaper advertisements and community flyers were used to recruit dyads. Inclusion criteria included maternal caregiver and child ability to read and write in English and that the caregiver lived with the child for at least the past two consecutive years. The study took place in a psychology research laboratory designed for assessments with behavioral observations.

Following consent procedures, dyads engaged in a warm-up task then four sequential interaction

tasks, all of which were video-taped for later coding. Following the interaction tasks, participants completed questionnaires and then were paid \$40 for participation.

Coding and reliability.

The codes from a Conflict Discussion task were used in the present study. For this task, maternal caregivers and children independently rank ordered a list of potential conflict areas (e.g., chores, homework, friends) and the topic rated highest by both members of the dyad was the one chosen for discussion. The dyad was given five minutes to talk about the topic and asked to come up with a solution, if possible, to the problem. This task in particular was chosen for the study because it was expected to induce stress thus allowing more opportunities to observe dysregulated emotion.

The coding training and procedures were as follows. Coding team members independently coded a family. Then, the entire coding team (comprised of seven doctoral students and one PhD level professor) met to discuss their codes and any discrepancy between codes. After coding several families as an entire team and once consistency across coding styles was achieved (i.e., scores within 1 point +/- of each other on a 7 point Likert scale), coders were paired into dyads and scored randomly-selected videos. Each maternal caregiver-child dyad was independently coded by two research assistants who later met to conference their scores. For each code, research assistants assigned a score reflective of the maternal caregiver and child behavior in the Conflict Discussion. Inter-rater reliability was computed on 30 randomly selected dyads. See Appendix A for the codes for all behavioral observation included in the present study.

Measures

Maternal Caregiver Emotion Regulation. Maternal caregivers reported on their own ER via the *Difficulties in Emotion Regulation Scale* (DERS; Gratz & Roemer, 2004). The DERS is a 36-item self-report measure of current, clinically-relevant difficulties with emotion regulation. Maternal caregivers were asked to rate items on a 5-point Likert scale (1 = *almost never*, 4 = *almost always*) according to the frequency with which the statement applied to them. The measure yields an overall score (i.e., DERS Total) and six subscales: Nonacceptance of Emotional Responses (e.g., “*When I’m upset, I feel ashamed with myself for feeling that way*”), Difficulties Engaging in Goal-Directed Behavior (e.g., “*When I’m upset, I have difficulty getting work done*”), Impulse Control Difficulties (e.g., “*When I’m upset, I lose control over my behaviors*”), Lack of Emotional Awareness (e.g., “*When I’m upset, I take time to figure out what I’m really feeling*”-reverse scored), Limited Access to Emotion Regulation Strategies (e.g., “*When I’m upset, I believe that there is nothing I can do to make myself feel better*”), and Lack of Emotional Clarity (e.g., “*I am confused about how I feel*”). Higher scores are indicative of more ER difficulties. High reliability and acceptable construct and predictive validity (e.g., internal consistencies from .80 to .89) have been established for the overall scale (Gratz & Roemer, 2004). The overall score (DERS Total) was used as a measure of maternal caregiver emotion dysregulation for the present study ($\alpha = .94$). See Table 1 for means, standard deviations, and ranges for all pencil and paper measures.

Maternal caregiver ER was also assessed through behavioral observations in the Conflict Discussion task. Maternal caregivers’ ER was rated using a global ER code that ranged from 1 (*extremely dysregulated*) to 7 (*extremely regulated*). Descriptions were provided for each value between 1 and 7 to facilitate reliable coding (see Appendix A). For example, “Parent’s emotions

are predominantly dysregulated. There are almost no (or not any) instances of regulated emotion,” is the description for a score of 1. Intraclass correlations were used to evaluate the reliability of the behavioral observations codes. The intraclass correlation for the maternal caregiver ER code was .79.

Emotion parenting behavior. Self-reports of emotion parenting behavior were collected via the Coping with Children’s Negative Emotions Scale (CCNES; Fabes, Eisenberg, Bernzweig, 1990). The measure assesses parental reactions to children’s negative emotions in the context of sixteen hypothetically-distressing situations (e.g., *“If my child falls off his/her bike and breaks it, and then gets upset and cries, I would...”*). Each individual item contains six theoretically distinct ways of responding to the distressing scenario and parents rate how likely they are to respond in each of the emotion parenting ways using a 7-point Likert scale. Several investigators have used this measure and reported adequate internal reliability (Eisenberg & Fabes, 1994; Eisenberg et al., 1999; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). Unsupportive emotion parenting subscales include: punitive reactions (e.g., *“tell the child to stop crying or he/she will not be able to ride the bike”*), minimization reactions (e.g., *“tell the child he/she is overreacting”*), and distress reactions (e.g., *“get angry with the child”*). The internal consistencies for the unsupportive scales were .89, .87, and .61, respectively. Supportive emotion parenting subscales include emotion-focused reactions (e.g., *“comfort your child and try to get him/her to forget about the accident”*), expressive encouragement (e.g., *“tell your child it is OK to cry”*), and problem-focused reactions (e.g., *“help your child figure out how to get the bike fixed”*). The internal consistencies for the supportive scales were .81, .90, and .79, respectively.

Significant relations (see Table 2 for correlations) were found amongst the unsupportive emotion parenting subscales from the CCNES (Punitive Reactions, Minimizing Reactions, Distress Reactions) as well as amongst the supportive emotion parenting subscales from the CCNES (Emotion Focused Reactions, Expressive Encouragement, Problem Focused Reactions), so they were combined into an unsupportive emotion parenting composite ($\alpha = .93$) and supportive emotion parenting composite ($\alpha = .93$), respectively .

Child Emotion Regulation. *Emotion Regulation Checklist (ERC;* Shields & Cicchetti, 1997). Maternal caregivers completed the 24-item ERC (4-point Likert scale) based on their child's typical methods of managing emotional experiences. The checklist has two subscales: (a) ER (i.e., assesses appropriate emotional expression, empathy, emotional self-awareness) and (b) Negativity/ Lability (i.e., assesses inflexibility, lability, dysregulated negative affect). The ERC has acceptable reliability and validity ($\alpha = .83$ for ER, $\alpha = .96$ for Negativity/Lability; Shields & Cicchetti, 1997). Internal reliability was lower than expected for the present study for the ER subscale ($\alpha = .62$) and acceptable for the Negativity/Lability subscale ($\alpha = .78$). Two items were removed from the ER scale, item 18 reverse scored (Displays flat affect/emotion) and item 23 [Displays appropriate negative emotion (for example, anger fear, frustration, distress) in response to hostile, aggressive, or intrusive acts by peers], because they were found to lower reliability.

The *Children's Emotion Management Scales for Sadness (CSMS) and Anger (CAMS;* Zeman, Shipman, & Penza-Clyve, 2001) and *Worry (CWMS;* Zeman, Cassano, Suveg, & Shipman, 2010). Children completed the CEMS for sadness (CSMS), anger (CAMS), and worry (CWMS) as a self-report measure of ER. The 12-item CSMS, 11-item CAMS, and 13-item CWMS use a 3-point Likert scale (1 = hardly ever, 2 = sometimes, 3 = often) to assess specific ER behaviors. For each emotion there are three subscales: (a) Emotion coping (e.g., "*I stay calm*

and keep my cool when I'm feeling mad"), (b) Inhibition (e.g., "I hide my sad feelings"), and (c) Dysregulation (e.g., "I do things like cry and carry on when I'm worried"). Preliminary studies indicate adequate internal consistency (i.e., alphas range from .62 to .77) and good test-retest reliability (Zeman et al., 2008). Composite scales for Emotion Coping ($\alpha = .83$), Inhibition ($\alpha = .77$), and Dysregulation ($\alpha = .60$) were formed for the present study by averaging the three subscales across the Sadness, Anger, and Worry scales. Of note, the Dysregulation subscale has fewer items than the other subscales and this may have contributed to the lower reliability for this scale.

Child ER was also assessed through behavioral observations in the Conflict Discussion task and was rated using a global ER code that ranged from 1 (*extremely dysregulated*) to 7 (*extremely regulated*). Descriptions were provided for each value between 1 and 7 to facilitate reliable coding. For example, "Child shows one or two instances of dysregulated emotion but predominately remains in control of their emotions. Child's behavior indicates that they are able to regulate their emotions most of the time," is the description for a score of 5 (*somewhat well-regulated*). The intraclass correlation for this code was .87.

Table 1.
Means, Standard Deviations, and Ranges of Paper and Pencil Measures

| Measure | Mean (SD) | Range |
|---------------------------------|--------------|---------|
| DERS Total | 1.93(.64) | 1.0-3.8 |
| CCNES Punitive Reactions | 2.84(1.36) | 1.2-6.5 |
| CCNES Distress Reactions | 3.06(.79) | 1.9-5.8 |
| CCNES Minimizing Reactions | 3.05(1.24) | 1.2-6.5 |
| CCNES Emotion Focused Reactions | 5.61(.94) | 3.0-7.0 |
| CCNES Expressive Encouragement | 4.84(1.30) | 1.7-7.0 |
| CCNES Problem Focused Reactions | 5.81(.83) | 3.2-7.0 |
| ERC: ER | 22.94 (2.93) | 15-28 |
| ERC: Negativity/Lability | 28.08 (5.71) | 18-45 |
| CEMS Coping | 2.29 (.40) | 1.4-3.0 |
| CEMS Inhibition | 2.01 (.40) | 1.3-3.0 |
| CEMS Dysregulation | 1.64 (.33) | 1.1-2.4 |

Note. CBCL = Child Behavior Checklist, CEMS = Children's Emotion Management Scale, ER = Emotion Regulation, ERC = Emotion Regulation Checklist.

Table 2
Correlations between Study Variables

| Measure | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|------|-----|
| 1. DERS Total | | | | | | | | | | | | | |
| 2. Observed Mom ER in conflict discussion | -.22 | | | | | | | | | | | | |
| 3. CCNES Punitive Reactions | .25 | -.26* | | | | | | | | | | | |
| 4. CCNES Minimizing Reactions | .30** | -.25 | .86** | | | | | | | | | | |
| 5. CCNES Distress Reactions | .43** | -.33** | .62** | .53** | | | | | | | | | |
| 6. CCNES Emotion Focused Reactions | -.07 | .13 | -.02 | .12 | -.19 | | | | | | | | |
| 7. CCNES Expressive Encouragement | -.11 | -.00 | .12 | .23 | -.15 | .61** | | | | | | | |
| 8. CCNES Problem Focused Reactions | -.36** | .24 | -.10 | .05 | -.18 | .88** | .55** | | | | | | |
| 9. ERC: ER | -.36** | .19 | -.25 | -.21 | -.21 | .36* | .16 | .38** | | | | | |
| 10. ERC: Negativity/Lability | .30* | -.08 | .44** | .46** | .37** | -.19 | -.001 | -.19 | -.48** | | | | |
| 11. CEMS Coping | -.12 | .19 | -.12 | -.17 | -.13 | -.17 | -.25 | -.18 | .22 | -.24 | | | |
| 12. CEMS Inhibition | .14 | .17 | .03 | -.03 | .05 | -.08 | -.16 | -.07 | .14 | -.10 | .36** | | |
| 13. CEMS Dysregulation | .21 | -.25† | .08 | .18 | .09 | -.10 | .10 | -.08 | -.03 | .15 | -.21 | -.06 | |
| 14. Observed Child ER | .06 | -.03 | .02 | -.08 | -.18 | -.03 | -.05 | -.04 | .03 | -.28† | .07 | .07 | .16 |

Note. DERS = Difficulties in Emotion Regulation, ER = Emotion Regulation, CCNES = Coping with Children's Negative Emotions Scale, ERC = Emotion Regulation Checklist, CEMS = Children's Emotion Management Scales

† $p \leq .05$ * $p \leq .02$, ** $p \leq .005$.

CHAPTER 3

RESULTS

Pearson bivariate correlations were used to examine the strength of relation between paper and pencil measures and corresponding behavioral observations. Given that there were three main constructs of interest (maternal caregiver ER, emotion parenting behavior, child ER), a Bonferonni's correction was applied reducing alpha to .02 (.05/3). The correlation between maternal caregiver report of dysregulation (DERS Total) and observed maternal caregiver ER in the conflict discussion was non-significant ($r = -.22, p = .09$), so the two measures were left separate. Regarding child ER, there was a marginal negative relation between observed child ER and maternal caregiver report of child emotion dysregulation (ERC Negativity/Lability, $r = -.28, p = .03$). Given the lack of a clear pattern of relations between paper and pencil measures and observed child ER, they were kept separate for the primary analyses.

Bivariate correlations were used to test hypothesis one (maternal caregiver emotion dysregulation would be negatively related to supportive emotion parenting behaviors and child adaptive ER and positively related to unsupportive emotion parenting behaviors and child emotion dysregulation) and hypothesis two (maternal caregiver ER would be positively related to supportive emotion parenting behaviors and child adaptive ER and negatively related to unsupportive emotion parenting behaviors and child emotion dysregulation). Hypotheses one and two were partially supported. Specifically, the DERS Total (maternal caregiver emotion dysregulation) was positively related to unsupportive emotion parenting behaviors (CCNES Unsupportive Composite, $r = .36, p = .007$) and child emotion dysregulation (ERC Negativity/Lability, $r = .30, p = .02$). The DERS Total was also negatively related to child ER

(ERC ER, $r = -.36, p = .004$). Observed maternal caregiver (adaptive) ER was negatively related to unsupportive emotion parenting ($r = -.30, p = .02$) and marginally negatively related to child reported emotion dysregulation (CEMS Dysregulation, $r = -.25, p = .050$). Maternal caregiver ER, both self-reported and observed, was not related to supportive emotion parenting behaviors. Overall, there is partial support for hypotheses one and two.

Of the four mediation models proposed, two mediation models were tested based on the significant relations that mapped onto the predictions. Bootstrapping analyses were conducted using the SPSS Process Macro (Preacher & Hayes, 2004) to test whether emotion parenting behavior mediated the link between maternal caregiver ER and child ER. Five thousand bootstrap resamples were used 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.

The first model examined the indirect effect of maternal caregiver emotion dysregulation (DERS Total) on child ER (ERC ER) through unsupportive emotion parenting (CCNES unsupportive emotion parenting composite; see Figure 1). Unsupportive emotion parenting did not mediate the link between maternal caregiver emotion dysregulation and child ER (point estimation = $-.007$, 95% BCa CI = $-.02$ to $.003$). The second analysis examined the indirect effect of maternal caregiver dysregulation (DERS Total) on child dysregulation (ERC Negativity/Lability) through unsupportive emotion parenting (CCNES unsupportive emotion parenting composite; see Figure 2). Maternal caregiver unsupportive emotion parenting mediated the link between maternal caregiver emotion dysregulation and child emotion dysregulation (point estimation = $.036$, 95% BCa CI = $.008$ to $.088$).

Figure 1.

Non-significant Results of Mediation Model 1: Maternal emotion dysregulation, unsupportive emotion parenting, and child ER.

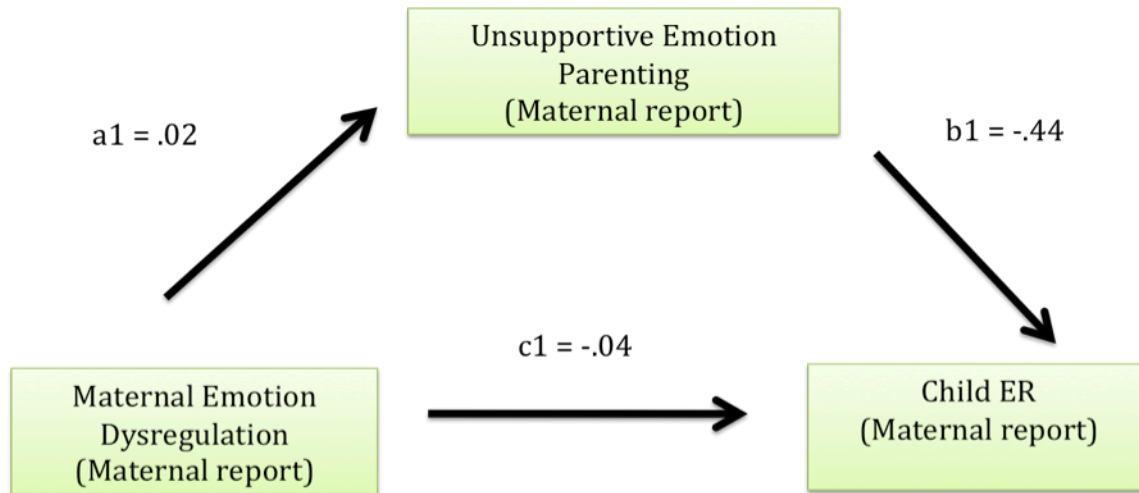
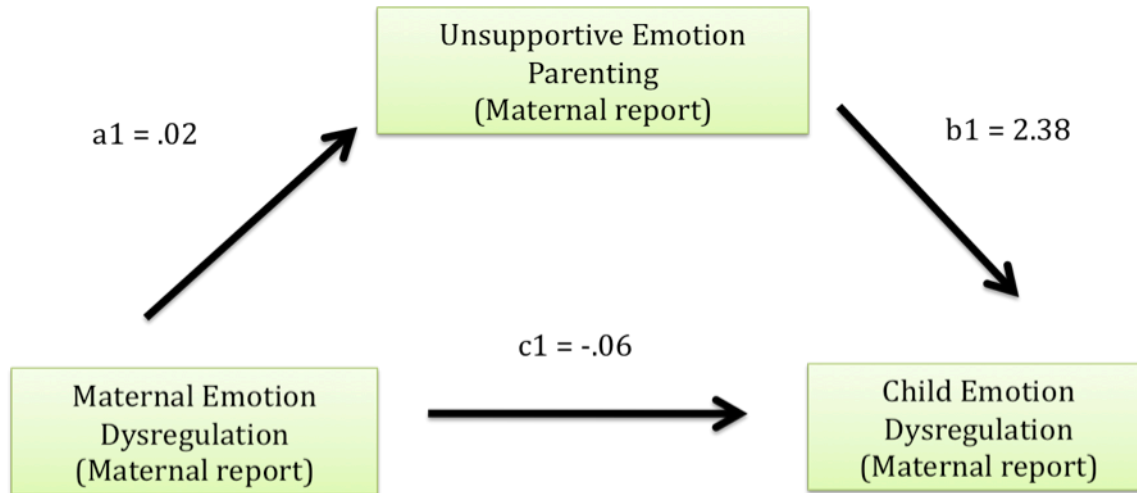


Figure 2.

Significant Results of Mediation Model 2: Maternal emotion dysregulation, unsupportive emotion parenting, and child emotion dysregulation.



CHAPTER 4

DISCUSSION

An increasing number of researchers and clinicians have urged for research and treatment addressing the integral role that emotion regulation (ER) plays in children's healthy psychosocial development (e.g., Cole et al., 2009; Suveg et al., 2009). Additionally, there is a general consensus that certain emotion parenting behaviors contribute to or impede children's emotional development (e.g., Gottman et al., 1996; Ramsden & Hubbard, 2002). Despite such acknowledgements in the field of emotion research, only one known published study (Bariola et al., 2011) has examined the relation between maternal caregiver ER and child ER. Further, no known studies have examined how maternal caregiver ER relates to specific emotion parenting styles. The present study filled a gap in the literature by examining maternal caregiver ER as one variable that may promote or hinder children's emotional development. Additionally, this study examined relations between maternal caregiver ER, emotion parenting behavior, and child ER using multiple methods of assessment. Results indicated that maternal caregiver ER was associated with adaptive emotion parenting and child outcomes whereas maternal caregiver emotion dysregulation was associated with maladaptive parenting and child outcomes. Partial support was provided for the mediating role of emotion parenting behaviors on the link between maternal caregiver and child ER.

Regarding the link between maternal caregiver ER and emotion parenting behaviors, hypotheses one and two posited that maternal caregiver ER would be positively related to supportive emotion parenting and negatively related to unsupportive emotion parenting and,

conversely, maternal caregiver emotion dysregulation would be positively related to unsupportive emotion parenting and negatively related to supportive emotion parenting. There was partial support for hypotheses one and two. Interestingly, mothers' emotional functioning (as measured by observed ER and self reported dysregulation) only related to unsupportive emotion parenting, but not to supportive emotion parenting, though results for supportive emotion parenting were in the hypothesized direction. Mothers who experience emotions as overwhelming, intense, and/or uncontrollable are likely to have limited resources to pull from when it come supporting their child's own emotional experiences in a constructive way. Mothers with ER difficulties are less encouraging and more critical about children's emotions than mothers who do not have ER difficulties. This may be because mothers with ER difficulties view emotions as disruptive and unpredictable and therefore try to minimize their children's experience of negative emotions in an attempt to prevent emotion dysregulation from escalating. Conversely, mothers with adaptive ER abilities (i.e., ability to regulate emotions in conflict situation) likely have more emotional resources that enable them to remain calm in response to their child's negative emotional displays. The results suggest that emotionally-regulated mothers are not necessarily prone to engage in more supportive emotion parenting techniques (compared to mother low in adaptive ER), but rather are less likely to engage in minimizing, punitive, and critical emotion parenting strategies. Perhaps maternal ER capabilities are necessary but not sufficient for supportive emotion parenting behaviors. Factors not examined in the present study (e.g., maternal emotional intelligence, family emotion climate) might help explain the maternal and environmental factors that are associated with supportive emotion parenting behaviors.

There was also partial support for the hypothesis that examined links between maternal caregiver ER and child ER. Specifically, maternal caregiver emotion dysregulation was negatively related to child ER and positively related to child emotion dysregulation. Observed maternal caregiver ER was marginally negatively related to child self-reported emotion dysregulation. There are several explanations for the findings. One possible explanation for this link is that mothers model ER (or dysregulation) for their children (Morris et al., 2007). From this perspective, children whose mothers are emotionally dysregulated are more likely to show their emotions in dysregulated ways compared to children whose mothers are able to effectively regulate their emotions. This interpretation is consistent with past research that found similar patterns of emotion management between mothers and children (Bariola et al., 2011; Muris et al., 1996). Another possible explanation is that mothers and children engage in evocative interactions where one member of the dyad becomes dysregulated, which results in the other becoming dysregulated, and emotional escalation for them both. Relatedly, the factors that may predispose a mother to adaptive/maladaptive ER (e.g., the personality trait of neuroticism, high negative affectivity) have heritable components (Emde et al., 1992; Rhee et al., 2012). Further, a child's temperament influences the reactions they evoke from their environment (e.g., Caspi, Damon, & Eisenberg, 1998). Put together, both passive and active G X E effects (Scarr & McCartney, 1983) likely influence the link between maternal caregiver and child ER. Future research could examine possible G X E interactions.

It is important to note that only 2 of the 12 relations between maternal and child ER were significant. Therefore, if there is a link between the variables, it is likely to be indirect. The present study examined emotion parenting behaviors as one mechanism through which maternal caregiver ER influences child ER. Partial support was found for this hypothesis. Specifically,

unsupportive emotion parenting behavior mediated the link between maternal caregiver and child emotion dysregulation. High maternal caregiver emotion dysregulation has the potential to result in increased levels of harsh, critical, unsupportive emotion parenting behaviors. Unsupportive emotion parenting behaviors, in turn, result in increased levels of child emotion dysregulation. Thus it seems that emotion parenting behaviors are one mechanism through which maternal caregiver ER difficulties relate to child ER difficulties. As previously discussed, a mother's own ER abilities (or difficulties) influence the likelihood that she will engage in unsupportive emotion parenting behaviors. Subsequently, when children's emotional experiences are punished, minimized, or criticized, children are either left with limited adaptive coping skills or learn maladaptive ways of expressing their emotions (e.g., minimizing it themselves, yelling, crying; Eisenberg & Fabes, 1994). Maladaptive coping strategies likely result in increased levels of negative affect and stressful cycles of interaction between mothers and children (Morelen & Suveg, in press).

Summary, Limitations, and Future Directions

The findings significantly contribute to the emotion socialization literature as no studies were found that specifically examined the link between maternal caregiver ER and emotion parenting behavior. The closest study found was Gottman and colleagues' (1996) seminal work on parental meta-emotion that established a link between parents' awareness of their own emotions and adaptive emotion parenting behaviors. The present study adds to prior knowledge by establishing that maternal ER is related to emotion parenting behavior; specifically, maternal ER is negatively related to unsupportive emotion parenting behavior. The findings provide preliminary empirical support for the need to address maternal caregiver ER in interventions aimed to teach emotion parenting skills. Beyond that, the findings suggest that adaptive

maternal caregiver ER is necessary, but not sufficient, for adaptive emotion parenting. Specifically, supportive emotion parenting behaviors did not relate to maternal caregiver ER or emotion dysregulation. Thus, while adaptive ER abilities decrease the likelihood of engaging in unsupportive emotion parenting behaviors, they do not necessarily increase the likelihood of engaging in supportive emotion parenting behaviors. Perhaps strategies for supporting children's emotions (e.g., encouraging coping through problem-solving, encouraging adaptive forms of emotional expression) are difficult for some parents. Therefore, parenting programs would likely benefit from the inclusion of emotion parenting skills and strategies for supporting children's emotional experiences. The suggestions regarding the potential benefits for intervention programs are speculative. Whether interventions would benefit from inclusion of parental ER skills is an empirical question that should be answered by future research.

The present study contributes to the literature by demonstrating links between maternal ER, emotion parenting, and child ER. The findings are strengthened by the diverse sample, the use of multiple methods of assessment, and the use of multiple informants. Despite the contributions, several limitations are noted. First, the sample size was relatively small and only included mothers and therefore limited the nature of the analyses. Future research should recruit fathers and employ larger sample sizes to allow for investigation of whether/how the relations between maternal ER, emotion parenting, and child ER vary by parent/child sex, race, and child age. Second, the mediation model was comprised of same-method (maternal report) variables and is therefore a potential reflection of same-method bias. Despite this limitation, it is promising that the present study found correlations between self-report and observational measures in the expected direction. Third, the cross-sectional nature of the study and the dyadic nature of the observational codes make it impossible to make conclusions regarding the temporal

sequence of the variables given the bidirectional nature of parent-child interactions. Future research should employ a longitudinal design and micro coding to better capture the order in which maternal caregiver ER displays, maternal caregiver emotion parenting behaviors, and child ER displays occur. The present study assumed the mediational order (maternal caregiver ER influencing maternal caregiver emotion parenting, which then influences child ER) based on a review of the literature, but acknowledges the empirical necessity of longitudinal designs.

References

- Bariola, E., Gullone, E., & Hughes, E. K. (2011). Child and adolescent emotion regulation: The role of parental emotion regulation and expression. *Clinical Child And Family Psychology Review, 14*, 198-212. doi:10.1007/s10567-011-0092-5
- Berenbaum, H., Raghavan, C., Le, H., Vernon, L. L., & Gomez, J. J. (2003). A taxonomy of emotional disturbances. *Clinical Psychology: Science And Practice, 10*, 206-226. doi:10.1093/clipsy/bpg011
- Caspi, A., Damon, W., & Eisenberg, N. (1998). Personality development across the life course. In *Handbook of child psychology, 5th ed.: Vol 3. Social, emotional, and personality development*. (pp. 311-388). Hoboken, NJ US: John Wiley & Sons Inc.
- Cicchetti, D., Ackerman, B. P., & Izard, C. E. (1995). Emotions and emotion regulation in developmental psychopathology. *Development and Psychopathology, 7*, 1-10. doi:10.1017/S0954579400006301
- Cunningham, J., Kliewer, W., & Garner, P. W. (2009). Emotion socialization, child emotion understanding and regulation, and adjustment in urban African American families: Differential associations across child gender. *Development And Psychopathology, 21*, 261-283. doi:10.1017/S0954579409000157
- Denham, S. A., Zoller, D., & Couchoud, E. A. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30*, 928-936. doi:10.1037/0012-1649.30.6.928

- Eisenberg, N., & Fabes, R. A. (1994). The Relations of Emotionality and Regulation to Children's Anger-related Reactions. *Child Development, 65*, 109-128. doi: 10.2307/1131369
- Eisenberg, N., Fabes, R. A., Shepard, S. A., Guthrie, I. K., Murphy, B. C., & Reiser, M. (1999). Parental reactions to children's negative emotions: Longitudinal relations to quality of children's social functioning. *Child Development, 70*, 513 - 534. doi:10.1111/1467-8624.00037
- Emde, R. N., Plomin, R., Robinson, J., Corley, R., DeFries, J., Fulker, D. W., . . . Zahn-Waxler, C. (1992). Temperament, emotion, and cognition at fourteen months: The MacArthur Longitudinal Twin Study. *Child Development, 63*, 1437-1455. doi:10.2307/1131567
- Fabes, R. A., Leonard, S. A., Kupanoff, K., & Martin, C. L. (2001). Parental Coping with Children's Negative Emotions: Relations with Children's Emotional and Social Responding. *Child Development, 72*, 907. doi: 10.1111/1467-8624.00323
- Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review, 34*, 285-310. doi: 10.1300/J002v34n03_05
- Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Metaemotion: How families communicate emotionally*. Mahwah, NJ: Erlbaum.
- Gottman, J. M., Katz, L. F., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology, 10*, 243-268. doi:10.1037/0893-3200.10.3.243

- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment, 26*, 41 - 54. doi:10.1023/B:JOBA.0000007455.08539.94
- Morelen, D., & Suveg, C. (under review). A real time analysis of parent-child emotion discussions: The interaction is reciprocal.
- Morris, A., Silk, J. S., Morris, M. S., Steinberg, L., Aucoin, K. J., & Keyes, A. W. (2011). The influence of mother-child emotion regulation strategies on children's expression of anger and sadness. *Developmental Psychology, 47*, 213-225. doi:10.1037/a0021021
- Morris, A., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. (2007). The role of the family context in the development of emotion regulation. *Social Development, 16*, 361- 388. doi:10.1111/j.1467-9507.2007.00389.x
- Muris, P., Steerneman, P., Merckelbach, H., & Meesters, C. (1996). The role of parental fearfulness and modeling in children's fear. *Behavior Research and Therapy, 3*, 265-268. doi: 005-7967(95)00067-4
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717-731.
- Ramsden, S. R., & Hubbard, J. A. (2002). Family expressiveness and parental emotion coaching: Their role in children's emotion regulation and aggression. *Journal of Abnormal Child Psychology, 30*, 657 - 667. doi: 10.1023/A:1020819915881

Rhee, S. H., Corley, R. P., Friedman, N. P., Hewitt, J. K. Hink, L. K. Johnson, D. P., . . .

Young, S. E. (2012). The Etiology of Observed Negative Emotionality from 14 to 24 Months. *Frontiers in Genetics, 3*, 1-10. doi: 10.3389/fgene.2012.00009

Rothbaum, F., & Weisz, J. R. (1994). Parental caregiving and child externalizing behavior in nonclinical samples: A meta-analysis. *Psychological Bulletin, 116*, 55-74.
doi:10.1037/0033-2909.116.1.55

Scarr, S., & McCartney, K. (1983). How people make their own environments: A theory of genotype → environment effects. *Child Development, 54*, 424-435.

Shields, A., & Cicchetti, D. (1997). Emotion regulation among school-age children: The development and validation of a new criterion Q-sort scale. *Developmental Psychology, 33*, 906-916. doi:10.1037/0012-1649.33.6.906

Suveg, C., Hoffman, B., Zeman, J. L., & Thomassin, K. (2009). Common and specific emotion-related predictors of anxious and depressive symptoms in youth. *Child Psychiatry and Human Development, 40*, 223-39.

Suveg, C., Shaffer, A., Morelen, D., & Thomassin, K. (2011). Links between maternal caregiver and child psychopathology symptoms: Mediation through child emotion regulation and moderation through maternal caregiver behavior. *Child Psychiatry And Human Development, 42*, 507-520.

Suveg, C., Southam-Gerow, M., Goodman, K., & Kendall, P.C. (2007). The role of emotion theory and research in child therapy development. *Clinical Psychology: Science and Practice, 14*, 358-371. doi:10.1111/j.1468-2850.2007.00096.x

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs Of The Society For Research In Child Development, 59*, 25-52, 250-283.

doi:10.2307/1166137

Zeman, J., Cassano, M., Suveg, C., & Shipman, K. (2010). Initial validation of the Children's Worry Management Scale. *Journal Of Child And Family Studies, 19*, 381-392.

doi:10.1007/s10826-009-9308-4

Zeman, J., Shipman, K., & Penza-Clyve, S. (2001). Development and initial validation of the Children's Sadness Management Scale. *Journal Of Nonverbal Behavior, 25*, 187-205.

doi:10.1023/A:1010623226626

Appendix A

CHILD EMOTION REGULATION

1: Extremely dysregulated: Child's emotions are predominantly dysregulated. There are almost no (or not any) instances of regulated emotion.

2: Highly dysregulated

3: Somewhat dysregulated: Child shows more dysregulated emotion than regulated.

4. Mixed regulation/dysregulation: Child shows a few instances of dysregulated emotion but also shows a few instances of regulated emotion (about 50/50 mix)

5. Somewhat well-regulated: Child shows one or two instances of dysregulated emotion but predominately remains in control of their emotions. Child's behavior indicates that they're able to regulate their emotions most of the time.

6. Very well-regulated

7. Extremely well-regulated: Child's emotions and reactions appear to be adaptively regulated and controlled. There are almost no (or not any) instances of dysregulated emotion.

Indicators of Emotional Dysregulation:

- Child exhibits wide mood swings (for example, the child's emotional state is difficult to anticipate because she moves quickly from a very positive or neutral to very negative emotional states).
- Becomes frustrated easily
- Has angry outbursts or temper tantrums; whines or pouts
- Is impulsive (responds quickly without thinking)
- Shows disruptive outbursts of energy/exuberance
- Responds angrily to mother's limit-setting
- Has difficulty managing emotional intensity (e.g. gets angry easily and takes a while to return to baseline)
- Inappropriate emotional responses (e.g., responds negatively when mother uses a neutral or positive tone, laughs when mother is angry or upset, shows flat affect in situations (e.g., conflict discussion) that would normally solicit an emotional response)
- Is overly exuberant/excited when trying to get their mother's attention or engage their mother in an activity
- Failure to flexibly respond to situation

Indicators of Emotional Regulation:

- Is able to transition into and out of an activity easily (e.g., does not become nervous, angry, or overly excited when moving from one activity to another)
- Is able to recover quickly from strong positive or negative emotions (e.g., does not pout or remain angry after an emotionally-laden event)
- Is able to be patient when the task demands (e.g., waiting their turn during the etch-a-sketch task)
- Responds positively to neutral or friendly comments made by their mother
- Display and expresses appropriate negative and/or positive emotion given the situation

PARENT EMOTION REGULATION

1: Extremely dysregulated: Parent's emotions are predominantly dysregulated. There are almost no (or not any) instances of regulated emotion.

2: Highly dysregulated

3: Somewhat dysregulated: Parent shows more dysregulated emotion than regulated but there is at least one indication that parent has some control over her emotions.

4. Mixed dysregulation/regulation: Parent shows a few instances of dysregulated emotion but also shows a few instances of regulated emotion. (Mix should be about 50/50)

5. Somewhat well-regulated: Parent shows one or two instances of dysregulated emotion but predominately remains in control of her emotions Parent's behavior indicates that she is able to regulate her emotions most of the time.

6. Very well-regulated

7. Extremely regulated: Parent's emotions and reactions appear to be well regulated under her control. There are almost no (or not any) instances of dysregulated emotion.

Dysregulation

- Mom's exhibits wide mood swings (for example, the mother's emotional state is difficult to anticipate because she moves quickly from a very positive or neutral to very negative emotional states).
- Becomes frustrated easily
- Has angry outbursts (e.g. yells at child)
- Has difficulty managing emotional intensity (e.g. gets angry easily and takes a while to return to baseline)
- Mom's emotions interfere with her ability to help her child with the specified task
- Has an emotional reaction inappropriate (in valence or intensity) given the situation

Regulation

- Is able to recover quickly from becoming upset (e.g., does not pout or remain angry after an emotionally-laden event)
- Is able to be patient towards her child
- Displays appropriate negative emotion (for example, anger, frustration, distress) in response to hostile, aggressive, or intrusive acts by the child
- Flexibly and appropriately matches her child's emotion and/or behavior (e.g. acts cheerfully towards her child when the child's behavior is positive).
- Shows understanding of her own emotions (e.g. telling her child how she feels)