

AN EXAMINATION OF NEGATIVE MATERNAL
REGARD FOR CHILD AND ITS ASSOCIATION
WITH PARENTING BEHAVIORS AND
CHILD PROBLEM BEHAVIORS

By

PAUL MICHAEL EMRICH

Bachelor of Arts in Family Psychology
Oklahoma Baptist University
Shawnee, Oklahoma
1996

Master of Science in Marriage and Family Therapy
Oklahoma Baptist University
Shawnee, Oklahoma
1999

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
December, 2011

AN EXAMINATION OF NEGATIVE MATERNAL
REGARD FOR CHILD AND ITS ASSOCIATION
WITH PARENTING BEHAVIORS AND
CHILD PROBLEM BEHAVIORS

Dissertation Approved:

Dr. Amanda Harrist

Dissertation Adviser

Dr. Michael Criss

Dr. Laura Hubbs-Tait

Dr. Steve Harrist

Dr. Robert Larzelere

Dr. Sheryl Tucker

Dean of the Graduate College

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	4
Parenting Behaviors.....	4
Supportive Parenting.....	5
Harsh Parenting.....	6
Parental Psychological Operations.....	7
Maternal Attributions.....	7
Maternal Affect.....	10
Maternal Attitudes.....	11
Relationship-Specific Parental Perceptions.....	12
Integrated Constructs of Parent Psychological Representations.....	13
Relational Schemas.....	14
Internal Working Models of Attachment.....	15
Negative Maternal Regard for Child.....	18
Conclusion.....	20
Hypotheses.....	20
III. METHODOLOGY.....	23
Participants.....	23
Procedure.....	24
Measures.....	25
Independent Variable: Negative Maternal Regard.....	25
Maternal Negative Attributions.....	26
Maternal Negative Affect.....	28
Maternal Negative Attitude.....	29
Mediating Variables: Parenting Behaviors.....	30
Supportive Parenting.....	30
Harsh Parenting.....	32
Dependent Variables: Child Problem Behaviors.....	34
Child Internalizing and Child Externalizing.....	34

IV. RESULTS	36
Overview	36
Hypothesis 1.....	37
Hypothesis 2.....	43
Hypothesis 3.....	43
Hypothesis 4.....	44
Hypothesis 5.....	46
Hypothesis 6.....	46
Hypothesis 7.....	50
Hypothesis 8.....	56
V. DISCUSSION	61
Overview.....	61
Summary of Results	62
Limitations	73
Recommendations.....	75
Conclusions.....	79
REFERENCES	82
APPENDICES	105
Articles Addressing Integrated Psychological Constructs Related to Parents.....	107
Negative Maternal Regard Items, Measures, Transformations, and Components.....	113
Institutional Review Board Approval	120
VITA.....	123

LIST OF TABLES

Table	Page
Table 1: Socioeconomic Characteristics of Participating Families	24
Table 2: Descriptive Statistics for Negative Maternal Regard Components	29
Table 3: Descriptive Statistics for Parenting Behavior Measures	33
Table 4: Descriptive Statistics for Child Problem Behaviors	35
Table 5: Internal Consistency of Each Negative Maternal Regard Component	37
Table 6: Correlations Among Negative Maternal Regard Components	38
Table 7: KMO and Bartlett's Test	39
Table 8: Explained Variance of each Negative Maternal Regard Component	40
Table 9: Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of Negative Maternal Regard Components	43
Table 10: Correlations Between Negative Maternal Regard and Parenting Behaviors	44
Table 11: Regression Analysis of Parenting Behaviors on Negative Maternal Regard	44
Table 12: Correlations Between Negative Maternal Regard and Child Problem Behaviors for Each Grade	45
Table 13: Correlations Between Negative Maternal Regard and Child Problem Behaviors	45
Table 14: Regression Analysis of Child Problem Behaviors on Negative Maternal Regard	46
Table 15: Correlations Between Parenting Behaviors and Child Problem Behaviors	47

Table	Page
Table 16: Correlations among Parenting Behaviors and Child Problem Behaviors for Each Grade	47
Table 17: Regression Analysis of Child Problem Behaviors on Parenting Behaviors	48
Table 18: Test of Harsh Parenting as Mediator of Association Between Negative Maternal Regard and Child Externalizing Behaviors.....	52
Table 19: Test of Supportive Parenting as Mediator of Association Between Negative Maternal Regard and Child Externalizing Behaviors.....	55
Table 20: Test of Supportive Parenting as Mediator of Association Between Negative Maternal Regard and Child Internalizing Behaviors.....	57
Table 21: Test of Harsh Parenting as Mediator of Association Between Negative Maternal Regard and Child Internalizing Behaviors.....	59

LIST OF FIGURES

Figure	Page
Figure 1: Scree Plot of Negative Maternal Regard Components.....	41
Figure 2: Unadjusted Correlations Among Negative Maternal Regard, Parenting Behaviors, and Child Problem Behaviors.....	49
Figure 3: Mediator Model for Parenting Behavior, Negative Maternal Regard, and Child Problem Behaviors.....	51
Figure 4: Model of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall.....	54
Figure 5: Model of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall.....	56
Figure 6: Model of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall.....	58
Figure 7: Model of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall.....	60
Figure 8: The Structural Analysis of Social Behavior (SASB) Simplified Cluster Model.....	76

AUTHOR NOTE

This research was supported in part by grant 42498 from the National Institute of Mental Health (MH 42498).

CHAPTER I

INTRODUCTION

Mothers experience intense feelings and thoughts about their children (Parker, 1996), but what happens when a mother dislikes her child? Consistently disliking a child is not a common topic for parents to discuss and share openly. However, one such mother confessed, “It got to the point where I viewed Sophie’s every move through a lens of failure” (Rabiner, 2011, “Why Don’t I like My Own Child?” para. 9). This mother realized disliking her child impacted her perceptions and her parenting. Disliking your own child violates social norms (Suitor, Sechrist, Plikuhn, Pardo, & Pillemer, 2008) and has been vilified by society (Parker, 1996). Indeed, negative connotations about disliking a child may be the reason Rabiner published her popular-press article under a pseudonym. While dislike for a child may be socially unacceptable and uncommon to address, it is important to acknowledge some mothers do dislike a particular child, and therefore, researchers need to understand how it contributes to parenting behavior and, ultimately, long-term child well-being. For example, Rabiner described her lack of emotional tenderness and connection with the child she disliked, while feeling “mommy love” for her other child (Rabiner, 2011, para. 7). As she articulated in the article, disliking her child related to feelings of annoyance, aversion, and frustration, as well as demanding and impatient parenting towards her child.

In the academic study of parenting, we rarely discuss the painful reality that some parents dislike a child. We study poor relationship quality, insecure attachment, parental favoritism, and parent-child conflict, but tend not to directly assess parents' regard for their children. To regard is "to look upon or think of with a particular feeling" (Random House Webster's Unabridged Dictionary, 2001, p. 1622). Thus, Negative Maternal Regard is a mother's tendency to think and feel about her child in a negative manner. This tendency has rarely been directly addressed in the parenting literature.

Developmental and social psychologists have proposed parents use integrated psychological operations to think and feel about their children. Two of the most prominent constructs have been relational schemas and internal working models of attachment. Both relational schemas and internal working models of attachment have proven useful conceptual frameworks, but each includes unique challenges for direct assessment. The conceptualization of this study draws upon established conceptual models which describe a mother's integrated social/psychological representations of a relationship, (e.g., relational schemas, internal working models) and specific cognitive and emotional operations (e.g., attitudes, attributions, affect) to conceptualize the notion of maternal dislike or Negative Maternal Regard (NMR). NMR—that is, a mother's tendency to think and feel negatively about a particular child—may serve as a useful approach to assessing a mother's psychological representation regarding a specific child (i.e., a mother's attributions, affect, and attitude toward her child), as well as explaining her parenting behaviors toward that child.

It was a goal of this project to operationalize and assess the NMR construct via connected parental psychological operations and then examine the relation of NMR to

parenting practices and longitudinal child behavioral adjustment among a large community sample of school-age children. NMR was operationalized by using data from multiple informants (viz., mothers and outside observers) and multiple measures (e.g., attributions made about the child in hypothetical situations, coded maternal attitude about the child based on open-ended questions, and observed affect a mother displays toward her child). Considering the social norms and complexity of NMR, employing several measures and using various methods of data collection from multiple informants will help identify and validate components of NMR, which can then be used as a construct in empirical research.

Through this study, the coherence of the NMR construct is explored, and the associations among NMR, concurrent parenting, and subsequent child internalizing and externalizing behaviors are examined. Specifically, NMR during the child's kindergarten year is expected to predict later child internalizing and externalizing behaviors at first, second, and third grades, with harsh parenting and limited supportive parenting mediating the association between NMR and child internalizing and externalizing.

CHAPTER II
REVIEW OF LITERATURE

Parenting Behaviors

There has been a long history of research linking parenting to child behavioral adjustment (e.g., Baumrind, 1971; Cicchetti & Toth, 2005; Grusec, 2011; McKee, Colletti, Rakow, Jones, & Forehand, 2008; Repetti, Taylor, & Seeman, 2002). For instance, several studies indicate a mother's parenting behaviors when a child is age five are linked to later child internalizing and externalizing behaviors (e.g., Aunola & Nurmi, 2005; Pettit, Laird, Dodge, Bates, & Criss, 2001). However, the contributions to and effects of specific parenting behaviors vary (Darling & Steinberg, 1993). Thus, the literature regarding maternal supportive and harsh parenting, respectively, and how they are associated with child internalizing and externalizing behaviors is reviewed.

Of particular relevance to this study is the association of parent's psychological operations (i.e., parent attributions, attitude, and affect regarding a child) to their parenting behaviors. So, the literature linking parenting behaviors with maternal attributions, attitudes, and affect regarding a child is reviewed. The conceptual models which seek to explain how these psychological operations relate to a mother-child relationship are also described. Next, how the NMR components fit into the existing literature is explained. This chapter concludes with the hypotheses for this study.

Supportive Parenting

A large group of studies has focused on the effects of supportive parenting behaviors on child adjustment. Supportive parenting has been conceptualized as encompassing various qualities such as parental warmth and affection (Bates & Bayles, 1988; Biringen & Robinson, 1991; Coie & Dodge, 1998; Eisenberg & Fabes, 1998; Pettit, Bates, & Dodge, 1993; Richman, Stevenson, & Graham, 1982), being child-centered (Gest, Neeman, Hubbard, Masten, & Tellegen, 1993), proactive teaching (Holden, 1985; Pettit et al., 1993; Zahn-Waxler, Iannotti, Cummings, & Denham, 1990), positive reinforcement for appropriate behavior (Patterson, Reid, & Dishion, 1992), inductive discipline (Hart, DeWolf, Wozniak, & Burts, 1992), initiating positive activities and play (Gardner, 1994; Ladd, Profilet, & Hart, 1992), being emotionally supportive and caring (Bronstein, Clauson, Stoll, & Abram, 1993; Pettit, Bates, & Dodge, 1997; Pianta, & Caldwell, 1990), being responsive to the child (Gardner, 1994), and participating with a child by providing optimum coaching and monitoring in peer contexts (Rubin, Bukowski, & Parker, 1998). Some researchers have sought to combine many of these behaviors to identify the overall practice of supportive parenting (e.g., Pettit et al., 1997; Russell, 1997). Operationalized in these ways, supportive parenting has been shown to influence children's optimum behavioral and social adjustment while also buffering risk factors, such as being raised by a single parent or in a low socio-economic status family (Pettit et al., 1997). Thus, high levels of supportive parenting appear to have a beneficial impact on child behavioral adjustment.

In contrast, low levels of supportive parenting have been linked with problematic outcomes. For example, compared to parents of non-aggressive adolescents, parents of

aggressive adolescents were shown to use explanations on fewer occasions as a parenting technique (Beauchaine, Strassberg, Kees, & Drabick, 2002). Similarly, low levels of supportive parenting tend to interact with other specific discipline practices to predict negative child behaviors. Research indicates negative effects of physical discipline are amplified in the context of low supportive parenting, whereas, negative effects are negligible when combined with regular occurrences of supportive parenting (Deater-Deckard & Dodge, 1997). Specifically, Deater-Deckard and Dodge (1997) found children exhibited externalizing behaviors after experiencing physical discipline in the absence of parental warmth, while children who experienced both physical discipline and supportive parenting did not. In a similar manner, parental emotional support—when a child was two, four, and six years of age—was negatively related to subsequent child externalizing behaviors (McCarty, Zimmerman, Digiuseppe, & Christakis, 2005). Thus, limited supportive parenting has been linked to difficulties in a child's behavioral adjustment.

Harsh Parenting

Similar to its association with low levels of supportive parenting, research shows an association between difficult child adjustment and high levels of overtly harsh parenting behaviors. Researchers have operationalized harsh parenting in terms of specific parenting behaviors that communicate hostility, anger, criticism, and rejection (e.g., Neppl, Conger, Scaramella, & Ontai, 2009). Studies have also shown harsh parenting relates to child behavior problems, most often externalizing behaviors (e.g., Dodge, Bates, & Pettit, 1994; Pettit et al., 1997). For instance, Deater-Deckard and Dodge (1997) reported that low parental involvement and harsh discipline when a child was age eight predicted adolescent delinquent behavior, while Dodge, Pettit, Bates, and

Valente (1995) reported harsh discipline observed when a child was age five predicted aggression at school. Even controlling for demographic and environmental risk factors, such as poverty and ethnicity, harsh parenting related to child externalizing behaviors (e.g., Dodge et al., 1994; McLoyd, 1991). Furthermore, Keiley, Howe, Dodge, Bates, and Pettit (2001) found harsh discipline prior to age five related to children exhibiting more externalizing and internalizing behaviors at kindergarten. Chang, Schwartz, Dodge, and McBride-Chang (2003) also found that mothers' harsh parenting, when compared to fathers' harsh parenting, had a more negative impact on their child's emotional regulation. Overall, research has shown maternal harsh parenting to be a key factor in the development of child behavioral adjustment difficulties.

Parental Psychological Operations

Although both supportive and harsh parenting have been linked to child behavior problems, less is known about how parenting psychological operations influence parents' behavior toward their children. Because Negative Maternal Regard (NMR) includes both cognitive and affective components, this section highlights findings from how similar internal components and are associated with parenting behaviors.

Maternal Attributions

Patterns of maternal attributions have been linked to parenting behaviors. Heider (1958) described interpersonal attributions as an explanation of another's behavior and the perception of another's feelings and thoughts. Zeanah and Anders (1987) proposed using a parent attribution framework to systematically measure a parent's internal cognitive operations about a child. Heider (1958) described interpersonal attributions as an explanation of another's behavior and the perception of another's feelings and

thoughts. Indeed, numerous researchers have studied attributions to understand a parent's interpretative thought patterns about a child (see Miller, 1995, for review). Studies have shown parents attribute specific control, motivation, and intent to a child's behavior and, as a result, formulate appraisals about that child in ways that influence specific parenting behaviors. For example, negative (i.e., hostile and blaming) parent attributions relate to harsh parenting (e.g., Bugental & Happaney, 2004; Dix, Ruble, & Zambarano, 1989; Nix, et al., 1999; Slep & O'Leary, 1998; Smith & O'Leary, 1995; Snyder, Cramer, Af Frank, & Patterson, 2005; Wilson, Gardner, Burton, & Leung, 2007).

In the current study, it is expected that a mother's negative attributions about her child's behavior (viz., child blame) will be linked to her expressing negative affect (i.e., shouting) toward her child. Bugental et al. (1990) showed that mothers who believed a child had more control over misbehaviors (e.g., intentional unresponsiveness and atypical behaviors) illustrated more dysphoric affect toward the target child. This study indicates a connection between maternal thoughts about her child's behavior and maternal feelings related to the target child, which can both influence parenting behaviors.

In a similar manner, parent negative cognition about a child has been shown to relate to non-optimal parenting behaviors. For example, mother's negative interpretations of a child's behavior have been connected to higher rates of harsh parenting (e.g., Bugental & Happaney, 2004; Bugental et al., 1993; Hastings & Rubin, 1999; Martorell & Bugental, 2006; Strassberg & Treboux, 2000). Negative interpretations of a child's behavior have also been shown to relate to low levels of parental responsiveness, acceptance, and involvement with a child (Dagget, O'Brien, Zanolli, & Peyton, 2000). Abusive mothers have also been found to have more negative beliefs and fewer positive

beliefs about their children than non-abusive mothers (Juby, 2009; Larrance & Twentyman, 1983). In sum, the literature supports the idea that parents' negative thoughts about their children are associated with specific problematic parenting behaviors.

A mother's pattern of interpreting a child's behaviors, traits, and motivations in a particular manner may be an aspect of NMR. Some studies of attribution have examined a parent's tendency to slant views about the child in a particular manner, thus parental attributions can be biased (i.e., they display an attributional bias). There can be varying degrees of accuracy, clarity, and consistency in how a parent perceives a child's traits, motivations, and intentions. For example, family therapy literature indicates that a parent's general perception of a child can include the perceived cause of the child's behavior (i.e., blame for child's behavior), while parental biases include understanding social cues and interpersonal interactions in extreme, distorted, rigid, and/or simplistic patterns (Azar, Nix, & Makin-Byrd, 2005; Dattilio, 2005). While much of the research on accuracy or bias in a parent's perceptions has focused on the academic performance and abilities of the child (Miller, 1995), some studies indicate skewed and rigid perceptions can relate to problematic parenting (e.g., Bugental, 2005) and psychosocial problems developing within the child (e.g., Bugental, Brown, & Reiss, 1996; Meyers, 2004; Snarr, Strassberg, & Slep, 2003). Based on these research findings, negative maternal attribution tendencies (i.e., blaming the child) are expected to be a significant component of NMR. As a result, identifying a mother's negative attributional tendencies about her child is an important step in assessing NMR.

Maternal Affect

While social cognitive operations—parent negative attributions—are thought to be important parts of NMR, mothers' negative affect related to her child is expected to be a significant component as well. This proposition is supported by findings from parenting research that examines how various parent emotions are associated with parenting behaviors and child adjustment (see Morris, Silk, Steinberg, Myers, & Robinson, 2007, for review). For instance, a mother's negative mood is associated with negative parenting behaviors such as coercion, intrusion, and a decrease in sensitivity and responsiveness towards a child (e.g., Belsky, Crnic, & Woodsworth, 1995; Weis & Lovejoy, 2002). Additional research indicates there are connections between parents expressing invalidating and negative emotions towards a child and that child's poor adjustment, low socio-emotional competencies, social problems, and externalizing behaviors (Denham, et al., 2000; Eisenberg, et al., 2003; Eisenberg, Cumberland, & Spinrad, 1998; Isely, O'Neil, Clatfelter, & Parke, 1999; Isely, O'Neil, & Parke, 1996; Lunkenheimer, et al., 2007). It should be noted, however, that some studies did not find problematic child behaviors related to parental negative affect when examining the school context. Specifically, these studies showed teachers reported fewer externalizing behaviors and more compliant behaviors with children who had parents expressing negative emotions (see Eisenberg et al., 2003). Thus, specific relations between a mother's negative emotions about her child and their associations with child problem behaviors remain unclear, but most studies link negative maternal emotions with problematic child behaviors.

In addition to these findings in the parent research literature, social psychologists have shown strong connections between a person's internal feelings about another and the person's interpretation of that other's behavior (e.g., Galper, 1976; Gould & Sigall, 1977; Regan, Straus, & Fazio, 1974; Cardy & Dobbins, 1986; Reizenzien, 1986). Likewise, a mother can have strong feelings about a child, and those internal feelings can impact subsequent views of her child's behavior. Weis and Lovejoy (2002) proposed that parent emotions about a child can lead parents to explain child behaviors and remember past incidents in a way that is compatible with feelings about that child. In fact, studies support the notion that a parent's emotions may bias interpretations of the child's behaviors (e.g., Richters, 1992, Weis & Lovejoy, 2002; Youngstrom, Izard, & Ackerman, 1999).

Based upon these findings, it appears that a parent's emotions about a child contribute to how a parent thinks about and interacts with the child. As a result, mother's negative affect about her child is expected to be a significant component of NMR, and that negative affect may contribute to her tendency to perceive her child in a particular manner.

Maternal Attitudes

Studies have investigated parent negative attitudes, but the operational definitions of parental attitude have been inconsistent. The definition of parent attitude has varied, depending on which characteristic is being examined. Some researchers have used parent attitude to mean expectations a parent has for a particular child (e.g., Daggett, O'Brien, Zanolli, & Peyton, 2000), while others have used it to define a harsh disciplinary approach to parenting in general (Hastings & Rubin, 1999; Juby, 2009). Even beyond the

parenting literature, the specific definition of attitude and the validity of the attitude concept has been a subject of debate. For instance, some social psychologists have recently worked on developing a consistent and inclusive definition of attitude. Fazio (2007) defined attitude as an evaluative response and memory associated with a particular object. According to this definition, attitudes about a particular object are kept in memory and then activated automatically when the individual is triggered by the attitude object. Eagly and Chaiken (2007) emphasized that attitudes have an evaluative component (i.e., favor or disfavor), but also described an individual's tendency to respond consistently to an attitude object as a key component. While social psychologists have recently aimed to articulate and refine the understanding of the attitude construct, the parenting literature has not consistently defined and examined parent attitude toward a child. The current study conceptualizes maternal attitude in a manner that is consistent with the most recent and refined definitions of attitude promoted in social psychology. That is, maternal attitude is the evaluative description of her child (i.e., the child is mother's attitude object).

Relationship-Specific Parental Perceptions

Social psychologists have emphasized that social perceptions and responsiveness are specific to a relationship (Clark & Lemay, 2010). Related to this emphasis, a small body of parenting research indicates parents feel and think differently about each of their children and these differences relate to each parent-child relationship. Specifically, mothers showed differing perceptions of their children, and those differing perceptions of a child's problem behavior have been found to correlate with mother's report of the quality of the mother-child relationship (Deater-Deckard, Smith, Ivy, & Petrill, 2005). For

instance, mothers of eight-year-old children reported a more negative relationship with children they perceived as exhibiting more problem behaviors. Furthermore, parenting behaviors appear to relate to parent perceptions of each child. When compared to parenting behaviors and feelings towards siblings, parents reported more negative feelings and less parental warmth toward children displaying externalizing behaviors (Deater-Deckard, 1996). This research was based on a sample of adopted children and needs to be tested in other populations (i.e., a community sample). However, this research indicates that negative parenting for a child correlates with a parent's negative perception of that child (Deater-Deckard et al., 1997).

Integrated Constructs of Parent Psychological Representations

There have been two dominant conceptual frameworks used to understand the connections among a mother's parental psychological operations, namely relational schemas and internal working models of attachment. Theorists have used each framework to articulate how a mother's personal relationship history with her child is stored internally and serves as a means for understanding current experiences. In the following section, the key concepts within these integrated parental psychological constructs are described and then compared them to the current conceptualization of NMR. Next, potential contributions of developing a better assessment of NMR and the potential impact for parenting research are presented. A table comparing research articles addressing relational schemas and internal working models of attachment was developed for the current project and is included as Appendix A.

Relational Schemas

According to Neisser (1967), individuals have mental schemas which organize mental representations of experiences. Many researchers have focused on how individuals mentally represent significant relationships (e.g., Anderson & Glassman, 1996; Aron, Aron, Tudor, & Nelson, 1991; Baldwin, 1995; Bugental & Goodnow, 1998). Baldwin (1992) proposed that relational schemas are how individuals internally store and process social information associated with important relationships. Relational schemas include mental representations of self and the other person in the relationship. To better understand the concept of relational schemas, it is helpful to realize it has been influenced by the broader social psychological theory of symbolic interactionism (e.g., Cooley, 1902; James, 1890; Mead, 1934). Within relational schemas, individuals organize memories related to specific types of relationships and rely on those memories to understand current experiences within a particular relationship. For instance, a mother may rely on her past experiences with a particular child to understand current experiences with that child. Relational schemas incorporate aspects of oneself and another, within the context of that relationship, and ultimately influence how an individual understands and interprets experiences within the relationship.

Another important feature of a relational schema is the influence on an individual's expectations for relational behavior and goals. Individuals incorporate various relational schemas specific to each relationship while expectations, goals, and behavior are specific to that schema. It has also been proposed that relational schemas are also organized by social domains associated with the type of relationship (i.e., attachment oriented, reciprocal, and hierarchical). For instance, the type of relationship triggers a

specific schematic process. Thus, relational schemas associated with a particular child are connected to schema domains, such as attachment oriented, reciprocal, and hierarchical schema.

Some developmental research indicates parents use integrated psychological operations specific to a child, such as relational schemas, to organize and direct behavioral responses in parent-child interactions. Bugental and colleagues have looked at power oriented relational schemas in mothers, which are thought to incorporate both hierarchical and attachment schemas (e.g., Bugental, Blue, & Cruzcosa, 1989; Bugental et al., 1993; Bugental, Lyon, Krantz, & Cortez, 1997). These researchers found mothers who believe they have less power (i.e., perceived powerlessness) in the parent-child relationship were more likely to interpret child behaviors as intentionally challenging. Once triggered in these mothers, a powerless oriented relational schema correlated with lower cognitive abilities in these mothers. That is, mother's social-cognitive processing abilities related to parenting appeared to diminish when power oriented relational schemas were triggered and activated. As a result, it is proposed that these schematic operations serve as psychological defenses and potentially bias a mother's perception (Bugental, Brown, & Reiss, 1996; Bugental, et al., 1998). It may be that perceived challenges from her child perceived as intentional may trigger a mother to rely on more automated mental operations: that is, on simplistic and habituated schematic operations.

Internal Working Models of Attachment

Researchers have also used the concept of internal working models to understand mothers' integrated cognitive and affective representations and processes specific to her child. Bowlby (1969) described an internal working model of attachment as an internal

representation of self relating to another person in an emotionally attached relationship. Internal working models include memories of attachment experiences that include representations of self, attached partners, and more global representations of others (Fivush, 2006). These representations influence a person's understanding of and actions related to a current attachment related experience. While these propositions developed within attachment theory, which itself emerged from ideas within control systems theory and ethology, it is helpful to recognize the strong theoretical and historical influence of object-relations and psychoanalytic theory on the internal working models concept (Bretherton, 1992).

Developmental researchers have emphasized the significance of emotions within an attached relationship and how emotions play an important role in internal working models (Collins, 1996). Internal working models relate to and are driven by affect within the relationship, with emotions serving as a means to help organize content and trigger specific working models (Pietromonaco & Barret, 2000). Activated in the context of an emotionally-bonded relationship, they include hierarchically organized and connected schemas; however, internal working models are interwoven and less structured than what has been described in relational schemas (Baldwin, 1996).

Researchers have shown that internal working models differ between varying attachment styles. An aggregate or specific internal working model may be incorporated, depending on the individual's attachment to another person. One common distinction has been between secure and insecure attachment styles, and each is thought to include unique internal working models. Thus, individuals may have differing interpretations of attachment related experiences, such as the parent-child relationship, depending on

attachment style. This idea has led researchers to identify biased perceptions associated with internal working models of attachment (Zhang & Hazan, 2002). In effect, it is thought that insecurely attached individuals may perceive attachment related experiences with negative bias or defensive avoidance while securely attachment ones do so in a more positive fashion (Dykas & Cassidy, 2011).

It has been emphasized that the internal working model construct has historically been defined and measured in unclear ways (Waters & Waters, 2006). As research findings progress, theorists are defining the internal working construct in a more precise fashion. Thus, the attachment related concept of representational “scripts” has been incorporated into the developmental literature to provide more specificity to the internal working models of attachment construct. Rather than viewing representation scripts as having distinct pieces acting separately in a linear fashion, they are understood to be more holistic. Theorists initially used a restaurant menu illustration to clarify how scripts include rules about and expectations for behavior, memories, and options for behavior within a relationship (Schank & Abelson, 1977). Just as individuals understand available options and behaviors from a restaurant menu when at that restaurant, individuals have scripts associated with specific contexts. As a result, attachment representation scripts have been introduced to describe similar rules and processes that occur within an attachment context (Waters & Waters, 2006). For example, research indicates secure-based scripts are stable aspects of maternal attachment representations and these scripts relate to maternal descriptions and thoughts about their own children (Bost et al., 2006; Vaughn et al., 2006). Thus, representation scripts are activated within specific types of close attachments. Therefore, developmental researchers have been investigating

maternal secure-based scripts as a stable influence on mothers' cognitive and emotional processes within specific attachment contexts. Accordingly, the concept of internal working models of attachment is evolving as further research refines the psychological processes with attached relationships.

Negative Maternal Regard for Child

For this project, the NMR construct is conceptualized in a manner similar to relational schemas and internal working models of attachment, in that they are all psychological “templates” within the parent, although NMR is perhaps more strongly child-specific than a schema or working model. The NMR construct is therefore the integration of connected parental psychological operations, namely a mother's negative attributions, attitudes, and affect toward a particular child. This “template” is then proposed to guide her parenting behavior, such that NMR would lead to negative parenting behaviors (viz., Harsh Parenting and low levels of Supportive Parenting) and ultimately be linked to child problem behaviors (viz., Child Internalizing and Externalizing). Each of the NMR components have been linked to problematic parenting (i.e., Harsh Parenting and low levels of Supportive Parenting) and child problem behaviors (i.e., Child Internalizing and Externalizing), thus the NMR construct may be associated with problematic parenting and child problem behaviors.

NMR for her child—a mother's tendency to think and feel negatively about her child—has not been specifically addressed in the child development literature in this manner. Developmental researchers have studied a variety of parent cognitive and emotional variables associated with children, but none have investigated the possibility of

an integrated parental psychological construct which includes maternal negative attributions, attitude, and affect.

While a mother may have individual characteristics (e.g., personality traits) affecting her parenting behavior, it is proposed that NMR is distinct; it is a child-specific set of thoughts and feelings. The regard a mother holds for one child may differ from the regard she holds for another of her children, regardless of or in combination with trait-like aspects of her personality. While some researchers have investigated varying cognitive operations and patterns to understand how parents perceive their family experiences and relationships (for a review, see Bugental & Johnson, 2000) and other researchers have looked at parent emotion and its impact on child development (for a review, see Morris et. al, 2007), it appears that developmental researchers have not operationalized and tested the effects of an integrated cognitive/emotional representation of a particularly disliked child.

Although NMR has not been explored in this manner, it has been recommended to investigate a parent's thoughts and feelings about each child rather than looking at broader more generalized social cognitive processes applied across different types of relationships (Zeanah & Andrews, 1987). A mother has a unique way of thinking about and feeling for each child and, as a result, exhibits unique parenting behaviors associated with the thoughts/feelings for each child. Thus, it may prove useful to look at how a mother regards a specific child rather than looking at more generalized thoughts and feelings about her children or about her parenting role.

Conclusion

Studies have examined differing cognitive and emotional operations linked to problematic parenting behaviors, associations between negative parenting behaviors and problematic child behaviors, and the associations of parent cognitive and emotional variables (i.e., parental attributions, affect, and attitude) with problematic child behaviors. This research project builds upon these studies by exploring the proposition of a parental psychological construct called NMR and then examines links to concurrent negative parenting behavior (harsh parenting, low supportive parenting) and later child problem behaviors (child internalizing and externalizing).

Hypotheses

It is a goal of this research project to assess the NMR construct by examining the connections among negative maternal attributions, attitude, and affect toward a particular target child. Previous studies have shown associations between each of the maternal cognitive/emotional variables included in this study (i.e. maternal negative attributions, negative attitude about a child, and negative affect; the proposed components of NMR) and problematic child behaviors, but have not investigated negative maternal cognitive/emotional variables as an integrated construct. NMR may guide a mother's problematic parenting behaviors, which, in turn, may relate to problematic child behaviors. This study includes an exploration of the NMR construct and examines its associations with specific parenting behaviors and child longitudinal behavioral adjustment among a community sample of mothers and their school-age children. The following specific hypotheses were tested:

- **Hypothesis 1:** A psychometrically sound measure can be developed to identify mothers integrated parental psychological construct (i.e., NMR) which consists of negative attributions, attitude, and affect for each of their children.
- **Hypothesis 2:** NMR will be positively linked to mothers' use of Harsh Parenting, as operationalized by restrictive and reactive discipline practices.
- **Hypothesis 3:** NMR will be negatively linked to mothers' Supportive Parenting, as operationalized by low levels of calm discussion, preventative guidance, involvement, and emotionally warm parenting behaviors.
- **Hypothesis 4:** NMR will predict Child Internalizing behaviors and Child Externalizing behaviors across first, second, and third grades.
- **Hypothesis 5:** Harsh Parenting behaviors from mothers will positively predict Child Internalizing behaviors and Child Externalizing behaviors across first, second, and third grades.
- **Hypothesis 6:** Supportive Parenting from mothers will negatively predict Child Internalizing behaviors and Child Externalizing behaviors across first, second, and third grades.
- **Hypothesis 7:** The associations between NMR and Child Externalizing behaviors will be mediated by the use of Harsh Parenting and low levels of Supportive Parenting.
- **Hypothesis 8:** The associations between NMR and Child Internalizing behaviors will be mediated by the use of Harsh Parenting and low levels of Supportive Parenting.

Specific characteristics of participant families, procedures used in this research project, and methods used to operationalize these variables are explained in the next chapter.

CHAPTER III

METHODOLOGY

Participants

Data from the Child Development Project was examined for this research project. The Child Development Project is a multi-site longitudinal study of how early family experiences affect child social and behavioral adjustments funded by a research grant (MH 42498) from the National Institute of Mental Health (Dodge, Bates, & Pettit, 1990). Participant families were recruited in 1987 and 1988 from Nashville, Tennessee, Knoxville, Tennessee, and Bloomington, Indiana when their children were entering kindergarten. During the child's pre-registration for kindergarten, on the first day of kindergarten, or during later contact, parents were asked to participate in a longitudinal study on child development. Seventy five percent of the families asked to participate in the project agreed. This study focused on mother-child dyads from two cohorts totaling 585 families. In this sample, 81% were European American, 17% percent were African American, and 2% were from other groups; 48% of the children were female; and 24% of the mothers were single at the time of recruitment.

Using the four-factor Hollingshead index, socioeconomic characteristics were analyzed for each of the participating families (Hollingshead, 1975). Using the Hollingshead index, scores can range from a low of eight to a high of 66, and are categorized into one of five social strata (e.g., 55-66 is classified as a professional). The

mean score for this sample was at the cut-off between skilled crafts-person and medium business-person ($M = 39.5$, $SD = 14$, $n = 570$). Additional socioeconomic characteristics of the participating families are summarized in Table 1.

Table 1

Socioeconomic Characteristics of Participating Families

Socioeconomic Status	<i>n</i>	% of total
Major business and professional	94	16.5%
Medium business, minor professional, technical	186	32.6%
Skilled crafts-person, clerical, sales workers	144	25.3%
Machine operators, semiskilled workers	98	17.2%
Unskilled laborers, menial service workers	48	8.4%
Total	570	100%

Note. Adapted from “Four Factor Index of Social Status,” by A. B. Hollingshead, unpublished manuscript, 1975, Yale University, New Haven, CT.

Procedure

The first assessments were completed before each child’s kindergarten year while subsequent assessments were done annually through each child’s third grade school year. Each mother was interviewed in her home during the summer prior to her child’s kindergarten year. In order to assess each child’s internalizing and externalizing behaviors, the child’s teachers completed the Teacher Rating Form during the spring of each academic year from kindergarten through third grade (Achenbach & Edelbrock, 1986).

All interviewers were trained to conduct the interviews and to code specific information obtained during the interviews. Interviewer training was completed over a four-week period during which trainees reviewed a procedures manual specific for the

Child Development Project. Trainees observed interviews and conducted supervised interviews prior to completing their own interviews. Training helped interviewer scoring reach reliabilities of .80 or higher, using trainers' scores as the criterion. Reliability of the actual interviewers was established by having a second coder score interview questions during 56 of the interviews (9.6% of the interviews). Variables were based on mothers' scores since fathers were not available to participate in all participant families (Pettit et al., 1997).

At least two researchers visited each family's home for the first phase of assessments. One researcher interviewed the mother and father (in 2-parent families) while the second interviewed the target child. Reliability coders participated in the interview scoring for a portion of the sample. While the interview with one parent was audio-recorded, the other parent completed a set of questionnaires. Parent interviews lasted approximately 90 minutes and included open-ended and structured questions regarding the child's developmental history. Information about the child's development, care-taking, family stressors, parenting, and child behavior was gathered (Pettit et al., 1997). Additionally, each interviewer independently completed a Post-Visit Inventory based on observations of mother-child interaction during the visit.

Measures

Independent Variable: Negative Maternal Regard

Items from well-validated instruments were used to construct the separate components of Negative Maternal Regard (NMR) for this study. Data were obtained via the mother interviews, questionnaires administered by interviewers, and post-visit ratings completed by each of the trained interviewers. Specifically, items were included from the

Concerns and Constraints Questionnaire (CCQ), the Parenting Possibilities Questionnaire (PPQ), the Developmental History Interview (DHI), and Post-Visit Inventory (PVI). Each of these instruments has been used in previous peer-reviewed studies (Pettit et al., 1997). Items from each of these instruments were used to create three proposed components of NMR: maternal negative attributions, attitude, and expressed affect. Next, the connections among the proposed components for NMR were examined. To review the specific items used in the original Child Development Project measures and how they were transformed to construct NMR components for this study, see Appendix B.

Maternal negative attributions. Items from two previously established instruments (the CCQ and PPQ) were used to measure each mother's negative attributions about her child's behavior. Child Development Project investigators developed the CCQ for each mother to complete during the initial interview. The CCQ consists of six questions repeated in five different scenarios to measure each mother's beliefs about and responses to hypothetical situations involving her child's misbehavior in child peer contexts. The CCQ has been used to identify a parent's explanations for child behavior (e.g., "Why do you think _____ acted this way?"), the parent's emotional reaction to child behavior (e.g., "If your child behaved this way, how would you feel?"), and the parent's likely behavioral responses ("What would you do if _____ acted this way?"). Responses to the first question from each of the stories were recoded and used as one measure of each mother's negative attributions regarding reasons for her child's behavior (e.g., Let's imagine that your child loses a race and then says it was a stupid race and calls the winner a bad name....why do you think your child acted this way?). Responses had been coded as "no interpretation made", "OK", "other

blame”, “situation”, “state”, “trait”, or “child misinterpreted” and were recoded to indicate each mother’s blame-oriented attributions for her child’s behavior. Each mother’s responses were coded as either blaming the child’s trait or not blaming the child’s trait. Responses attributing child behavior to child’s “trait” were coded as blaming the child’s behavior due to the child’s trait. All other responses attributing child misbehavior to “state,” “situation,” “other blame,” “OK,” “no interpretation made,” or “child misinterpreted” were coded as not blaming the child’s trait. A composite Blame Child Trait score was computed by using the mean of the five items ($\alpha = .40$).

The second assessment of Maternal Negative Attributions was developed from items from the Parenting Possibilities Questionnaire (PPQ). This questionnaire was originally developed by Child Development Project investigators to assess each mother’s attributions about her child’s intentions and reasons for specific child behaviors occurring during or following hypothetical parent and child interactions. The PPQ included nine ambiguous hypothetical vignettes involving the child’s behavior within a parent-child context. For each vignette, the mother chose the most likely intention and reason for her child’s behavior. As each mother selected her child’s intention for problematic behavior, a Likert-type scale was used to assess how likely that reason may have been for her child’s behavior. Thus, this questionnaire measured each mother’s interpretation of her child’s intentions and motivations for negative behaviors presented in hypothetical scenarios. Items associated with interpreting child intentions as negative were used to assess each mother’s attributions regarding her child’s intentions ($\alpha = .34$). Due to the low coefficient alpha when all of the items were combined into one measure, the correlations between each of the PPQ items were examined. After examining the correlations between

the PPQ items, they were separated into two types of maternal attributions for child behavior: one blaming the child for misbehaving without provocation (i.e., proactively) and another blaming the child misbehavior to emotional reactivity (i.e., reactively). The division between attributing child misbehavior as proactive and reactive was based on empirical and theoretical distinctions between proactive and reactive child aggression (Crick & Dodge, 1996). Once partitioned, the correlations between the two types of maternal attributions showed a negative association ($r = -.44, p < .001$). Thus, the mean of responses explaining child behavior to instrumental intentions were included in a subscale as Blaming Child Proactive ($\alpha = .79$). Likewise, a subscale was created for responses attributing children's behavior to their emotional reaction was labeled Blaming Child Reactive ($\alpha = .77$).

Maternal negative affect. An item from an observation based inventory was used to assess Maternal Negative Affect. Child interviewers completed a 47-item Post-Visit Inventory (PVI) based on observations of mother-child interactions during the interview. Maternal Negative Affect was assessed by using Question 14 from the PVI. Question 14 reads "Shouts at children. Y N" and was conceptualized as tapping how mothers expressed their feelings of irritation and impatience toward their child. This observation-based assessment was chosen as a measure of each mother's negative affectivity toward her child during real-time parent-child interactions (as opposed to an on-going pattern of negative maternal parenting, measured in the current study as harsh disciplinary practices). The original item scored yes as 0 and no as 1, so the yes answers were recoded to 1 and no answers to 0 in order to measure negative affect as a higher score. This recoded item was labeled Maternal Negative Affect.

Maternal negative attitude. Maternal Negative Attitude about her child was assessed by using summary scores provided by the trained interviewers. Each mother's Developmental History Interview (DHI, developed by Child Development Project investigators) included summary scores based on her open-ended description of her child. These summary scores assessed each mother's overall evaluative attitude about her child and her level of insight regarding her description. Question 1 (A) in the DHI was used to assess maternal negative attitude. Each mother described her child for approximately five minutes and the interviewer then paused and coded her description as either mostly negative (1), mixed/hard to say (2), or mostly positive (3). Next, the interviewer coded the distinctiveness of the mother's description as vague/indistinct (1), somewhat distinct (2), or distinct/insightful (3). These items were recoded so that each mother's negative and indistinct answers were higher scores and positive and distinct answers were lower. The mean of the two items was used to assess each mother's negative attitude about her child ($\alpha = .50$).

Table 2

Descriptive Statistics for Negative Maternal Regard Components

Variables	<i>M</i>	<i>SD</i>	Minimum	Maximum
Maternal Negative Attitude	1.65	0.54	1.00	3.00
Maternal Negative Affect	0.22	0.41	0.00	1.00
Maternal Negative Attributions				
Blame Child Trait	0.21	0.21	0.00	0.80
Blame Child Proactive	2.72	1.18	1.00	4.00
Blame Child Reactive	2.16	0.82	1.00	4.00

Note. $N = 507$

Mediating Variables: Parenting Behaviors

Supportive parenting. Previously used measures of Supportive Parenting (Pettit et al., 1997) were used in the current study. Select items from four assessments (the DHI, the Conflict Tactics Scale, the Concerns and Constraints Questionnaire [CCQ], and the Post-Visit Inventory [PVI]) were used to construct four subscales of Supportive Parenting. The first Supportive Parenting component was labeled Involvement and assessed each mother's involvement in her child's interactions with peers. During the interview, each mother was asked to discuss instances when her child interacted with peers, if her child was around children exhibiting aggressive behavior, if her child had discussed close friends, and if her child had any conflict with peers. Question 14 read, "How often was _____ with (neighborhood kids/sitters etc.)" Question 15 read, "Has _____ been around any children you would consider to be aggressive, by that we mean starts fights, arguments, or conflicts?" After Questions 14 and 15, the interviewer recorded with whom the child interacted and specific settings for the interaction. Question 16 read, "Did _____ have any close friends that he/she talked about, like to play with, seemed to prefer?", and Question 17 read, "When _____ played/interacted with other children, how often were there conflicts or disagreements?" Based on each mother's answers to these questions, interviewers rated her involvement in her child's social interaction. Rating 5 read, "Rating for parents' expressed interest, concern, and effort at monitoring and planning their child social development" and was rated on a Likert-type scale from 1 to 5 (unaware to very high interest, effort). Each of these questions assessed two time periods in the child's development—ages 1-2 ½ and 2 ½-4.

The ratings for each era were summed and the cross-era mean was computed and labeled Involvement/Monitoring ($\alpha = .92$).

Items from the Conflict Tactics Scale (Straus, 1987) were used to measure calm Discussion, a second Supportive Parenting component. In this measure, each mother reported how the family handled disagreements by describing behaviors of family members during conflict. Each mother also reported situations that may trigger family conflict. Fourteen behaviors—which ranged from calm discussion to violence—were included in the rating (e.g., parenting behaviors ranged from “tried to discuss an issue calmly” to “beat up your child”). Frequency of these behaviors—from never to almost daily—were rated on a Likert-type scale from 1 to 6 for two eras: “during the past year” and “before a year ago”. The cross-era mean of these items was computed and labeled Discussion ($\alpha = .86$).

A third Supportive Parenting component—Prevention—was developed from items within the Concerns and Constraints Questionnaire (CCQ). The CCQ included five hypothetical scenarios including child negative behavior. Each mother was asked to imagine the child in the story was her child, and to describe strategies she would use to prevent her child’s negative behavior. Preventative parenting strategies were rated on a Likert-type scale from 1 to 5 (viz., 1=do nothing – unpreventable; 2=after-the-fact punishment – non-preventative power assertion punishment; 3=after-the-fact – reasoning, proactive guidance; 4=before-the-fact – preventative but vague and general; 5=before-the-fact – preventative, situation and method and specific). To create a measure of preventative parenting, answers including preventative parenting (e.g., before-the-fact – preventative but vague and general; before-the-fact preventative, situation and method

and specific) were coded as 1 (preventative parenting) while all other responses were coded 0. The mean across five stories was computed and labeled Prevention ($\alpha = .70$). Inter-rater reliability (correlation between independent raters) on the CCQ was .56 (Pettit et al., 1997).

A final Supportive Parenting component was computed from items measuring the observed emotional warmth each mother exhibited toward her child. Interviewer observation ratings were recorded using the Post-Visit Interview (PVI). Each mother's emotional warmth towards her child was assessed with selected items from this inventory, completed by the Child Interviewer. Four behaviors were included to assess maternal emotional warmth (e.g., "speaks to child with a positive tone. Y N", "initiates positive physical contact with the child. Y N", "accepts positive physical contact from the child. Y N", "mother expresses a positive attitude when speaking of the child. Y N"). These items have been used to measure maternal warmth in previous studies (e.g., Pettit et al., 1997). The four behaviors-positive verbal tone, showing a positive attitude, showing positive physical contact, and accepting child initiated positive physical contact—were used to assess each mother's caring behavior toward her child by computing a mean and labeling it Warmth ($\alpha = .61$).

A composite score was computed using each of the four Supportive Parenting components. First, each of the Supportive Parenting components was transformed into a standardized score. Next, a mean of the four standardized scores was computed and labeled Supportive Parenting Composite ($\alpha = .43$).

Harsh parenting. A previously used measure for harsh discipline (e.g., Pettit et al., 1997) was used to assess Harsh Parenting. This component was based on each

mother's answers to open-ended interview questions about discipline and her child. During the initial interview, each mother was asked who disciplined her child, how her child was disciplined, if physical discipline was used, and how often each discipline was used (e.g., "What kinds of things did you or _____'s mother/father have to do to deal with his/her misbehavior?", "Who usually dealt with _____'s misbehavior", "How often did you have to physically punish _____...such as spank, grab, shake?" "What was the most severe thing you had to do during this period?"). Low scores (e.g., one, two, and three) were collapsed to ensure assessment of Harsh Parenting rather than low levels of Supportive Parenting, and the final assessment measured Harsh Parenting on a range from absent to present. Harsh Parenting during two time periods was measured—during the previous year and prior to the previous year—and mean of the combined scores was used as an assessment of Harsh Parenting ($\alpha = .61$).

Table 3

Descriptive Statistics for Parenting Behavior Measures

Variables	<i>M</i>	<i>SD</i>	Minimum	Maximum
SP Composite	0.00	1.0	-4.74	1.89
SP Components				
Involvement	3.25	1.05	1.00	5.00
Discussion	0.00	0.75	-3.04	1.43
Prevention	0.76	0.25	0.00	1.00
Warmth	0.81	0.22	0.00	1.00
HP	-0.01	0.63	-1.64	2.33

Note. *N* = 553

SP = Supportive Parenting, HP = Harsh Parenting

Dependent Variables: Child Problem Behaviors

Child internalizing and child externalizing. Each child's problem behaviors were measured using the 112-item Child Behavior Checklist—Teacher Report Form (TRF; Achenbach et al., 1986). Classroom teachers completed the checklist during the spring of each child's first, second, and third grade years. The checklist included questions about the child's current and recent behaviors (i.e., now or within the last two months). Teachers rated, on a Likert-type scale from 1 to 3, if the child exhibited multiple problematic child behaviors with higher scores indicating a higher degree of problem behaviors (i.e., very true or often true, somewhat or sometimes true, or not true). The teacher checklist produces two broad scales assessing Child Internalizing behaviors and Child Externalizing behaviors. In the current study, Child Internalizing behavior and Child Externalizing behavior subscale scores were used, 35 items each, to measure each child's problem behaviors. A sample of items which addressed internalizing include "Cries a lot", "Feels hurt when criticized" and a sample of items that addressed externalizing behaviors include "Defiant, talks back to staff", "Disrupts class discipline", and "Physically attacks people". Child Internalizing and Externalizing scores were computed for each year (first, second, and third grades). Additionally, cross-year means were computed and labeled Child Internalizing behaviors overall and Child Externalizing behaviors overall.

Table 4

Descriptive Statistics for Child Problem Behaviors

Variables		<i>M</i>	<i>SD</i>	Minimum	Maximum	<i>n</i>
CIB overall		5.68	4.44	1	28	558
CEB overall		6.81	8.73	1	53	558
Problem Behaviors by Year						
First Grade	CIB	5.4	5.67	1	34	537
	CEB	6.61	9.66	1	52	537
Second Grade	CIB	5.81	6.28	1	40	517
	CEB	7.02	10.42	1	57	517
Third Grade	CIB	5.92	6.70	1	39	498
	CEB	6.63	10.10	1	55	498

Note. CIB = Child Internalizing, CEB = Child Externalizing

CHAPTER IV

RESULTS

Overview

This chapter summarizes results from testing each of the hypotheses of this study. Multiple analytic techniques were used to conceptualize, operationalize, measure, and examine each of the components and overall construct of Negative Maternal Regard (NMR). Correlation and exploratory factor analyses were used to test the dimensionality of the NMR components and the latent connections among of the NMR components. Following examination of the NMR components and development of a measure for the NMR construct via factor analysis, a conceptual model was developed to empirically test specific associations between the NMR construct, parenting behaviors, and subsequent child problem behaviors. Correlational and regression analyses were conducted to examine the direct associations between NMR, parenting behaviors, and child problem behaviors. Next, a series of regression steps were used to examine parenting behaviors as possible mediation of the association between NMR and child problem behaviors. Following each regression analysis examining mediation, the Sobel statistical method was used to formally test each mediated path. A narrative description explaining each test is augmented with tables and figures to illustrate specific results from examining each hypothesis. An exploratory analysis conducted after testing each hypothesis is presented at the end of this chapter.

Hypothesis 1: A psychometrically sound measure can be developed to identify mothers integrated parental psychological construct (i.e., NMR) which consists of negative attributions, attitude, and affect for each of their children.

Results. The first approach was to operationalize the components of NMR as continuous variables and examine connections among each of the operationalized components. The internal consistency of maternal negative attitude, maternal negative attributions-blame child trait, maternal negative attributions-blame child proactive, and maternal negative attributions-blame child reactive was tested by examining the coefficient alpha (see Table 5). Maternal negative attitude included 2 items and showed low reliability, as indicated by the coefficient alpha. The coefficient alpha for maternal negative attributions-blame child trait also showed low reliability. One item was used to measure maternal affect, thus, it was not tested for reliability. According to classical test theory, the negative maternal attitude measure empirically accounted for 50% of the true score while maternal negative attributions-blame child trait empirically accounted for 40% of the true score.

Table 5

Internal Consistency of Each Negative Maternal Regard Component

NMR components	α
Maternal Negative Attitude (2 items)	.50
Maternal Negative Affect (1 item)	n/a
Maternal Negative Attributions	
Blame Child Trait (5 items)	.40
Blame Child Proactive (3 items)	.87
Blame Child Reactive (4 items)	.79

Note. NMR = Negative Maternal Regard

Next, the correlations between each of the NMR components were examined (see Table 6).

Table 6
Correlations Among Negative Maternal Regard Components

NMR components	Negative Attitude	Negative Affect	Negative Attributions	
			Blame Child Trait	Blame Child Proactive
Negative Affect	.09*			
Negative Attributions				
Blame Child Trait	.12**	.03		
Blame Child Proactive	.06	-.07	-.01	
Blame Child Reactive	-.08*	.14**	.03	-.44***

Note. $N = 513-572$.

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Maternal negative attitude was positively correlated with negative affect and with maternal negative attributions-blame child trait, while showing negative correlation with maternal negative attributions-blame child reactive misbehavior. Maternal negative affect showed a positive correlation with maternal negative attributions-blame child reactive misbehavior. It must be noted that the largest correlation between two NMR components was negative. Maternal negative attributions-blame child proactive misbehavior was negatively correlated with maternal negative attributions-blame child reactive misbehavior. In sum, three of the 10 inter-correlations among the 5 NMR components were significant and positive as expected, whereas the other two significant correlations were negative, including the only one that exceeded .14 in absolute size.

To further examine the connections among the components used to assess NMR, exploratory factor analysis was conducted to investigate underlying latent connections among the measured components. Exploratory factor analysis is a psychometrically sound and relatively simple mathematical approach to examine which combination of variables account for the most variation among a set of variables (Stevens, 2002). Exploratory factor analysis is an effective method for testing the dimensionality of scales as well. The Kaiser-Mayer-Olkin (KMO) measure indicates the linear combinations among the variables which account for a sufficient portion of the correlation values consistent with the underlying factors. The KMO measure was reviewed to determine if the distribution of values among the NMR components was adequate for conducting a factor analysis (KMO = .51). George and Mallery (2006) identified .50 as the minimally acceptable level for conducting factor analysis (see Table 7). In order to conduct a satisfactory factor analysis, the correlations among the variables must not be an identity matrix. The Bartlett's Test of Sphericity indicated the sample correlation matrix is not an identity matrix, thus the variables were correlated.

Table 7

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.51
Bartlett's Test of Sphericity	Approximate χ^2	139.787
	df	10
	Sig.	< .001

The Kaiser method of examining and retaining factors with Eigenvalues of greater than one has been a widely used criterion for determining the most significant factors in a set of variables (Stevens, 2002). Among the NMR components, there were two factors with Eigenvalues over one (see Table 8).

Table 8

Explained Variance of Each Negative Maternal Regard Component

Factors	Initial Eigenvalues		
	Total	% of variance	Cumulative %
1*	1.51	30	30
2*	1.13	23	53
3*	.96	19	72
4*	.86	17	89
5*	.54	11	100

Note. * = all NMR components included in each factor.

Cattell (1966) also suggested using the scree test as a graphical method for examining the magnitude of each factor. To further examine the magnitude of the factors within the NMR components, a scree plot was reviewed to confirm the significance of each factor (see Figure 1).

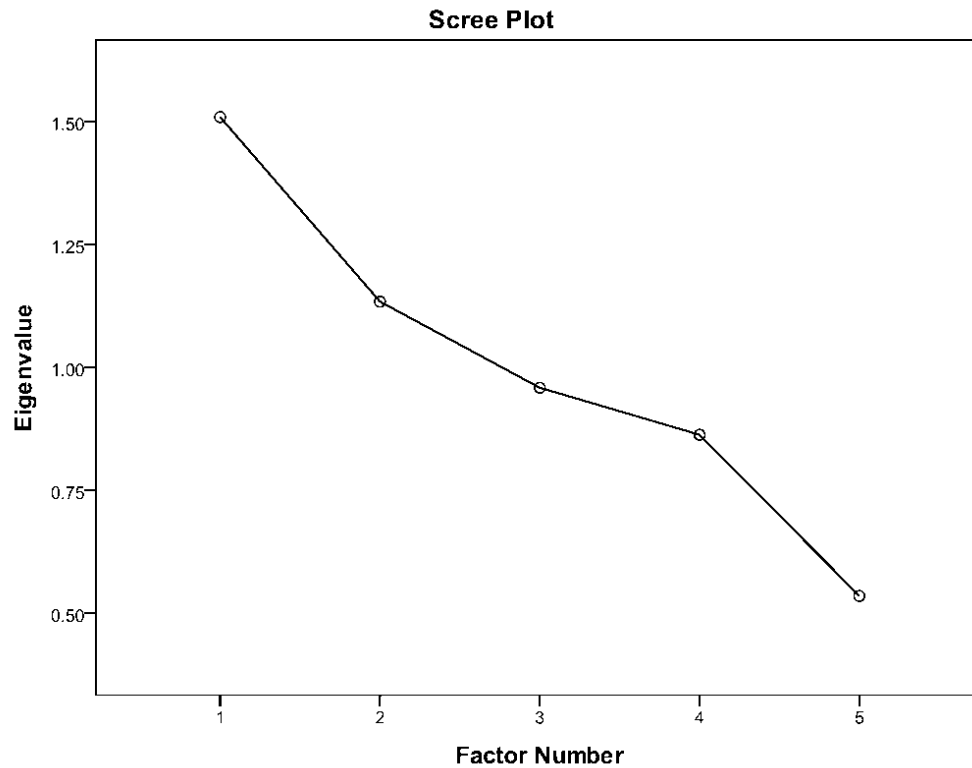


Figure 1. Scree Plot of NMR Factors

To facilitate the interpretation of the exploratory factor analysis, a Varimax rotation was conducted to examine the rotated factors (Kaiser, 1960). Comparisons between the rotated factors developed from the exploratory factor analysis and the NMR components are presented in table 9. As recommended by Stevens (2002), only components loading at or above .40 were used for interpretation purposes. In sum, exploratory factor analysis results indicated that there were two factors underlying the NMR components. In this analysis, negative maternal affect, negative maternal attitude, and negative maternal attributions-blame child trait had loadings greater than .40 on the second factor. Negative maternal attributions-child reactive and negative maternal attributions-child proactive showed large loadings on factor one, but with opposite signs, consistent with their negative correlations with each other also a negative association

with one another; additionally, maternal negative affect, attitude and attributions-blame child trait showed weak loadings on factor one. The NMR components which showed large loadings on factor two were consistent with the theoretical model based on results from a review of the literature. For instance, maternal negative blame attributions have been linked to non-optimal parenting (e.g., Bugental & Happaney, 2004). In addition to this, maternal negative affect has also been linked to problematic parenting behaviors (e.g., Belsky, Crnic, & Woodsworth, 1995; Weis & Lovejoy, 2002). While maternal negative attitude has not been consistently defined and investigated in the parenting literature, the overall concept has been linked to problematic parenting (e.g., Daggett, O'Brien, Zanolli, & Peyton, 2000; Hastings & Rubin, 1999; Juby, 2009). Based upon these theoretical principles and research results, the second factor (i.e., strong loadings for Maternal Negative Affect, Attitude, and Attributions-Blame Child Trait, and weak loadings for Maternal Negative Attributions- Blame Child Proactive and Maternal Negative Attributions-Blame Child Reactive) was used to interpret the NMR construct and the second factor score was used as a measure for further analysis of the NMR construct.

Table 9

Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of Negative Maternal Regard Components

NMR Components	Factors	
	1	2
Maternal Negative Attributions – Blame Child Proactive	-.85	-.02
Maternal Negative Attributions – Blame Child Reactive	.80	-.03
Maternal Negative Affect	.31	.42
Maternal Negative Attitude	-.21	.73
Maternal Negative Attributions – Blame Child Trait	.07	.65

Note. Factor loadings > .40 are in boldface. Extraction method: Principal component analysis.

Rotation method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

Hypothesis 2: NMR will be positively linked to mothers’ use of Harsh Parenting behaviors, as operationalized by restrictive and reactive discipline practices.

Hypothesis 3: NMR will be negatively linked to a mother’s Supportive Parenting behaviors, as operationalized by calm discussion, preventative guidance, involvement, and emotionally warm parenting behaviors.

Results. Correlational and regression analyses indicated a significant association of NMR with Supportive Parenting and Harsh Parenting. NMR was shown to negatively correlate with the overall measure for Supportive Parenting and positively correlate with Harsh Parenting. Further analysis showed NMR negatively correlated with several Supportive Parenting components separately (see Table 10). Effect sizes were small, with 4.3% of the variability of Supportive Parenting behaviors and 2.7% of the variability of Harsh Parenting behaviors accounted for by NMR.

Table 10

Correlations Between Negative Maternal Regard and Parenting Behaviors

Variable	Parenting Behaviors					
	SP Components					
	D	P	I/M	W	SP	HP
NMR	-.16***	-.13**	-.15***	-.08 [†]	-.21***	.16***

Note. $N = 503-507$.

NMR = Negative Maternal Regard, D = Discussion, P = Preventative, I/M = Involvement/Monitoring, W = Warmth, SP = Supportive Parenting Composite, HP = Harsh Parenting.

[†] = $p \leq .10$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 11

Regression Analysis (2 Equations) of Parenting Behaviors on Negative Maternal Regard

Predictors	B	SE(B)	R^2	CI (95%)	β	t	Sig. (p)
Outcome: SP							
Predictor: NMR	-.079	.017	.043	[-.11, -.05]	-.208	-4.769	< .001
Outcome: HP							
Predictor: NMR	.102	.027	.027	[.05, .16]	.165	3.745	< .001

Note. NMR = Negative Maternal Regard, SP = Supportive Parenting, HP = Harsh Parenting.

Hypothesis 4: NMR will predict Child Internalizing behaviors and Child Externalizing behaviors across first, second, and third grades.

Results. Correlational and regression analyses showed a significant association between NMR and the mean of Child Internalizing behaviors across first, second, and third grades (CIB overall) and the mean of Child Externalizing behaviors across first, second, and third grades (CEB overall). Regarding effect sizes, 3% of the variability of

Child Internalizing behaviors overall and 1.5% of the variability of Child Externalizing behaviors overall were accounted for by NMR.

In addition to affecting the Child Internalizing behaviors overall and Child Externalizing behaviors overall, NMR had its strongest association with Child Internalizing behaviors during second grade while NMR had its strongest association with Child Externalizing behaviors during third grade.

Table 12

Correlations Between NMR and Child Problem Behaviors for Each Grade

Variable		Child Problem Behaviors					
		First Grade		Second Grade		Third Grade	
		CIB	CEB	CIB	CEB	CIB	CEB
NMR	<i>r</i>	.08 [†]	.09*	.20***	.10*	.13**	.13**
	<i>n</i>	469	469	455	455	433	433

Note. CIB = Child Internalizing. CEB = Child Externalizing.

[†] = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 13

Correlations Between Negative Maternal Regard and Child Problem Behaviors

Variable	CIB overall	CEB overall
NMR	.17***	.12**

Note. NMR = Negative Maternal Regard, CIB = Child Internalizing, CEB = Child Externalizing

** = $p \leq .01$, *** = $p \leq .001$.

Table 14

Regression Analyses (2 Equations) of Child Problem Behaviors on Negative Maternal Regard

Predictors	B	SE(B)	R ²	CI (95%)	β	t	Sig. (p)
Outcome: CIB overall							
Predictor: NMR	.748	.197	.03	[0.36, 1.14]	.17	3.803	< .001
Outcome: CEB overall							
Predictor: NMR	1.059	.395	.015	[0.28, 1.84]	.121	2.681	.008

Note. Negative Maternal Regard, CIB = Child Internalizing, CEB = Child Externalizing

Hypothesis 5: Harsh Parenting behaviors from mothers will positively predict Child's Internalizing and Externalizing behaviors across first, second, and third grades.

Hypothesis 6: Supportive Parenting behaviors from mothers will negatively predict Child's Internalizing and Externalizing behaviors across first, second, and third grades.

Results. Correlation and regression analyses indicated a statistically significant association between Harsh Parenting with Child Internalizing behaviors overall and Child Externalizing behaviors overall (see Tables 15 and 16). Regarding effect sizes, 1% of the variability in Child Internalizing behaviors overall and 4% of the variability in Child Externalizing behavior overall were accounted for by maternal Harsh Parenting (see Table 17).

Correlation and regression analyses also indicated significant negative association between Supportive Parenting and Child Internalizing behaviors overall and Child Externalizing behaviors overall (see Tables 15 and 16). Regarding effect sizes, 1% of the variability in Child Internalizing behaviors overall and 2% of the variability in Child Externalizing behaviors overall were accounted for by maternal Supportive Parenting (see Table 17).

Table 15

Correlations Between Parenting Behaviors and Child Problem Behaviors

Variables	CIB overall	CEB overall
HP	.10*	.20***
SP (composite)	-.09*	-.15***
SP (components)		
Discussion	-.04	-.12**
Guidance	-.00	-.08*
Involvement	-.09*	-.08 [†]
Warmth	-.09*	-.14***

Note. $N = 539-554$.

[†] = $p \leq .10$, * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 16

Correlations Between Parenting Behaviors and Child Problem Behaviors for Each Grade

Variables	Child Problem Behaviors					
	First Grade		Second Grade		Third Grade	
	CIB	CEB	CIB	CEB	CIB	CEB
HP	.02	.12**	.10*	.21***	.09*	.20***
SP (composite)	-.02	-.09*	-.11**	-.14**	-.06	-.14**
SP (indicators)						
Discussion	.01	-.10	-.09	-.12**	-.01	.02
Guidance	-.04	-.09*	.00	-.09*	.00	.11
Involvement	-.01	-.03	-.09*	-.07	-.07	-.09
Warmth	-.01	-.07	-.10*	-.12**	-.06	.00

Note. $N = 539-554$.

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Table 17

Regression Analyses (4 Equations) of Child Problem Behaviors on Parenting Behaviors

Predictor	B	SE(B)	R ²	CI (95%)	β	<i>t</i>	Sig. (<i>p</i>)
Outcome: CIB							
Predictor: SP	-1.045	.482	.01	[-1.99, -0.09]	-.092	-2.17	.03
Outcome: CEB							
Predictor: SP	-3.238	.943	.02	[-5.09, -1.39]	-.145	-3.432	.001
Outcome: CIB							
Predictor: HP	.723	.301	.01	[0.13, 1.31]	.103	2.404	.017
Outcome: CEB							
Predictor: HP	2.792	.586	.04	[1.64, 3.94]	.201	4.767	< .001

Note. SP = Supportive Parenting, HP = Harsh Parenting, CIB = Child Internalizing Overall, CEB = Child Externalizing Overall.

A model illustrating each of the direct associations between NMR, parenting behaviors, and child problem behaviors is shown in Figure 2. All of the correlations indicated significant associations among the measured variables: NMR, Harsh Parenting, Supportive Parenting, Child Internalizing behaviors overall, and Child Externalizing behaviors overall, respectively. Based upon the statistically significant associations found in the results of the previous tests of hypotheses, analyses proceeded with testing the mediation models (Supportive Parenting and Harsh Parenting mediating the association between NMR and child problem behaviors).

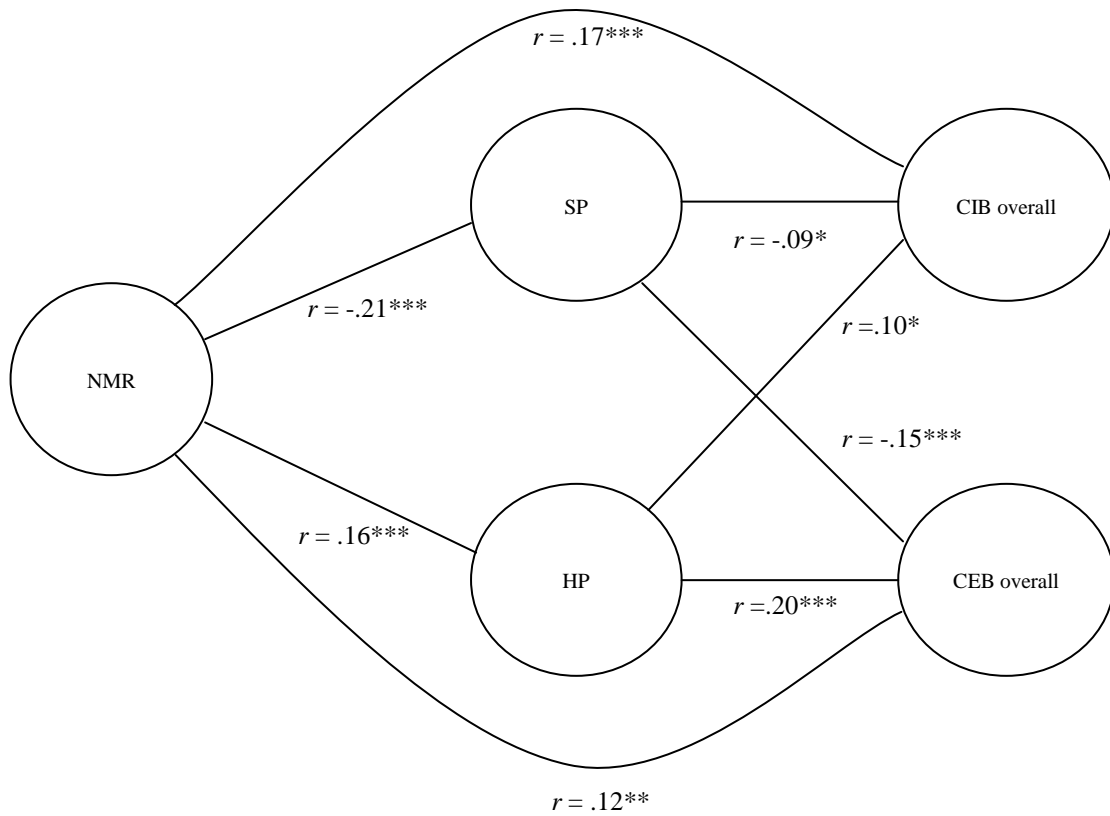


Figure 2. Unadjusted Correlations Among Negative Maternal Regard, Parenting Behaviors, and Child Problem Behaviors.

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

Hypothesis 7: The associations between a mother's NMR and Child Externalizing behaviors will be mediated by the use of Harsh Parenting behaviors and low levels of Supportive Parenting.

Results. An established method for testing mediation by examining a series of regression analyses was used (Baron & Kenny, 1986). An informal content analysis of the 2001, 2002, and 2003 issues of *Journal of Applied Psychology* found that 22% of the published articles examined mediation with the overwhelming majority utilizing this procedure for examining mediation (Preacher & Hayes, 2004). When conducting a series of regression analyses to examine and estimate a mediation model (see Figure 3), two assumptions must be established. First, there must be no measurement error in the mediator. Second, the outcome variable cannot cause the mediator. The Harsh Parenting measure, as used in this study, has been used in multiple peer-reviewed studies. As a result, the level of reliability ($\alpha = .61$) was deemed acceptable for this study, although it left 39% of the variance as measurement error according to classical test theory. The mediating and outcome variables included in this mediation model are longitudinal. Thus, assumption two was met because the measurement of the outcome variable occurred at a later point in time than the measurement of the mediator variable. After partially meeting the two assumptions for using regression analysis to examine mediation, the recommended four step process was completed by estimating three regression equations (see Figure 3).

$$Y = i_1 + cX$$

$$M = i_2 + aX$$

$$Y = i_3 + c'X + bM$$

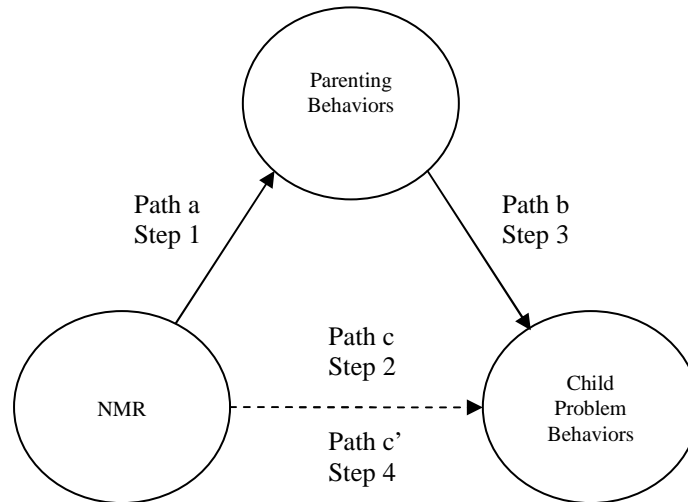


Figure 3. Mediator Model for Parenting Behaviors, Negative Maternal Regard, and Child Problem Behaviors. Path c indicates the direct effect of the predictor variable on the outcome variable. Path c' indicates the indirect effect of the predictor variable on the outcome variable via the mediating variable.

Table 18

Test of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall.

Steps	B	SE(B)	R ²	CI (95%)	β	t
Step 1 (Path a)						
Mediator: HP						
Predictor: NMR	.102	.027	.027	[.05, .15]	.165***	3.745
Step 2 (Path c)						
Outcome: CEB						
Predictor: NMR	1.059	.395	.015	[0.28, 1.84]	.121**	2.681
Step 3 & 4 (Path b and c')						
Outcome: CEB						
Mediator: HP	2.611	.635		[1.36, 3.86]	.186***	4.111
Predictor: NMR	.782	.395	.048	[0.01, 1.56]	.089*	1.981

Note. NMR = Negative Maternal Regard, HP = Harsh Parenting, CEB = Child Externalizing Overall

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

The three estimated equations and four steps used to examine mediation are summarized in Table 18. When using this procedure, the first three findings are required to establish a significant mediation, whereas the fourth step distinguishes between full, partial, and no mediation. First, the predictor variable must significantly predict the mediating variable (Path a). Regression analysis suggested NMR significantly predicted Harsh Parenting. Second, the predictor variable must significantly predict the outcome variable (Path c). In this case, regression analysis indicated NMR significantly predicted Child Externalizing behaviors overall. And third, the effect of the predictor variable on

the outcome variable must decrease when controlling for the mediating variable. In this case, regression analysis indicated the effects of NMR on Child Externalizing behaviors overall decreased when controlling for Harsh Parenting, from $r = .12$ to $\beta = .09$. NMR's effect was reduced in the full model, but it appeared to continue to have a significant direct effect on Child Externalizing behaviors overall in addition to its indirect effect through Harsh Parenting. These findings indicated Harsh Parenting partially mediated the effect of NMR on Child Externalizing behaviors overall (see Figure 4).

When examining large sample sizes, there is risk of committing a Type II error by interpreting the significance of mediation solely by the significance of the two paths to and from the mediator (Preacher et al., 2002). In order to reduce the risk of misinterpreting results in this manner, a formal test can be used to assess the significance of the overall indirect path through the mediator. As recommended by other researchers, the Aroian version of the Sobel test was used to examine the statistical significance of the indirect effect, yielding these results (Baron & Kenny, 1986; Preacher et. al, 2002). According to Preacher and Hayes (2004), the Aroian version of the Sobel test has greater power than many alternative methods for testing the significance of mediation. The Aroian version of the Sobel test utilizes the products of the coefficients derived from the regression equations. Specific elements of this test can be reviewed in the following equation:

$$s_{ab} = \sqrt{(b^2 s_a^2 + a^2 s_b^2 + s_a^2 s_b^2)}$$

In this analysis, the Sobel test indicated that Harsh Parenting significantly mediated the effect of NMR on Child Internalizing behavior overall, $z' = 2.74$, $p = .006$.

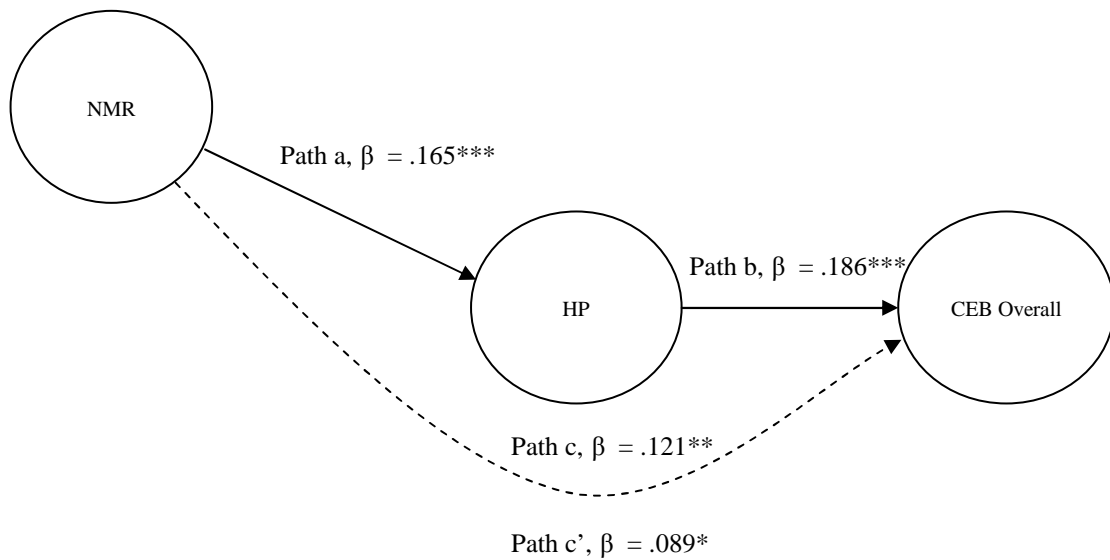


Figure 4. Model of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall. Path c indicates the unadjusted effect of the predictor variable on the outcome variable. Path c' indicates the direct effect of the predictor variable on the outcome variable after controlling for the mediating variable. Path coefficients are standardized beta weights. * = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

The same procedure was followed to examine Supportive Parenting as a mediating variable between NMR and Child Externalizing behaviors overall. The two required assumptions for using regression analyses to examine mediation were reviewed before estimating this mediation model. While the internal consistency of each Supportive Parenting component was acceptable, the reliability of the composite Supportive Parenting measure was low ($\alpha = .43$), leaving as much as 57% of the variance as possible measurement error. The longitudinal design and timing of measurement of the mediating variable and outcome variable met the required assumption that the outcome variable cannot cause the mediating variable. After examining these assumptions, the

three regression equations to estimate the mediation model were examined and four steps to test mediation were followed. The regression equations are summarized in Table 19.

Table 19

Test of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall.

Steps	B	SE(B)	R ²	CI (95%)	β	t
Step 1 (Path a)						
Mediator: SP						
Predictor: NMR	-.079	.017	.043	[-.11, -.05]	-.208***	-4.769
Step 2 (Path c)						
Outcome: CEB						
Predictor: NMR	1.059	.395	.015	[0.28, 1.84]	.121**	2.681
Step 3 & 4 (Path b and c')						
Outcome: CEB						
Mediator: SP	-3.071	1.054		[-5.14, -1.00]	-.134**	-2.915
Predictor: NMR	.792	.403	.032	[0.01, 1.58]	.091*	1.968

Note. NMR = Negative Maternal Regard, SP = Supportive Parenting, CEB = Child Externalizing Overall.

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$

Regression analysis indicated NMR negatively predicted Supportive Parenting. Regression analysis also indicated NMR significantly predicted Child Externalizing behavior overall. As shown in Step 4, the effect of NMR on Child Externalizing behavior overall changed, but remained significant when controlling for Supportive Parenting (see Figure 5). NMR's effect was reduced in the full model, but it appeared to continue to have a significant direct effect on Child Externalizing behaviors overall in addition to its indirect effect through Supportive Parenting. These results indicated that Supportive

Parenting partially mediated the effect of NMR on Child Externalizing behavior overall. The Aroian version of the Sobel test supports the interpretation that Supportive Parenting significantly mediated the association between NMR and Child Externalizing behaviors overall, $z' = 2.43, p = .01$.

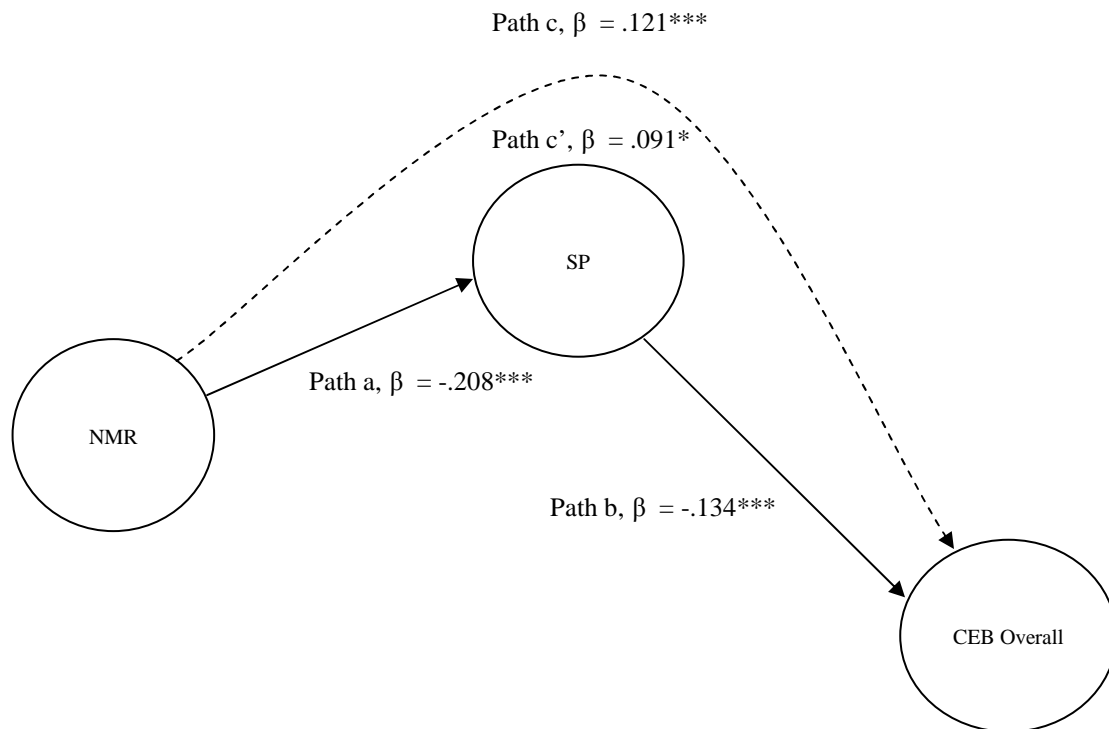


Figure 5. Model of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Externalizing Overall. Path c indicates the unadjusted effect of the predictor variable on the outcome variable. Path c' indicates the direct effect of the predictor variable on the outcome variable after controlling for the mediating variable. Path coefficients are standardized beta weights.

* = $p \leq .05$, *** = $p \leq .001$.

Hypothesis 8: The association between NMR and Child Internalizing behavior will be mediated by the low levels of Supportive Parenting.

Results. Regression analyses were also used to examine Supportive Parenting as a mediator between NMR and Child Internalizing behaviors overall. The two assumptions required for estimating mediation with regression analyses were examined and addressed while testing hypothesis 7. The three estimated equations and four steps used to test this hypothesis can be reviewed in Table 20.

Table 20

Test of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall.

Steps	B	SE(B)	R ²	CI (95%)	β	t
Step 1 (Path a)						
Mediator: SP						
Predictor: NMR	-.079	.017	.043	[-.11, -.05]	-.208***	-4.769
Step 2 (Path c)						
Outcome: CIB						
Predictor: NMR	.748	.197	.03	[0.36, 1.14]	.17***	3.803
Step 3 & 4 (Path b and c')						
Outcome: CIB						
Mediator: SP	-.935	.528		[-1.97, 0.10]	-.081 [†]	-1.772
Predictor: NMR	.667	.202	.035	[0.27, 1.06]	.152***	3.308

Note. NMR = Negative Maternal Regard, SP = Supportive Parenting, CIB = Child Internalizing Overall.

[†] = $p \leq .10$, *** = $p \leq .001$.

Regression analysis indicated NMR negatively predicted Supportive Parenting. Regression analysis also indicated that NMR significantly predicted Child Internalizing behaviors overall. Analysis also revealed that NMR continued to significantly affect

Child Internalizing behaviors overall when controlling for Supportive Parenting, but the observed effect did decrease, suggesting marginally significant partial mediation (see Figure 6). NMR's effect was reduced in the full model, but it appeared to continue to have a marginal direct effect on Child Internalizing behaviors overall in addition to its indirect effect through Supportive Parenting. Consistent with this, the Aronian version of the Sobel test showed the indirect effect of NMR on Child Internalizing behaviors overall (i.e., the mediated path) to be only marginally significant, $z' = 1.62, p = .10$.

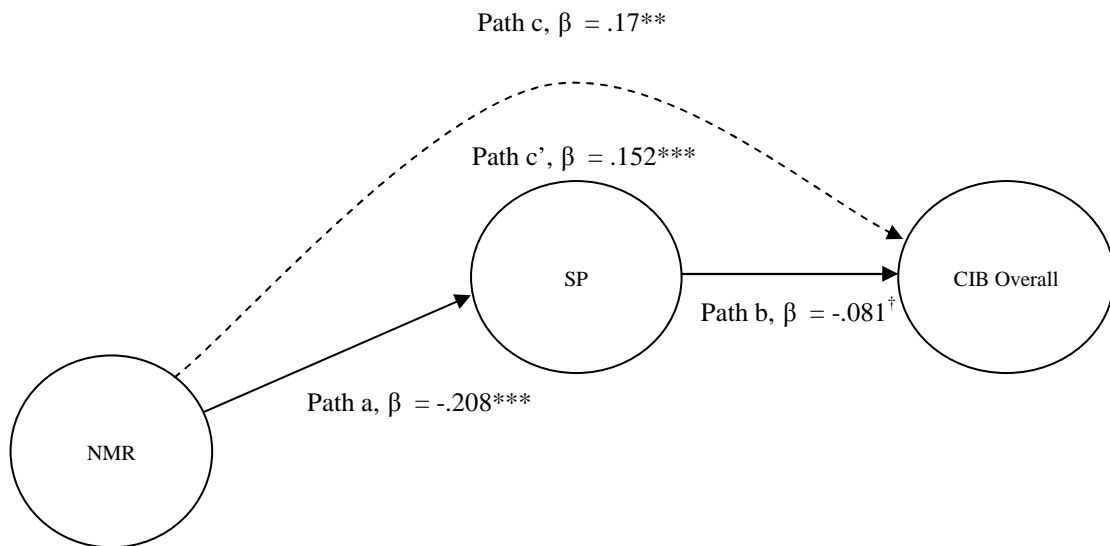


Figure 6. Model of Supportive Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall. Path c indicates the unadjusted effect of the predictor variable on the outcome variable. Path c' indicates the indirect effect of the predictor variable on the outcome variable after controlling for the mediating variable. Path coefficients are standardized beta weights.

$^{\dagger} = p \leq .10, *** = p \leq .001$.

Regression analyses were used to examine Harsh Parenting as a mediator between NMR and Child Internalizing behaviors overall. The two assumptions required for estimating mediation with regression analyses were examined and addressed while

testing hypothesis 7. The three estimated equations used to examine the mediating role of Harsh Parenting between NMR and Child Internalizing behaviors overall can be reviewed in Table 21.

Table 21

Test of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall.

Steps	B	SE(B)	R ²	CI (95%)	β	t	p
Step 1 (Path a)							
Outcome: HP							
Predictor: NMR	.102	.027	.027	[.05, .16]	.165***	3.745	.102
Step 2 (Path c)							
Outcome: CIB							
Predictor: NMR	.748	.197	.03	[0.36, 1.14]	.17***	3.803	.748
Step 3 & 4 (Path b and c')							
Outcome: CIB							
Mediator: HP	.643	.32		[0.01, 1.27]	.091*	2.006	.045
Predictor: NMR	.678	.199	.037	[0.29, 1.07]	.155***	3.403	.001

Note. NMR = Negative Maternal Regard, HP = Harsh Parenting, CIB = Child Internalizing Overall.

* = $p \leq .05$, *** = $p \leq .001$.

Regression analyses indicated NMR predicted Harsh Parenting and that NMR predicted Child Internalizing behaviors overall. The next analysis showed the effect of Harsh Parenting on Child Internalizing behaviors was significant when controlling for NMR (see Figure 7). However, the effect of NMR remained significant when controlling for Harsh Parenting, thus supporting partial mediation. NMR's effect was slightly reduced in the full model, but it appeared to continue to have a significant direct effect on

Child Internalizing behaviors overall in addition to its indirect effect through Harsh Parenting. The Aronian version of the Sobel test was used to formally test this mediation model. The Sobel test supported the interpretation that Supportive Parenting mediated the effect of NMR on Child Internalizing behaviors overall, $z' = 1.72, p = .08$.

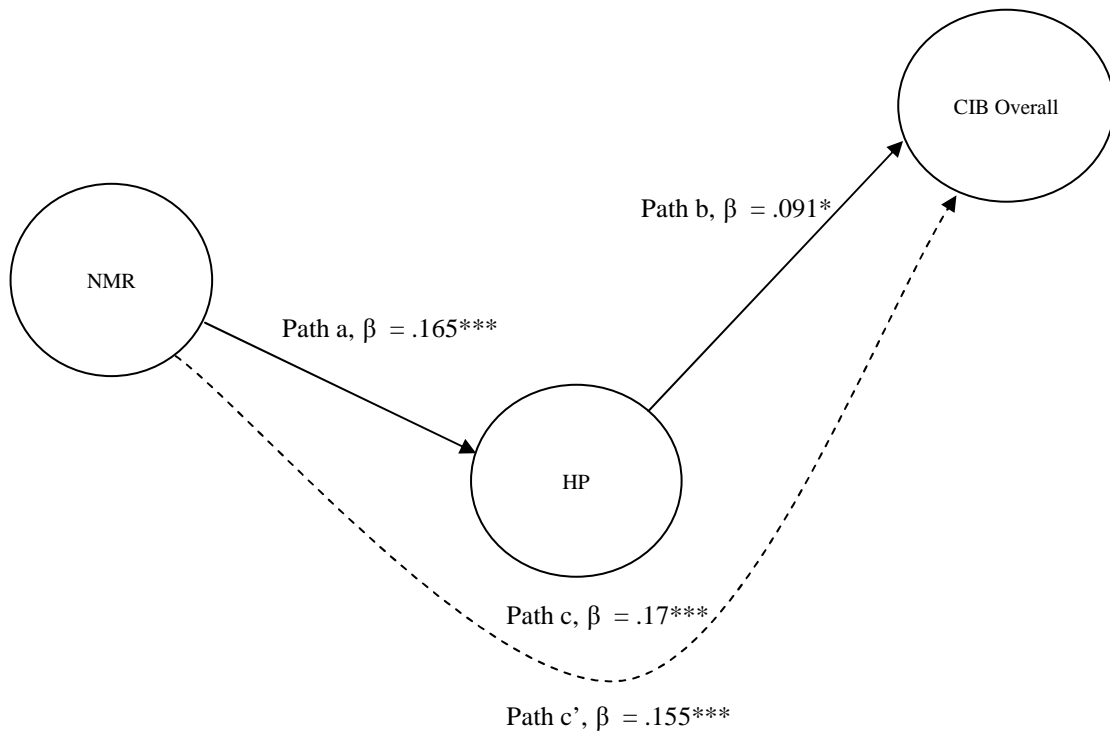


Figure 7. Model of Harsh Parenting as Mediator of Association between Negative Maternal Regard and Child Internalizing Overall. Path c indicates the unadjusted effect of the predictor variable on the outcome variable. Path c' indicates the direct effect of the predictor variable on the outcome variable when mediated by the mediating variable. Path coefficients are standardized beta weights.

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$.

CHAPTER V

DISCUSSION

Overview

This study examined the coherence of the Negative Maternal Regard construct (NMR) and its association with parenting behaviors and subsequent child problem behaviors across first, second, and third grades. Research has shown that the variables of maternal negative attitude, negative attributions, and negative affect are related to problematic parenting behaviors. Furthermore, research has also shown connections between harsh parenting and limited supportive parenting with child internalizing and externalizing behaviors. However, the combined effect of negative maternal attitudes, attributions, and affect has rarely been investigated.

Multiple methods for conceptualizing, operationalizing, and investigating NMR were used in this study. Multiple informants, measurement procedures, and analytic strategies were used to better conceptualize and measure NMR. Once conceptualized and measured, this study investigated the associations of the NMR construct with parenting practices (Supportive Parenting and Harsh Parenting) and child problem behaviors (Child Internalizing behaviors and Child Externalizing behaviors) across a subsequent three year period. After analyses showed significant associations between NMR and each of these variables, multiple mediation models were examined.

Summary of Results

This longitudinal study incorporated multiple methods for investigating the NMR construct, parenting behaviors, and child problem behaviors across first, second, and third grades. Using multiple indicators via multiple methods is a recommended approach to reliably measure psychological constructs (Baron & Kenny, 1986). In keeping with this principle, multiple indicators were used to assess the NMR components of maternal negative attitude, maternal negative affect, and maternal negative attributions (blame child trait, blame child reactive, blame child proactive). Data measuring these components were gathered via multiple procedures (open-ended questions, structured questionnaires, and observations) and multiple informants (mother self-report, interviewers, and observers). Child problem behaviors were assessed annually over a three year period via teacher ratings.

Multiple NMR components, but not all, exhibited significant correlations with each other. For instance, maternal negative affect showed small but significant correlations with maternal negative attributions-blame child reactive ($r = .14, p \leq .01$). One way of interpreting this association is that mothers with high levels of negative affect may be interpreting child behavior as laden with negative emotions by psychologically projecting their own emotional qualities onto their child. This interpretation is consistent with the object-relations theoretical concept of projective identification, which proposes an individual's dislike for qualities within self become perceived within another (Waska, 1999). In this process, mothers avoid problematic aspects of self by separating themselves from that particular quality. Object relations theory also suggests that a mother's projective identification could serve as a way of controlling the disliked quality

in herself by expressing controlling and hostile behaviors towards her child, onto whom she has projected her own negative quality. This theoretical perspective is closely related to the attachment theory proposition that individuals incorporate specific internal working models in response to perceived threats to self (Pietromonaco et al., 2000). Within this perspective, maternal projective identification can lead to a series of distressing and dysfunctional parent-child interactions (Waska, 1999). This interpretation is consistent with the results in the current study showing a significant association between maternal negative affect and problematic parenting.

An additional perspective for understanding the connection between negative maternal affect and negative maternal attributions-blame child reactive could be recognizing the emotional nature of both variables. The maternal negative attributions-blame child reactive variable assessed each mother's attributions regarding her child's emotionally reactive misbehavior in parent-child interactions. Maternal negative affect assessed expressed negative affect, that is shouting at her child. When considering the emotional nature of maternal negative affect and maternal negative attributions-blame child reactive, and how both variables address parent-child interactions, there may be a dynamic interplay of expressed emotion between mother and child. This association may be related to a synchrony of negative affect (Harrist & Waugh, 2002). Synchrony has been described as complementary emotional states (Tronick & Gianimo 1986) and as bi-directional emotional exchanges between a parent and child (Hann et al., 1994). The results from this study are consistent with previous developmental systems research emphasizing the emotional contexts surrounding dysfunctional family interactions (Bugental, et al., 1990; Morris, et al., 2007). This multi-directional emotional process is

particularly important when considering findings that have shown adolescents are more at risk of exhibiting oppositional behaviors when interacting with a critical, hostile, and rejecting family member (Cook, Strachan, & Goldstein, 1989).

Another significant but small association was found between negative maternal attitude and negative maternal attributions-blame child trait ($r = .12, p = .005$). Both of these components assessed a mother's negativity towards her child in a general fashion. For instance, higher levels of negative maternal attitude included general (i.e., vague) negativity while negative maternal attributions-blame child trait included blaming her child's general traits for misbehavior. A mother's negative and indistinctive narrative regarding her child corresponds with findings on narrative coherence in adult attachment research. Specifically, studies have shown avoidantly attached adults exhibit incoherent and fragmented recall of memories related to attachment related experiences (Bartholomew & Horowitz, 1991; Conway, Singer, & Tagini, 2004; Sutin & Gillath, 2009). Generalized blaming of a child's trait and the indistinct negative narrative description of a child, then, may indicate a pattern of thinking/meaning-making among mothers who have an insecure/avoidant attachment style.

A surprising finding among NMR component intercorrelations was that maternal negative attributions-blame child reactive and maternal negative attributions-blame child proactive showed a large and significant correlation in negative direction ($r = -.44, p \leq .001$). These components assessed maternal attributions specific to parent-child interactions, but the specific intentions attributed to child behavior differed. Maternal negative attributions-blame reactive assessed each mother's attributions regarding her child's misbehavior due to the child's hostile emotional state (i.e., angry or upset). In

contrast, maternal negative attributions-blame child proactive assessed each mother's attributions regarding her child's instrumental misbehavior with proactive intention (i.e., trying to achieve a particular outcome and thinking prior to acting). The negative association between negative maternal attributions-blame child reactive and negative maternal attributions-blame child proactive may be distinguishing each mother's attributions regarding her child's reasons for misbehavior. Crick and Dodge (1996) found evidence that social-information processes differed between proactively aggressive children and reactively aggressive children, while Bugental (2000) found differing types of parental attributions. Similar to these other findings on social-information processes and parental attributions (Bugental et al., 2000; Crick et al., 1996), this study suggests negative maternal attributions have differing attribution typologies for interpreting child misbehavior. This corresponds with previous findings which map differing social-information processes onto different types of child aggression. This also parallels previous findings illustrating differing types of relational attributions, that is negative maternal attributions may include subtypes of blame attributions (i.e., blame child reactive and blame child proactive attributions).

Results of this study indicated that many of the measured maternal psychological operations were significantly intercorrelated (albeit with small to medium effect sizes), thus the connections among all of these NMR components were investigated further. In examining the combined components of NMR, exploratory factor analysis showed two factors accounting for significant variance among the NMR components. The rotated components of NMR (viz., maternal negative attitude, maternal negative affect, and maternal negative attributions-blame child trait) showed significant loadings for the

theoretical construct of NMR. The second extracted factor from the combined NMR components indicated significant underlying connections among maternal negative attitude, maternal negative affect, and maternal negative attributions-blame child trait. Based on these empirical results and how they fit the theoretical model, the second factor was interpreted as the most psychometrically sound and theoretically meaningful measure for NMR. This underlying factor was consistent with hypothesis 1, which proposed a psychometrically sound measure can be developed to identify mothers integrated parental psychological construct (i.e., NMR) which consists of negative attributions, attitude, and affect for each of their children. In the current study, this integrated construct—a mother's not liking her child—was reflected by mothers viewing a child in an indistinct and negative way (negative attitude), feeling irritable or annoyed by a child, expressed via shouting (negative affect), and blaming bad behavior on the child's stable characteristics (negative attribution).

The findings from developing and examining the NMR measure suggest NMR may be a latent maternal psychological construct. This is similar to the relational schemas and internal working models of attachment concepts, in that they are understood to be integrated social-psychological constructs used to conceptualize mothers' psychological representations of their children. While relational schemas and internal working models of attachment address a general social-psychological construct within a parent, this study focused on NMR as a potentially problematic construct as measured via negative psychological operations. In sum, the results of this study addressed negative maternal psychological operations related to problematic parenting behaviors and subsequent child problem behaviors.

Given the focus on negative psychological operations and connections to problematic parenting and child behaviors in the current study, it is useful to show how these results correspond with similar findings in the clinical research literature. For instance, Skowron, Kozlowski, and Pincus (2010) addressed maternal psychological representations and problematic parent-child interaction by researching variables defined within intergenerational family systems theory (Kerr & Bowen, 1988) and interpersonal copy process theory (Benjamin, 2003). Both of these theories are prominently used in the family therapy and clinical psychology literature to address dysfunctional relationship processes. Intergenerational family systems theory suggests family emotional processes are transmitted across multiple generations while interpersonal copy process theory proposes parents behave toward their children in ways that reflect their own past family experiences. For example, Critchfield and Benjamin (2008) emphasized how the overwhelming majority of studies linking past experiences with adult psychopathology indicate intergenerational transmission of hostility. As a result of the focus on problematic operations and outcomes, this study proceeded to test the hypotheses that NMR predicts problematic parenting behaviors and child problem behaviors over a period of three years. The second NMR factor score derived from exploratory factor analysis was used as the measure of the NMR construct for subsequent analyses.

Consistent with hypothesis 2, results showed a small but significant association between NMR and Harsh Parenting in a positive direction ($r = .16, p \leq .001$). Thus, NMR significantly related to higher levels of Harsh Parenting. In contrast to the findings between NMR and Harsh Parenting, results showed a small-to-medium significant association between NMR and Supportive Parenting overall ($r = -.21, p \leq .001$). Thus,

higher levels of NMR predicted lower levels of Supportive Parenting. To gain a more detailed understanding of the relationship between NMR and different aspects of Supportive Parenting, correlations between NMR and each of the Supportive Parenting components were reviewed. Results showed a small but significant association between NMR and Discussion, Prevention, and Involvement ($r = -.16, p \leq .001$, $r = -.13, p = .003$, $r = -.15, p \leq .001$, respectively). It was surprising to find NMR was slightly less related to Warmth than with the other Supportive Parenting components ($r = -.08, p = .07$). The Supportive Parenting components of Discussion, Prevention, and Involvement include instrumental parenting behaviors, whereas Warmth appears to be more of an automatic behavior (e.g., speaks to child with a positive tone, initiates positive physical contact with the child, accepts positive physical contact from the child, mother expresses a positive attitude when speaking of the child). The association between NMR and these instrumental parenting behaviors appear to be slightly stronger.

These findings build upon previous research suggesting a strong connection between each of the NMR components and non-optimal parenting practices. For instance, studies have shown an association between negative maternal attributions and both limited supportive parenting (e.g., Dagget et al., 2000) and harsh parenting (e.g., Bugental et al., 2004; Bugental et al., 1993; Hastings et al., 1999; Martorell et al., 2006; Strassberg et al., 2000); negative maternal affect and both limited supportive parenting and increased harsh parenting (e.g., Belsky, et al, 1995; Weis, et al., 2002); and negative maternal attitude and harsh parenting (e.g., Juby, 2009). However, it appears no parenting researchers have investigated the effect of all of these components as an integrated negative parental psychological construct. In sum, these findings suggest NMR

significantly relates to both problematic parenting (Harsh Parenting) and limited positive parenting (Supportive Parenting).

Further analysis showed NMR significantly predicted subsequent Child Internalizing behaviors and Child Externalizing behaviors averaged across time, (although the effect size was small). Previous research has shown an association between negative maternal attributions (e.g., Bugental et al., 1996; Meyers, 2004; Snarr et al., 2003) and negative maternal affect (e.g., Denham, et al., 2000; Eisenberg, et al., 2003; Eisenberg, et al., 1998; Lunkenheimer, et al., 2007; Morris et al, 2007) with problematic child adjustment. The results of the current study further support this connection. This study adds to the previous research by examining and illustrating the association between a latent underlying negative parental construct—NMR—and subsequent Child Internalizing behaviors and Child Externalizing behaviors.

Overall, NMR showed significant associations with small to medium effect sizes between each of the (potential) mediators and dependent variables included in this study. To further examine the specific paths between NMR, parenting behaviors, and child problem behaviors, regression analysis was used to investigate the possible mediating role of parenting behaviors between NMR and child problem behaviors.

A series of regression equations were calculated to estimate whether Harsh Parenting mediated the link between NMR and Child Externalizing behaviors. When controlling for Harsh Parenting, the effect of NMR on Child Externalizing behaviors remained, but was decreased. Additionally, a Sobel test demonstrated that Harsh Parenting significantly mediated the indirect association between NMR, Harsh Parenting, and Child Externalizing behaviors. Results examining the role of Supportive Parenting as

a mediator between NMR and Child Externalizing behaviors showed similar results. When controlling for Supportive Parenting, the effect of NMR on Child Externalizing behaviors remained but decreased. A Sobel test confirmed a significant indirect effect of NMR on Child Internalizing behaviors via , Supportive Parenting). Given these results, it appears the association between NMR and Child Externalizing behaviors is mediated, to some extent, by each of the parenting behaviors. These results build upon a long line of research connecting each of the NMR components, non-optimal parenting, and Child Externalizing behaviors. This study adds to previous findings by showing the association between the integrated NMR construct, non-optimal parenting as operationalized by low Supportive Parenting and Harsh Parenting, and Child Externalizing behaviors. Given these results, it appears that NMR continued to have a direct effect on child problem behaviors when controlling for parenting behaviors.

Results examining the mediating role of Supportive Parenting with NMR and Child Internalizing behaviors appeared different from those found when investigating Child Externalizing behaviors. When controlling for Supportive Parenting, the effects of NMR on Child Internalizing behaviors decreased slightly but remained significant. A Sobel test showed that the mediated path to Child Internalizing behaviors that included both NMR and Supportive Parenting was also significant. Results examining the mediating role of Harsh Parenting with NMR and Child Internalizing behaviors showed similar results. When controlling for Harsh Parenting, the effects of NMR on Child Internalizing behaviors decreased slightly and the mediated path was also significant, according to the Sobel test. Based on these results, the effect of NMR on Child

Internalizing behaviors was partially mediated by each of the parenting behaviors included in this study

Due to the significant relation of NMR to Child Internalizing behaviors and the limited mediating role of the observed parenting behaviors, NMR appears to have a direct effect on Child Internalizing behaviors when controlling for parenting behaviors. Mothers with NMR may be openly negative about their child during discussions with other adults or they may express NMR via covert behaviors that are not traditionally included as parenting behaviors in parenting studies. This is merely one example of a possible mechanism of how NMR directly impacts Child Internalizing behaviors. Further research is needed to address specific mechanisms of how NMR and Child Internalizing behaviors are linked.

There may also be variables which were not accounted for in this analysis which mediate or moderate the link between NMR and child problem behaviors. One such possibility is the presence of parental psychopathology. For instance, one study showed negative parenting practices mediated the association between parent internalizing and child internalizing (Burstein, Stanger, Kamon, & Dumenci, 2006). Other studies have shown children of depressed parents are three time more at risk of developing an anxiety disorder, depression, and substance abuse 20 years later (Weisman et al., 2006). Thus, parents with internalizing conditions, such as depression, may be more likely to incorporate NMR. This possibility is consistent with a number of studies which have shown depressed mothers having negative perceptions of their children (Richters, 1992). Thus, there may be additional variables to consider, such as parent psychopathology,

when examining the path between NMR, problematic parenting behaviors, and child problem behaviors.

Another possible interpretation for the significant association between NMR and Child Internalizing behaviors may be the mother-child intergenerational transmission of negative styles in perception and neurotic temperament traits (Widiger & Mullins-Sweatt, 2009). For instance, several theorists have proposed a connection between perceptions of the behavior from a significant other and internalized perceptions of self (see Anderson & Chen, 2002, for review). Consistent with a cognitive perspective on social development, Ojanen and Perry (2007) showed adolescents' perception of maternal behavior was associated with self-esteem. They found that perceived maternal control was particularly problematic for anxious and timid children. It is possible that perceived maternal attitude, attribution, and affect interact with a child's self-perceptions. This interpretation is consistent with the object-relations concept of introjection, where a person internalizes a significant person's behavior towards her or him and then behaves in ways which mirror that perceived behavior (Skowron, et al., 2010). From the description of introjection within interpersonal copy process theory, child internalizing behaviors are a form of mirrored behavior directed towards self. In this scenario, a mother with NMR may exhibit attitudes, attributions, and affect through venues outside of the parenting behaviors typically included in parenting studies. Children of mother's with NMR may internalize a negative view of self which in turn can be expressed as Child Internalizing behaviors.

Limitations

There were several limitations in this study to consider. Several of the items used to measure NMR components were rescaled to ensure they measured the intended operation. This benefitted the study in that it allowed for the measure to be specific to a single operation, but it also had the drawback of restricting the range of scores. Rescaling may contribute to attenuation of correlations (Pettit et al., 1997). Possibly related to this drawback, the internal consistency reliability within many of the NMR components was rather low. When reviewing the coefficient alpha from maternal negative attitude and maternal negative attributions-blame child trait, the level of reliability appeared to be low. According to George and Mallery (2006), coefficient alpha levels $> .50$ are poor and coefficient alpha levels $< .50$ are unacceptable. In this study, maternal attitude had a poor level of reliability ($\alpha = .50$) and maternal negative attribution – blame child trait had an unacceptable level of reliability ($\alpha = .40$). According to classical test theory, there was 50% of measurement unaccounted for within maternal negative attitude measure and 60% within maternal negative attributions-blame child trait measure. A low coefficient alpha could indicate error for measuring the intended operation. Taking all of these matters into account, the amount of error within each of these measures must be considered when interpreting results because they can be misleading (Trusty, Thompson, & Petrocelli, 2004).

Another limitation was the measurement of maternal negative affect. A single item was used to measure this particular NMR component. While some researchers have shown a single-item measure can be reliable and valid (Zimmerman et al., 2006), other methodologists advocate for the use of multiple-items scales (Loo, 2002; Warren &

Landis, 2007). Thus, the use of a single-item measure, such as maternal negative affect was a limitation in measuring NMR. Another limitation to this particular measure was the focus on observed maternal affect. Observers rated maternal negative affect when a mother yelled at her child. This observation could be interpreted as parenting behavior rather than internal affect. This illustrates the difficulty in using observational procedures for measuring an internal psychological operation. Each of these limitations in measuring maternal negative affect may have resulted in limiting the focus of measurement to a particular type of emotional expression, while there are various ways for experiencing and expressing affect.

Another potential limitation in this particular study was sample attrition. Participant dropout rates can be problematic with longitudinal studies and attrition was a potential limitation in this project. For instance, there were 469 children included in this study during first grade and 433 children during third grade. This 7.6% drop over the three year period could influence interpretation of these results. However, the opposite perspective is that 92.4% of the sample remained actively involved in this study throughout first, second, and third grades. Either way of interpreting this sample attrition, the variation in the sample across each year of the study could influence the magnitude of the coefficients. Thus, the coefficient magnitudes could be a function of sample attrition.

Another limitation associated with sample attrition is sample representation and sample self-selection. It is possible that specific sample characteristics were associated with attrition. For instance, families with specific socioeconomic characteristics may be more mobile and make longitudinal participation in a study such as this challenging for participant families and researchers. Another potential problem associated with this study

is the potentially difficult topic for parents. For example, some mothers may be threatened by research questions addressing less desirable parenting characteristics, such as negative affect, attitude, and attributions for their children. It is difficult for parents to have outsiders observe and, in essence, make judgments about their personal characteristics and parenting practices. A perceived threat or criticism very well could be more likely with mothers exhibiting NMR and may lead to dropping out of this study.

Recommendations

Considering all of these matters, more research is needed in this area. For instance, more reliable methods of measurement would improve the understanding of NMR and perhaps better define the operations within NMR. Historically, the topic of internal representations of relationships has been challenging for researchers to study. As a result, specific operations within this topic have proven difficult to measure. Thus, more specific and reliable measurements would improve the understanding of NMR.

There is an approach to conceptualizing and researching internalized relationships and social behavior which may be helpful for further research in this area. The Structural Analysis of Social Behavior (SASB) has been introduced as a useful assessment tool to address connections between intrapsychic operations and interpersonal behaviors (Benjamin, Rothweiler, & Critchfield, 2006). The SASB may prove to be a reliable method for assessing closely related parental psychological operations and parenting behaviors in a single procedure. While there may be limitations to using the SASB to research mothers with NMR, it may be a useful adjunct to the methods introduced in this study to measure NMR. The SASB conceptual model used to

visualized clusters is theoretically parsimonious (see Figure 8). Thus, it warrants consideration for further studies of NMR.

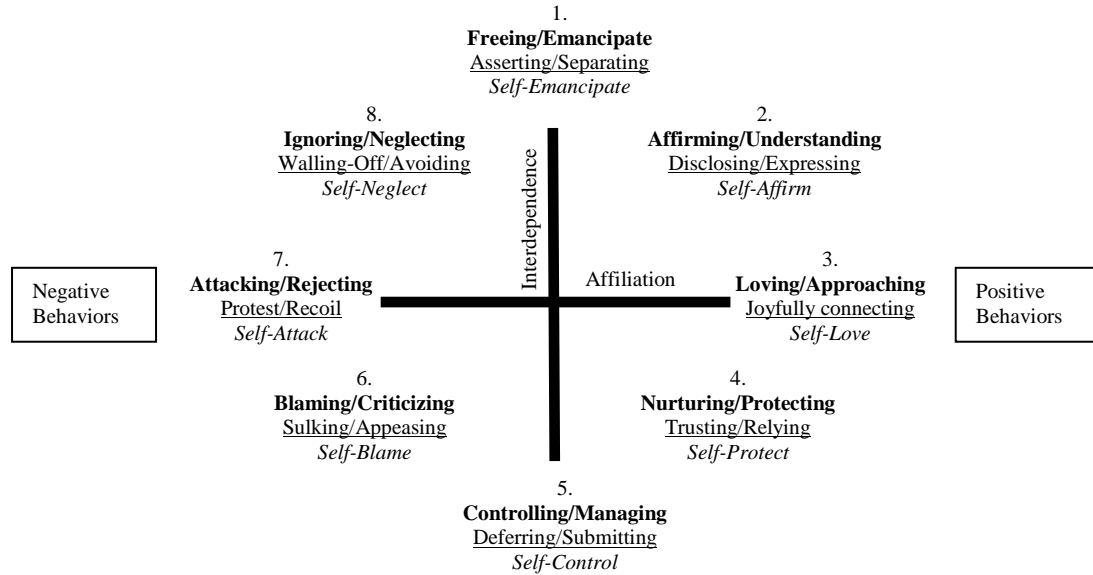


Figure 8. The Structural Analysis of Social Behavior (SASB) Simplified Cluster Model. **Bold**, underlined, and *italicized* labels represent transitive, intransitive, and introject behaviors, respectively.

Use of the SASB may help delineate between multiple negative parenting behaviors and their corresponding intrapsychic operations. This study included the presence of harsh parenting behaviors and limited supportive parenting behaviors, both of which have been found to have associations with child problem behaviors. Further research could articulate specific psychological operations which correspond with particular negative parenting behaviors. For instance, the SASB proposes an association between attacking/rejecting behaviors with self-attacking introjections.

Further research also needs to address additional complexities of parent-child interactions which relate to NMR, problematic parenting behaviors, and child problem behaviors. This study incorporated interviews, observations, and self-report procedures

for assessing NMR components at a single point of time. This time period was an important developmental phase for parents and their children, but it would prove useful to use methods for researching the ongoing NMR operations and the reciprocal interactions between mother and child overtime. For example, it could be that a child was a very difficult infant and toddler, and the mother developed negative regard in response to having such a challenging child; therefore “future” externalizing problems of the child might not be developing in response to negative regard and negative parenting, but may reflect a stable, negative, pattern of behavior, one that the mother has responded to (over time) in a negative fashion. Thus, longitudinal studies examining the dynamic interplay between NMR and child will prove useful in understanding the specific operations contributing to dysfunctional family interactions.

In addition to longitudinal designs, the use of micro-analytic observation methods would also provide specific information about how NMR impacts specific parenting behaviors, and ultimately parent-child interactions. For instance, micro-analytic observation procedures have been used to examine affect which occurred within marital relationships (Gottman, Coan, Carrer, & Swanson, 1998). Coded behavioral observations—video and audio recordings—captured the nuanced expressions of positive, neutral, and negative affect shown through body language, facial actions, and vocal tone. Such nuanced affective expressions are most likely conveyed from a mother towards her child. In particular, a mother with NMR may be communicating negative emotions similar to those investigated in married couples (e.g., disgust, contempt, belligerence, domineering, anger, fear/tension, defensiveness, whining, sadness, and stonewalling).

Emotions such as these may be related to NMR for a child and are important to consider in future research.

This study incorporated a summary score from the Developmental History Interview based on each mother's description of her child that exhibited a low level of reliability. Further research could include standardized interviews which have criterion methods of measurement, instead. The Camberwell Family Interview (CFI) and the Five Minute Speech Sample (FMSS) are two examples of validated methods for assessing a family member's expressed emotion about another particular family member via an open-ended description procedure (Hooley, Miklowitz, & Beach, 2006). Using standardized interviews to build upon the findings from this study could improve measurement reliability and provide more specificity to a mother's description about her child.

Closely related to the potential problem of sample attrition outlined in the limitations section, future research needs to consider issues associated with participant drop out. Mothers with NMR may very well have limited insight into parenting issues and may be highly sensitive to perceived threats. Perceived criticism of parenting behaviors and personal qualities may be a particular influence on drop-out rates. In addition to these issues, mothers with NMR may be exhibiting maternal projective identification and projective identification has been associated with psychological defensiveness to a perceived threat. Thus, future studies must include the matters of sample attrition and sensitive themes as a research topic and consider this process in research designs.

Conclusions

This longitudinal study incorporated multiple methods and procedures for understanding the underlying psychological construct a mother may have regarding a

disliked child. This particular research topic was conceptualized as Negative Maternal Regard (NMR). An integrated maternal social-psychological construct was examined via the connected parental psychological operations of maternal negative attitude, maternal negative affect, and the maternal negative attributions of blame child trait, blame child reactive, and blame child proactive. Significant (but generally small) correlations were found among many, but not all of the NMR components, and exploratory factor analysis showed two significant factors among the NMR components. In sum, exploratory factor analysis results indicated the NMR components of maternal negative attitude, maternal negative affect, and maternal negative attributions-blame child trait accounted for a significant amount of variance within the second factor. These results showed a latent connection between the identified NMR components and could indicate the validity of the NMR construct. These results show support for hypothesis 1.

Further analysis showed the NMR construct, as derived via exploratory factor analysis, significantly related to problematic parenting behaviors, that is lower levels of Supportive Parenting and higher levels of Harsh Parenting. Specifically, NMR was significantly associated with Supportive Parenting in a negative fashion while being significantly related to Harsh Parenting in a positive direction. These results show support for hypotheses 2 and 3.

Results also showed NMR significantly predicted problematic child behaviors (Child Internalizing behaviors and Child Externalizing behaviors) across first, second, and third grades. Problematic parenting (low levels of Supportive Parenting and high levels of Harsh Parenting) was also significantly related to child problem behaviors (Child Internalizing behaviors and Child Externalizing behaviors) across first, second,

and third grades. Parenting behaviors (Supportive Parenting and Harsh Parenting) were shown to mediate the effects of NMR on Child Externalizing behaviors. In contrast, parenting behaviors (Supportive Parenting and Harsh Parenting) only partially mediated the NMR on Child Internalizing behaviors.

In sum, this study was a first step in understanding the connections among negative maternal psychological operations regarding a specific child. Results showed significant associations in the anticipated manner. However, NMR continued to significantly predict Child Internalizing behaviors across first, second, and third grades even when examining Supportive Parenting and Harsh Parenting as potential mediators. These results suggest NMR is significantly associated with Child Internalizing behaviors and Child Externalizing behavior, but the specific association between NMR and Child Internalizing behaviors differs from that which is between NMR and Child Externalizing behaviors.

Given the results of this study, it may be useful to target a mother's internal processes (i.e., NMR) for intervention. Many parent interventions have focused primarily on changing parenting behaviors and have placed less emphasis on parent social-cognitive factors. However, this study showed the significant association between NMR and Child Internalizing was only partially mediated by problematic parenting. As a result, interventions focused solely on changing parenting behaviors may not be to most effective approach when intervening in families with NMR and Child Internalizing behaviors. Various approaches (e.g., cognitive-behavioral therapy, family therapy, parent training, attachment-based interventions, psychoanalytic parent-infant psychotherapy) can be used to facilitate prevention and intervention programs for NMR (e.g., Azar et al.,

2005; Dattilio, 2005). For instance, Snyder and colleagues described the application of relational frame theory and acceptance and commitment therapy with parents (Snyder et al., 2010). Parenting interventions based upon relational frame theory and acceptance and commitment therapy address parents' internal responses (i.e., thoughts and feelings) in addition to dealing with more mainstream parenting approaches targeted at changing parenting behaviors.

It is imperative that researchers, parent educators, therapists, and parents themselves recognize that some parents may have negative regard for a child. Experts and parents alike have neglected to address NMR. Therefore, it is critical for such mothers to openly discuss negative feelings and thoughts about a child and for experts to develop programs to intervene with the negative cycle between NMR, problematic parenting, and child behavioral problems. Recognition of NMR will allow parents, parent educators, and clinicians to participate in interventions to improve family processes related to NMR. Overall, these results suggest NMR is an important issue for researchers, clinicians, educators, and parents to address further.

REFERENCES

- Achenbach, T. M., & Edelbrock, C. (1986). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. Burlington VT: Queen City Printers.
- Anderson, S. M., & Chen, S. (2002). The relational self: An interpersonal social-cognitive theory. *Psychological Review*, *109*, 619–645. doi:10.1037//0033-295X.109.4.619
- Aunola, K., & Nurmi, J. (2005). The role of parenting styles in children's problem behavior. *Child Development*, *76*, 1144–1159. doi:10.1111/j.1467-8624.2005.00840.x-i1
- Azar, S. T., Nix, R. L., & Makin-Byrd, K. N. (2005). Parenting schemas and the process of change. *Journal of Marital and Family Therapy*, *31*, 45–58. doi:10.1111/j.1752-0606.2005.tb01542.x
- Baden, A. D., & Howe, G. W. (1992). Mothers' attributions and expectancies regarding her conduct-disordered children. *Journal of Abnormal Child Psychology*, *20*, 467–486. doi:10.1007/BF00916810
- Baldwin, M. W., Keelan, J. P. R., Fehr, B., Enns, V., & Koh-Rangarajoo, E. (1996). Social-cognitive conceptualization of attachment working models: Availability and accessibility effects. *Journal of Personality and Social Psychology*, *71*, 94–109. doi:10.1037//0022-3514.71.1.94
- Baldwin, M. W., & Meunier, J. (1999). The cued activation of attachment relational schemas. *Social Cognition*, *17*, 209–227. doi:10.1521/soco.1999.17.2.209

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182. doi:10.1037/0022-3514.51.6.1173
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226–244. doi:10.1037/0022-3514.61.2.226
- Bates J. E., & Bayles, K. (1988). The role of attachment in the development of behavior problems. In J. Belsky & T. Nezworski (Eds.), *Clinical implications of attachment* (pp. 253–299). Hillsdale, NJ: Erlbaum.
- Bates, J. E., Freeland, C. B., & Loonsbury, M. L. (1979). Measurement of infant difficulty. *Child Development, 50*, 794–803. doi:10.2307/1128946
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology, 4*(1, Pt. 2), 1–103. doi:10.1037/h0030372
- Beauchaine, T. P., Strassberg, Z., Kees, M. R., & Drabick, D. A. G. (2002). Cognitive response repertoires to child non-compliance by mothers of aggressive boys. *Journal of Abnormal Child Psychology, 30*, 89–101. doi:10.1023/A:1014287217012
- Belsky, J., Crnic, K., & Woodsworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of Personality, 63*, 905–929. doi:10.1111/j.1467-6494.1995.tb00320.x

- Benjamin, L. S., Rothweiler, J. C., & Critchfield, K. L. (2006). The use of Structural Analysis of Social Behavior (SASB) as an assessment tool. *Annual Review of Clinical Psychology, 2*, 83–109. doi:10.1146/annurev.clinpsy.2.022305.095337
- Bickett, L. R., Milich, R., & Brown, R. T., (1996). Attributional styles of aggressive boys and their mothers. *Journal of Abnormal Child Psychology, 24*, 457–472. doi:10.1007/BF01441568
- Biringen, Z., & Robinson, J. (1991). Emotional availability in mother–child interactions: A reconceptualization for research. *American Journal of Orthopsychiatry, 61*, 258–271. doi:10.1037/h0079238
- Boll, T., Ferring, D., & Filipp, S. (2005). Effects of parental differential treatment on relationship quality with siblings and parents: Justice evaluations as mediators. *Social Justice Research, 18*, 155–182. doi:10.1007/s11211-005-7367-2
- Boll, T., Ferring, D., & Filipp, S. (2003). Perceived parental differential treatment in middle adulthood: Curvilinear relations with individuals' experiences relationship quality to siblings and parents. *Journal of Family Psychology, 17*, 472–487. doi:10.1037/0893-3200.17.4.472
- Bost, K. K., Shin, N., McBride, B. A., Brown, G. L., Vaughn, B. E., Coppolo, G., Verissimo, M., Monteiro, L., & Korth, B. (2006). Maternal secure base scripts, children's attachment security, and mother-child narrative styles. *Attachment and Human Development, 8*, 241–260. doi:10.1080/14616730600856131
- Bowlby, J. (1969). *Attachment and loss: Vol. 1, Attachment*. New York: Basic Books.

- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology, 28*, 759–775. doi:10.1037/0012-1649.28.5.759
- Bronstein, P., Clauson, J., Stoll, M. F., & Abram, C. L. (1993). Parenting behavior and children's social, psychological, and academic adjustment in diverse family structures. *Family Relations, 42*, 268–276. doi:10.2307/585556
- Bugental, D. B. (2005). Interdisciplinary insights on nonverbal responses within attachment relationships. *Journal of Nonverbal Behavior, 29*, 177–186. doi:10.1007/s10919-005-4849-8
- Bugental, D. B., Blue, J., Cortez, V., Fleck, K., Kopeikin, H., Lewis, J. C., & Lyon, J. (1993). Social cognitions as organizers of autonomic and affective responses to social challenge. *Journal of Personality and Social Psychology, 64*, 94–103. doi:10.1037//0022-3514.64.1.94
- Bugental, D. B., Blue, J., & Cruzcosa, M. (1989). Perceived control over caregiving outcomes: Implications for the child abuse. *Developmental Psychology, 25*, 532–539. doi:10.1037/0012-1649.25.4.532
- Bugental, D. B., Blue, J., & Lewis, J. (1990). Caregiver beliefs and dysphoric affect directed to difficult children. *Developmental Psychology, 26*, 631–638. doi:10.1037/0012-16.26.4.631
- Bugental, D. B., Brown, M., & Reiss, C. (1996). Cognitive representations of power in caregiving relationships: Biasing effects on interpersonal interaction and information processing. *Journal of Family Psychology, 10*, 397–407. doi:10.1037//0893-3200.10.4.397

- Bugental, D. B., & Goodnow, J. J. (1998). Socialization processes. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 389–462). New York: Wiley.
- Bugental, D. B., & Happaney, K. (2004). Predicting infant maltreatment in low-income families: The interactive effects of maternal attributions and child status at birth. *Developmental Psychology, 40*, 234–243. doi:10.1037/0012-1649.40.2.234
- Bugental, D. B., & Johnston, C. (2000). Parental and child cognitions in the context of the family. *Annual Review of Psychology, 51*, 315–344.
doi:10.1146/annurev.psych.51.1.315
- Bugental, D. B., Lyon, J. E., Krantz, J., & Cortez, V. (1997). Who's the boss? Accessibility of dominance ideation among individuals with low perceptions of interpersonal power. *Journal of Personality and Social Psychology, 72*, 1297–1309. doi:10.1037/0022-3514.72.6.1297
- Burstein, M., Stanger, C., Kamon, J., & Dumenci, L. (2006). Parent psychopathology, parenting, and child internalizing problems in substance-abusing families. *Psychology of Addictive Behaviors, 20*, 97–106. doi:10.1037/0893-164X.20.2.97
- Caldwell, B., & Bradley, R. (1984). *HOME Observation for Measurement of the Environment*. Little Rock, AR: Center for Child Development and Education.
- Cardy, R. L., & Dobbins, G. H. (1986). Affect and appraisal: Liking as an integral dimension in evaluation performance. *Journal of Applied Psychology, 71*, 672–678. doi:10.1037/0021-9010.71.4.672

- Cattell, R. B. (1966). The meaning and strategic use of factor analysis. In R. B. Cattell (Ed.), *Handbook of multivariate experimental psychology* (pp. 174–243). Chicago: Rand McNally.
- Chang, L., Schwartz, D., Dodge, K. A., & McBride-Chang, C. (2003). Harsh parenting in relation to child emotion regulation. *Journal of Family Psychology, 17*, 598–606. doi:10.1037/0893-3200.17.4.598
- Cicchetti, D., & Toth, S. L. (2005). Child maltreatment. *Annual Review of Clinical Psychology, 1*, 409–438. doi:10.1146/annurev.clinpsy.1.102803.144029
- Clark, M. S., & Lemay, E. P. (2010). Close relationships. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of Social Psychology* (pp. 898–940). New York: Wiley. doi:10.1002/9780470561119.socpsy002025
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 779–862). New York: Wiley.
- Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71*, 810–832. doi:10.1037//0022-3514.71.4.810
- Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting. *American Psychologist, 55*, 218–232. doi:10.1037//0003-066X.55.2.218
- Conway, M. A., Singer, J. A., & Tagini, A. (2004). The self and autobiographical memory: Correspondence and coherence. *Social Cognition, 22*, 491–529. Retrieved from <http://search.proquest.com/docview/229663222?accountid=4117>

- Cook, W. L., Strachan, A. M., & Goldstein, M. J. (1989). Expressed emotion and reciprocal affective relationships in families of disturbed adolescents. *Family Process, 28*, 337–348. doi:10.1111/j.1545-5300.1989.00337.x
- Cooley, C. H. (1902). *Human nature and the social order*. New York: Schocken.
- Cowan, P. A. (2005). Reflections on ‘parenting matters’ by Marc Bornstein. *Infant and Child Development, 14*, 315–319. doi:10.1002/icd.395
- Crick, N., & Dodge, K. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development, 3*, 993–1002. doi:10.1111/j.1467-8624.1996.tb01778.x
- Critchfield, K. L., & Benjamin, L. S. (2010). Assessment of repeated relational patterns for individual cases using the SASB-Based Index Questionnaire. *Journal of Personality Assessment, 92*, 480–489. doi:10.1080/00223891.2010.513286
- Critchfield, K.L., & Benjamin, L. S. (2008). Internalized representations of early interpersonal experience and adult relationships: A test of copy process theory in clinical and non-clinical settings. *Psychiatry, 71*, 71–92.
doi:10.1521/psyc.2008.71.1.71
- Dagget, J., O’Brien, M., Zanolli, K., & Peyton, V. (2000). Parents’ attitudes about children: Associations with parental life histories and child-rearing quality. *Journal of Family Psychology, 14*, 187–199. doi:10.1037//0893-3200.14.2.187
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*, 487–496. doi:10.1037/0033-2909.113.3.487

- Dattilio, F. M. (2005). The restructuring of family schemas: A cognitive-behavior perspective. *Journal of Marital and Family Therapy, 31*, 15–30.
doi:10.1111/j.1752-0606.2005.tb01540.x
- Deater-Deckard, K. (1996). Within family variability in parental negativity and control. *Journal of Applied Developmental Psychology, 17*, 407–422. doi:10.1016/S0193-3973(96)90034-9
- Deater-Deckard, K., & Dodge, K. A. (1997). Externalizing behavior problems and discipline revisited: Nonlinear effects and variations by culture, context, and gender. *Psychological Inquiry, 8*, 161–175. doi:10.1207/s15327965pli0803_1
- Deater-Deckard, K., Smith, J., Ivy, L., & Petrill, S. A. (2005). Differential perceptions of and feelings about sibling children: Implications for research on parenting stress. *Infant and Child Development, 14*, 211–225. doi:10.1002/icd.389
- Denham, S. A., Workman, E., Cole, P. M., Weissbrod, C., Kendziora, K. T., & Zahn-Waxler, C. (2000). Prediction of externalizing behavior problems from early to middle childhood: The role of parental socialization and emotion expression. *Development and Psychopathology, 12*, 23–45. Retrieved from <http://journals.cambridge.org/action/displayJournal?jid=DPP>
- Dix, T., Ruble, D. N., & Zambarano, R. J. (1989). Mother's implicit theories of discipline: Child effects, parent effects, and the attribution process. *Child Development, 60*, 1373–1391. doi: 10.1111/1467-8624.ep9772432
- Dodge, K. A. (1980). Social cognition and children's aggressive behavior. *Child Development, 51*, 162–170. doi:10.1111/1467-8624.ep12325439

- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1994). Socialization mediators of the relation between socioeconomic status and child conduct problems. *Child Development*, 65, 649–665. doi:10.2307/1131407
- Dodge, K. A., Pettit, G. S., Bates, J. E., & Valente, E. (1995). Social information processing patterns partially mediate the effect of early physical abuse on later conduct problems. *Journal of Abnormal Psychology*, 104, 632–643. doi:10.1037/0021-843X.104.4.632
- Dubois, D. L., & Silverthorn, N. (2004). Bias in self-perceptions and internalizing and externalizing problems in adjustment during adolescence: A prospective investigation. *Journal of Clinical and Adolescent Psychology*, 33, 373–381. doi:10.1207/s15374424jccp3302_19
- Duncan, S. D., & Fiske, D. W. (1977). *Face-to-face interaction: Research methods and theory*. Hillsdale, NJ: Erlbaum.
- Dykas, M. J., & Cassidy, J. (2011). Attachment and the processing of social information across the life span: Theory and evidence. *Psychological Bulletin*, 137, 19–46. doi:10.1037/a0021367
- Eagly, A. H., & Chaiken, S. (2007). The advantages of an inclusive definition of attitude. *Social Cognition*, 25, 582–602. doi:10.1521/soco.2007.25.5.582
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, 9, 241–273. Retrieved from EBSCO/host
- Eisenberg, N., & Fabes, R. A. (1998). Prosocial development. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 701–778). New York: Wiley.

- Eisenberg, N., Gershoff, E. T., Fabes, R. A., Shepard, S. A., Cumberland, A. J., Losoya, S. H. (2001). Mother's emotional expressivity and children's behavior problems and social competence: Mediation through children's regulation. *Developmental Psychology, 37*, 475–490. doi: 10.1037//0012-1649.37.4.475
- Eisenberg, N., Valiente, C., Morris, A. M., Fabes, R. A., Cumberland, A., Reiser, M., Gershoff, E. T., Shepard, S. A., & Losoya, S. (2003). Longitudinal relations among parental emotional expressivity, children's regulation, and quality of socioemotional functioning. *Developmental Psychology, 39*, 3–19. doi: 10.1037/0012-1649.39.1.3
- Fazio, R. H. (2007). Attitudes as object-evaluation associations of varying strengths. *Social Cognition, 26*, 603–637. doi:10.1521/soco.2007.25.5.603
- Fivush, R. (2006). Scripting attachment: Generalized event representations and internal working models. *Attachment and Human Development, 8*, 283–289. doi:10.1080/08912960600858935
- Frazier, P. A., Tix, A. P., & Baron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*, 115–134. doi:10.1037/0022-0167.51.1.115
- Galper, R. E. (1976). Turning observers into actors: Differential causal attributions as a function of “empathy”. *Journal of Research in Personality, 10*, 328–335. doi:10.1016/0092-6566(76)90022-2
- Gardner, F. E. M. (1994). The quality of joint activity between mothers and her children with behavior problems. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 35*, 935–948. doi:10.1111/j.1469-7610.1994.tb02303.x

- George, D., & Mallery, P. (2006). *SPSS for windows step by step: A simple guide and reference, 6th Ed.* New York: Pearson.
- Gest, S. D., Neeman, J., Hubbard, J. J., Masten, A. S., & Tellegen, A. (1993). Parenting quality, adversity, and conduct problems in adolescence: Testing process-oriented models of resilience. *Develop and Psychopathology, 5*, 663–682.
doi:10.1017/S0954579400006222
- Goldberg, S., Perotta, M., Minde, K. K., & Corter, C. (1986). Maternal behavior and attachment in low birth weight twins and singletons. *Child Development, 57*, 34–46. doi:10.2307/1130635
- Gottman, J. M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and Family, 60*, 5–22. Retrieved from <http://www.jstor.org/argo.library.okstate.edu/stable/353438>
- 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
- Gould, R., & Sigall, H. (1977). The effects of empathy and outcome on attribution: An examination of the divergent-perspectives hypothesis. *Journal of Experimental Social Psychology, 13*, 480–491. doi:10.1016/0022-1031(77)90032-4
- Grusec, J. E. (2011). Socialization processes in the family: Social and emotional development. *Annual Review of Psychology, 62*, 243–269.
doi:10.1146/annurev.psych.121208.131650
- Halberstadt, A. G. (1998). Of models and mechanisms. *Psychological Inquiry, 9*, 290–294, Retrieved from EBSCO/host

- Harrist, A. W., & Waugh, R. M. (2002). Dyadic synchrony: Its structure and function in children's development. *Developmental Review, 22*, 555–592.
doi:10.1016/S0273-2297(02)00500-2
- Hart, C. H., DeWolf, M., Wozniak, P., & Burts, D. C. (1992). Maternal and paternal disciplinary styles: Relations with preschoolers' playground behavioral orientations and peer status. *Child Development, 63*, 879–892.
doi:10.2307/1131240
- Harter, S. (1998). The development of self-representations. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 553–617). New York: Wiley.
- Hastings, P. D., & Rubin, K. H. (1999). Predicting mother's beliefs about preschool-aged children's social behavior: evidence for maternal regards moderating child effects. *Child Development, 70*, 722–741. doi:10.1111/1467-8624.00052
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Holden, G. W. (1985). How parents create a social environment via proactive behavior. In T. Garling & J. Valsinger (Eds.), *Children within environments* (pp. 193–215). New York: Plenum.
- Hollingshead, A. B. (1975). Four factor index of social status. Unpublished manuscript, Yale University, New Haven, CT.
- Holmes, J. G. (2000). Social relationships: The nature and function of relational schemas. *European Journal of Social Psychology, 30*, 447–495. doi:10.1002/1099-0992(200007/08)30:4<447::AID-EJSP10>3.0.CO;2-Q
- Hooley, J. M., Miklowitz, D. J., & Beach, S. R. H. (2006). Expressed emotion and DSM-V. In S. R. H. Beach, M. Z. Wamboldt, M. J. Kaslow, R. E., Heyman, M. B.,

- First, L. G. Underwood, & D. Reiss (Eds.), *Relational Processes and DSM-V: Neuroscience, Assessment, Prevention, and Treatment* (pp. 175–191). Arlington, VA: American Psychiatric Publishing.
- Inbar, M. (1977). *The vulnerable age phenomenon*. New York, NY: Russell Sage Foundation.
- Isely, S. L., O’Neil, R., Clatfelter, D., & Parker, R. D. (1999). Parent and child expressed affect and children’s social competence: Modeling direct and indirect pathways. *Developmental Psychology, 35*, 547–560. doi:10.1037/0012-1649.35.2.547
- Isely, S., O’Neil, R., & Parke, R. D. (1996). The relation of parental affect and control behaviors to children’s classroom acceptance: A concurrent and predictive analysis. *Early Education and Development, 7*, 7–23.
doi:10.1207/s15566935eed0701_2
- James, W. (1890). *The principles of psychology*. Cambridge, MA: Harvard University Press.
- Joiner, T. E., & Wagner, K. D. (1996). Parental, child-centered attributions and outcome: A meta-analytic review with conceptual and methodological implications. *Journal of Abnormal Child Psychology, 24*, 37–52. doi:10.1007/BF01448372
- Juby, C. (2009). Parental attitudes: A mediating role in disciplinary methods used by parents. *Child and Adolescent Social Work, 26*, 519–531. doi:10.1007/s10560009-0183.z
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*, 141–151.
doi:10.1177/001316446002000116

- Keiley, M. K., Howe, T. R., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2001). The timing of child physical maltreatment: A cross-domain growth analysis of impact on adolescent externalizing and internalizing problems. *Development and Psychopathology, 13*, 891–912. Retrieved from <http://journals.cambridge.org/action/displayJournal?jid=DPP>
- Kerr, M., & Bowen, M. (1988). *Family evaluation*. New York, NY: Norton.
- Kochanska, G., & Askan, N. (1995). Mother–child mutually positive affect, the quality of child compliance to requests and prohibitions, and maternal control as correlates of early internalization. *Child Development, 66*, 236–254. doi:10.2307/1131203
- Kowal, A., Kramer, L., Krull, J. L., & Crick, N. R. (2002). Children’s perceptions of the fairness of parental preferential treatment and her socioemotional well-being. *Journal of Family Psychology, 16*, 297–306. doi:10.1037/0893-3200.16.3.297
- Ladd, G. W., Profilet, S., & Hart, C. (1992). Parent’s management of children’s peer relations: Facilitating and supervising children’s activities in the peer culture. In R. D. Parke & G. W. Ladd (Eds.), *Family-peer relationships: Modes of linkage* (pp. 215–253). Hillsdale, NJ: Erlbaum.
- Larrence, D. T., & Twentyman, C. T. (1983). Maternal attributions and child abuse. *Journal of Abnormal Psychology, 92*, 449–457. doi:10.1037//0021-843X.92.4.449
- Levine, Mel (2002). *A mind at a time*. New York, NY: Simon and Shuster.
- Loo, R. (2002). A caveat on using single-item versus multiple-item scales. *Journal of Managerial Psychology, 17*, 68–75. doi:10.1108/026839400210415933

- Lowe, C. A., & Goldstein, J. W. (1970). Reciprocal liking and attributions of ability: Mediating effects of perceived intent and personal involvement. *Journal of Personality and Social Psychology, 16*, 291–297. doi:10.1037/h0029853
- Lunkenheimer, E. S., Shields, A. M., Cortina, K. S. (2007). Parental emotion coaching and dismissing in family interaction. *Social Development, 16*, 232–248. doi: 10.1111/j.1467-9507.2007.00382.x
- MacBrayer, E. K., Milich, R., & Hundley, M. (2003). Attributional biases in aggressive children and her mothers. *Journal of Abnormal Psychology, 112*, 698–708. doi:10.1037/0021-843X.112.4.598
- Martorell, G. A. & Bugental, D. B. (2006). Maternal variations in stress reactivity: Implications for harsh parenting behaviors with very young children. *Journal of Family Psychology, 20*, 641–647. doi:10.1037/0893-3200.20.4.641
- Mangelsdorf, S., Gunnar, M., Kestenbaum, R., Lang, S., & Andreas, R. (1990). Infant proneness-to-distress temperament, maternal personality, and mother—infant attachment: Associations and goodness of fit. *Child Development, 61*, 820–831. doi:10.2307/1130966
- McCarty, C. A., Zimmerman, F. J., Diguseppe, D. L., & Christakis, D. A. (2005). Parental emotional support and subsequent internalizing and externalizing problems among children. *Journal of Developmental and Behavioral Pediatrics, 26*, 267–275. doi:10.1097/00004703-200508000-00002
- McHale, S. M., Updegraff, K. A., Jackson-Newson, J., Tucker, C. J., & Crouter, A. C. (2000). When does parents' differential treatment have negative implications for siblings? *Social Development, 9*, 149–172. doi:10.1111/1467-9507.00117

- McKee, L., Colletti, C., Rakow, A., Jones, D. J., Forehand, R. (2008). Parenting and child externalizing behaviors: Are the associations specific or diffuse? *Aggression and Violent Behavior, 13*, 201–215. doi:10.1016/j.avb.2008.03.005
- McLoyd, V. C. (1990). The impact of hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*, 311–346. doi:10.1111/j.1467-8624.1990.tb02781.x
- Mead, G. H. (1934). *Mind, self and society*. Chicago: University of Chicago Press.
- Miller, S. A. (1995). Parents' attributions for their children's behavior. *Child Development, 66*, 1557–1584. doi:10.2307/1131897
- Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R., (2007). The role of the family context in the development of emotional regulation. *Social Development, 16*, 351–388. doi:10.1111/j.1467-9507.2007.00289.x
- Neisser, U. (1967). *Cognitive psychology*. East Norwalk, CT: Appleton-Centure-Crofts.
- Neppl, T. K., Conger, R. D., Scaramella, L. V., & Ontai, L. L. (2009). Intergenerational continuity in parenting behavior: Mediating pathways. *Developmental Psychology, 45*, 1241–1256. doi:10.1037/a0014850
- Nix, R. L., Pinderhouse, E. E., Dodge, K. A., Bates, J. E., Petit, G. S., & McFadyen-Ketchum, S. A. (1999). The relation between mother's hostile attribution tendencies and children's externalizing behavior problems: The mediating role of mother's harsh discipline practices, *Child Development, 70*, 896–909. doi:10.1111/1467-8624.00065
- Parker, R. (1996). *Mother love, mother hate: The power of maternal ambivalence*. New York: Basic Books.

- Patterson, G. R., Reid, J. B., & Dishion, T. J. (1992). *Antisocial boys*. Eugene, OR: Castalia.
- Pettit, G. S., Bates, J. E., & Dodge, K. A. (1993). Family interaction patterns and children's conduct problems at home and school: A longitudinal perspective. *School Psychology Review, 22*, 403–420. Retrieved from EBSCO/host
- Pettit, G. S., Bates, J. E., & Dodge, K. A. (1997). Supportive parenting, ecological context, and children's adjustment: A seven-year longitudinal study. *Child Development, 68*, 908–923. doi:10.2307/1132041
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*, 583–598. doi:10.1111/1467-8624.00298
- Pianta, R. C., & Caldwell, C. B. (1990). Stability of externalizing symptoms from kindergarten to first grade and factors related to stability. *Development and Psychopathology, 2*, 247–258. doi:10.1017/S0954579400000754
- Pietromonaco, P. R., & Barret, L. F. (2000). The internal working models concepts: What do we really know about the self in relation to others. *Review of General Psychology, 4*, 155–175. doi:10.1037//1089-2680.4.2.155
- Pinderhughes, E. E., Dodge, K. A., Bates, J. E., Pettit, G. S., & Zelli, A. (2000). Discipline responses: Influences of parents' socioeconomic status, ethnicity, beliefs about parenting, and cognitive-emotional processes. *Journal of Family Psychology, 14*, 380–400. doi:10.1037//0893-3200.14.3.380

- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavioral Research Methods, Instruments, and Computers*, *36*, 717–731. doi:10.3758/BF03206553
- Prentice, D. A., & Miller, D. T. (1992). When small effects are impressive. *Psychological Bulletin*, *112*, 160–164. doi:10.1037/0033-2909.112.1.160
- Putallaz, M., Costanzo, P. R., Grimes, C. L., & Sherman, D. M. (1998). Intergenerational continuities and their influences on children's social development. *Social Development*, *7*, 389–427. doi:10.1111/1467-9507.00074
- Rabiner, J. (2011). *Why don't I like my child?* Redbook, retrieved September 1, 2011, from <http://www.redbookmag.com/kids-family/advice/i-dont-like-my-child>
- Regan, D. T., Straus, E., & Fazio, R. (1974). Liking and the attribution process, *Journal of Experimental Social Psychology*, *10*, 385–397. doi:10.1016/0022-1031(74)90034-1
- Regard. (2001). In W. R. Nichols, S. B. Stebbins, & C. Bunning (Ed.), *Random House Webster's Unabridged Dictionary* (p. 1622, 2nd ed.). New York: Random House.
- Reisenzein, R. (1986). A structural equation analysis of Weiner's attribution-affect model of helping behavior, *Journal of Personality and Social Psychology*, *50*, 1123–1133. doi:10.1037//0022-3514.50.6.1123
- Repetti, R. L., Taylor, S. E., & Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. *Psychological Bulletin*, *128*, 330–366. doi:10.1037//0033-2909.128.2.330
- Richman, N., Stevenson, J., & Graham, P. J. (1982). *Preschool to school: A behavioral study*. London: Academic Press.

- Richters, J. E. (1992). Depressed mothers as informants about her children: A critical review of the evidence of distortion. *Psychological Bulletin*, *112*, 485–499. doi:10.1037/0033-2909.112.3.485
- Rothbart, M. K., & Bates, J. E. (1998). Temperament. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 105–176). New York: Wiley.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon & N. Eisenberg (Eds.), *Handbook of Child Psychology* (pp. 619–700). New York: Wiley.
- Rudy, D., & Grusec, J. E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem. *Journal of Family Psychology*, *20*, 68–78. doi:10.1037/0893-3200.20.1.68
- Russell, A. (1997). Individual and family factors contributing to mother's and father's positive parenting. *International Journal of Behavioral Development*, *21*, 111–132. doi:10.1080/016502597385018
- Schank, R., & Abelson, R. (1977). *Scripts, plans, goals, and understanding*. NY: Wiley.
- Sheeber, L. B., Johnston, C., Chen, M., Leve, C., Hops, H., & Davis, B. (2009). Mother's and father's attributions for adolescent behavior: An examination in families of depressed, subdiagnostic, and nondepressed youth. *Journal of Family Psychology*, *23*, 871–881. doi:10.1037/a0016758
- Skowron, E. A., Kozlowski, J. M., & Pincus, A. L. (2010). Differentiation, self-other representations, and Rupture-Repair processes: Predicting child maltreatment risk. *Journal of Counseling Psychology*, *57*, 304–316. doi:10.1037/a0020030

- Slep, A. M. S., & O'Leary, S. G. (1998). The effects of maternal attributions of parenting: An experimental analysis. *Journal of Family Psychology, 12*, 234–243. doi: 10.1037//0893-3200.12.2.234
- Smith, A. M., & O'Leary, S. G., (1995). Attributions and arousal as predictors of maternal discipline. *Cognitive Therapy and Research, 19*, 459–471. doi: 10.1007/BF02230412
- Snyder, J., Cramer, A., Afrank, J., & Patterson, G. R. (2005). The contributions of ineffective discipline and parental hostile attributions of child misbehavior to the development of conduct problems at home and school. *Developmental Psychology, 41*, 30–41. doi:10.1037/0012-1649.41.1.30
- Snarr, J. D., Strassberg, Z., Slep, A. A. S. (2003). Making faces: Testing the relation between child behavior problems and mother's interpretations of child emotion expressions. *Journal of Abnormal Child Psychology, 41*, 371–380. doi:10.1023/A:1023887401140
- Snyder, J., Low, S., Bullard, L., Schrepferman, L., Wachlarowicz, M., Just, C., & Reed, A., (2010, May). *Emotion coaching and mindfulness/acceptance in parent management training*. Paper presented at the Third Annual Parenting Chautauqua of Oklahoma State University, Tulsa, OK.
- Stern, S. B., & Azar, S. T. (1998). Integrating cognitive strategies into behavioral treatment for abusive parents and families with aggressive adolescents. *Clinical Child Psychology and Psychiatry, 3*, 387–403. doi:10.1177/1359104598033005
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences, 4th Ed.* Mahwah, New Jersey: Lawrence Erlbaum Associates.

- Strassberg, Z. (1995). Social information-processing in compliance situations by mothers of behavioral problem boys. *Child Development, 66*, 376–38.
doi:10.2307/1131584
- Strassberg, Z., & Treboux, S. (2000). Interpretations of child emotion expressions and coercive parenting practices among adolescent mothers. *Social Development, 9*, 80–95. doi:10.1111/1467-9507.00112
- Straus, M. A. (1987). *Measuring physical and emotional abuse of children with the Conflict Tactics Scale*. Unpublished manuscript, Family Research Laboratory, University of New Hampshire, Durham.
- Sutor, J. J., Sechrist, J., Plikuhn, M., Pardo, S. T., & Pillemer, K. (2008). Within-family differences in parent-child relations across the life course. *Current Directions in Psychological Science, 17*, 334–338. doi:10.1111/j.1467-8721.2008.00601.x
- Sutin, A. R., & Gillath, A. (2009). Autobiographical memory phenomenology and content mediate attachment style and psychological distress. *Journal of Counseling Psychology, 56*, 351-364. doi:10.1037/a0014917
- Teti, L. O., & Cole, P. M. (1995, April). *Emotion regulation in the preschool years: Relations to socialization and psychopathology*, Paper presented at the meeting of the Society for Research in Child Development, Indianapolis, IN.
- Trusty, J., Thompson, B., & Petrocelli, J. V. (2004). Practical guide for reporting effect size in quantitative research in the journal of counseling and development. *Journal of Counseling and Development, 82*, 107–110. Retrieved from <http://aca.metapress.com/app/home/contribution.asp?referrer=parent&backto=issue,13,15;journal,32,48;linkingpublicationresults,1:112973,1>

- van IJzendoorn, M. H., (1995), Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the adult attachment interview. *Psychological Bulletin*, 117, 387–403. doi:10.1037/0033-2909.117.3.387
- Vaughn, B. E., Verissimo, M., Coppola, G., Bost, K. K., Shin, N., McBride, B., Krzysik, L., & Korth, B. (2006). Maternal attachment script representations: Longitudinal stability and associations with stylistic features of maternal narratives. *Attachment and Human Development*, 8, 199–208. doi:10.1080/14616730600856024
- Waska, R. T. (1999). Projective identification, countertransference, and the struggle for understanding over acting out. *Journal of Psychotherapy Practice and Research*, 8, 155–161. Retrieved from <http://jppr.psychiatryonline.org>
- Warren, C. R., & Landis, R. S. (2007). One is the loneliest number: A meta-analytic investigation on single-item measure fidelity. *Ergometrika*, 4, 32–53. Retrieved from http://www.ergometrika.org/Volume_4/volume4_no1_3.htm
- Waters, H. S., & Waters, E. (2006). The attachment working models concept: Among other things, we build script-like representations of secure base experiences. *Attachment and Human Development*, 8, 185–197. doi:10.1080/14616730600856016
- Weis, R. & Lovejoy, M. C. (2002). Information processing in everyday life: Emotion-congruent bias in mother's reports of parent-child interactions. *Journal of Personality and Social Psychology*, 83, 216–230. doi:10.1037/0022-3514.83.1.216

- Weisman, M. W., Wickromarante, P., Nomura, Y., Warner, V., Pilowsky, D., & Verdelli, H. (2006). Offspring of depressed parents: 20 years later. *Archives of General Psychiatry*, *163*, 1001-1008. doi: 10.1176/appi.ajp.163.6.1001
- Widiger, T. A., & Mullins-Sweatt, S. N. (2010). Five-factor model of personality disorder: A proposal for DSM-V. *Annual Review of Clinical Psychology*, *5*, 197–220. doi:10.1146/annurev.clinpsy.032408.153542
- Wilson, C., Gardner, F., Burton, J., & Leung, S. (2007). Maternal attributions and observed maternal behaviour: Are they linked? *Behavioural and Cognitive Psychotherapy*, *34*, 503–507. doi:10.1017/S1352465806003195
- Youngstrom, E., Izard, C. & Ackerman, B. (1999). Dysphoria-related bias in maternal ratings of children. *Journal of Consulting and Clinical Psychology*, *67*, 905–916. doi:10.1037//0022-006X.67.6.905
- Zahn-Waxler, C., Iannotti, R. J., Cummings, E. M., & Denham, S. (1990). Antecedents of problem behaviors in children of depressed mothers. *Development and Psychopathology*, *2*, 271–291. doi:10.1017/S0954579400000778
- Zeanah, C. H., & Anders, T. F. (1987). Subjectivity in parent-infant relationships: A discussion of internal working models. *Infant Mental Health Journal*, *8*, 237–250. doi:10.1002/1097-0355(198723)8:3<237::AID-IMHJ2280080307>3.0.CO;2-H
- Zhang, F., & Hazan, C. (2002). Working models of attachment and person perception processes. *Personal Relationships*, *9*, 225–235. doi:10.1111/1475-6811.00015
- Zimmerman, M., Ruggero, C. J., Chelminski, I., Young, D., Posternak, M. A., Friedman, M., Boerescu, D., & Attiullah, N. (2006). Developing brief scales for use in clinical practice: The reliability and validity of single-item self-report measures of

depression symptom severity, psychosocial impairment due to depression, and quality of life. *Journal of Clinical Psychiatry*, 67, 1536–1541. Retrieved from <http://www.psychiatrist.com>

APPENDICES

APPENDIX A

ARTICLES ADDRESSING INTEGRATED

PSYCHOLOGICAL CONSTRUCTS RELATED TO PARENTING

Author	Constructs	Components	Data	Analysis	Key outcome
Dykas and Cassidy (2011)	Attachment-relevant social information processing, internal working models	Secure-base internal working models of attachment, biased schematic way, social information processing	Reviewed literature on attachment and social information processing	Integrated concepts from attachment theory and social information processing to present assimilated theoretical models	Emphasized internal working model construct as a conceptual framework for understanding human social information processing; discussed associations between attachment style and accurate or biased-positive or negative-processing of information
Bost et al. (2006)	Maternal representation of attachment	Maternal narrative styles	Mothers (N=99) and pre-school age children (47 boys and 43 girls)	Analyzed scored answers on word prompt, memory mother-child conversations, and the Attachment Behavior Q-Set	Supports notion children's thoughts on emotion influenced by maternal narrative including emotionally-laden content; mother-child attachment variables correlate with maternal narrative style
Fivush (2006)	Attachment scripts	Generalized event representations, internal working models	Reviewed and integrated literature regarding secure base script construct	Provided overview of secure base script development	Secure base scripts organized hierarchical, develop complexity and flexibility, are influenced by attachment experiences, narratives, and socio-cultural factors
Vaughn et al. (2006)	Maternal attachment script representations	Attachment relationships, scripts, hierarchy, stability	Studied mothers of pre-school age children (N=55)	Scored answers following a word prompt set	Found temporal stability in secure-based scripts overall, but more so with aggregated scripts

(table continues)

Author	Constructs	Components	Data	Analysis	Key outcome
Waters and Waters (2006)	Attachment working models	Script-like representations, secure-base script,	Reviewed literature on scripts, representations, and presented methods for assessing and researching secure base scripts	Articulated the definition and description of secure base script and the relevance to security and attachment	Proposed secure base script as way secure base experiences are mentally represented and accessed in attachment contexts
Azar et al. (2005)	Parenting schemas	Information structures, organized memory, beliefs about caregiving and child, social behavior guide	Reviewed research related to parenting schemas	Highlighted research on maladaptive parenting schemas and common interventions within multiple therapeutic approaches	Defined maladaptive parenting schemas as rigid, simplistic, including inappropriate content, or directed by negative affect
Dattilio (2005)	Family schemas	Cognitive structures, organized thought and perception, attributions, assumptions, standards in family context	Reviewed basic research and theory related to role schemas within families	Examines family members mutual influence on relational beliefs, automatic thoughts, and perceptions	Presents psychotherapy interventions for restructuring schemas in family therapy context
Bugental (2005)	Attachment relationships	Attributional biases, insecure attachment, physiological stress responses	Reviewed and applied concepts from biological and cognitive approaches to attachment	Integration of parent-child attachment, biological and cognitive concepts	Proposed relation between cognitive biases and insecure attachments among depressed or abusive mothers, with physiological stress response and ineffective communication mediating the processes
Dagget et al. (2000)	Parents' attitude about children	Attributions, perceptions	Included 80 mothers of 5 year old children	Showed inter-relations among four attitude variables; and path analysis of parent perception of children, life attitudes, expectancies, and attitude of child behavior	Mothers who experienced harsh parenting, had unrealistic child expectations, and negative towards child associated with lower quality home environment

(table continues)

Author	Constructs	Components	Data	Analysis	Key outcome
Holmes (2000)	Relational schemas	Self-in-relation to other, cognitive networks, felt security, attachment and dependency regulation	Reviews research on close interpersonal relationships and social cognition	Reviews research from interdependence theory perspective	Defined relational schema as organized self-other cognitions motivated by felt security
Pietro-monaco and Barrett (2000)	Internal working models	Affect, felt security, representation and evaluation of self and others, emotional bonds	Reviewed findings relevant to adult internal working models	Evaluated the content, structure, operation, and stability of working models in adult relationships	Proposed people hold varying unconscious working models associated with various attachment relationships; that they guide attention and interpretation, generate expectations and plans; have the goal of felt security; associated with attachment style, temperament, caregiving, attachment bonds, and perceived threats and security; organized hierarchically with emotional goals
Baldwin and Meunier (1999)	Attachment relational schemas	Knowledge structures, relational expectations	Experiment including 42 students; one group experienced rejection cue while the second cued acceptance. Information processing following cue was examined	Conducted experiment to delineate cued activation of separate relational knowledge structures and test how different schemas contribute to processing of new information	Defined attachment relational schemas as regularly activated relational knowledge with relational expectancies of interpersonal acceptance or rejection. Found cued relational schemas related to processing of new information
Putallaz et al. (1998)	Cognitive schemas of relationships and modeling	Attachment status, modeling, mechanisms for intergenerational continuities,	Literature review and paradigm proposal for integrating research findings	Reviewed literature examining intergenerational continuities and the influence on child social development	Found intergenerational continuity of child abuse, parent-child attachment, parenting behaviors in the literature. Proposed a paradigm to integrate the reviewed findings

(table continues)

Author	Constructs	Components	Data	Analysis	Key outcome
Baldwin and Keelan (1996)	Attachment style, social-cognitive theory	General attachment style, significant relationships, interpersonal expectations, mental model availability and accessibility	Studies included undergraduate psychology students; study one N=178; study two N=345, study three N=99	Conducted three studies including questionnaires, interviews, and an experimental operation	Discovered priming attachment affected attraction; suggested relational schemas correspond with range of attachment orientations, which then affects knowledge recall and thinking
Bugental et al. (1996)	Relational schemas	Cognitive representation, parent attributions	Induced low power schemas in mothers - study one N=150, study two N=160	Conducted two experiments to explore relational schemas as organizers of and responses to information related to child	Found activating low power schemas in parents reduced cognitive capacity
Collins (1996)	Working models of attachment	Attachment styles, explanations, emotions, behavior	Conducted two experiments examining attachment styles and social perception	Examined if attachment styles and behavior were mediated by explanation patterns and emotional distress	Found preoccupied attachment explained events more negatively and reported more distress; avoidant attachment provided negative explanations, but reported less emotional distress; attachment and relationship quality predicted explanations, but only attachment predicted emotional response
Baldwin (1995)	Relational schemas	Relational cognition, interpersonal script, memory structures, cognitive and social domains	Reviews research on adult attachment and relational cognition	Presents a comprehensive model of relational cognition using examples from information processing and adult attachment research	Defined relational schemas as cognitive structures with organized and regular recall in specific social contexts

(table continues)

Author	Constructs	Components	Data	Analysis	Key outcome
van IJzendoorn (1995)	Parents' mental representation of attachment, infant attachment security	Adult Attachment Interview categories- autonomous/ secure, dismissive, preoccupied; Ainsworth Strange Situation categories-avoidant, secure, ambivalent	Study included 18 samples (N=854) examining relation between the Adult Attachment Interview and Strange Situation; and 10 samples (N=389) on the Adult Attachment Interview and parental responsiveness	Conducted meta-analysis to examine if the Adult Attachment Interview predicts parent—infant attachments	Found a very large combined effect size ($d=1.06$) for insecure versus secure classifications. A portion of the studies showed correspondence between parents' mental representation of attachment and infant attachment security to be 75%; $k=.49$, $n=661$
Crittenden (1993)	Information processing of neglectful parents	Child signals, four stages of parent information processing; parent perceives, interprets, selects response, implements behavior	Review of literature and novel theoretical application	Reviews research on neglectful parents and proposes specific deficits in information processing which contribute to neglectful behavior	Interventions need to be based on specific information processing stage deficiencies
Baldwin (1992)	Relational schemas	Cognitive structures, interpersonal relatedness, cognitive maps	Reviewed literature on theoretical models related to relational schemas and processing of social information	Reviewed and integrated Object Relations, Symbolic Interactionism, Social Constructionism, Representations, Working Models, cognitive memory, schema, interpersonal scripts	Defined relational schemas as interpersonal scripts including self-schema in relation to other-schema. Includes generalizations from other relationships to another specific relational schema.
Bretherton (1990)	Internal working model of self and attachment figure	Working models	Reviewed literature on internal working models of attachment and integrated ideas and terms	Reviewed and clarified the literature on internal working models of attachment	Articulated association between working models (e.g., coherence, defensiveness, organization) to communication patterns in attachment relationships

(table continues)

Author	Constructs	Components	Data	Analysis	Key outcome
Crittenden (1990)	Internal representational models of attachment	Working model, attachment relationship, affect/emotional bonds	Reviewed literature on internal representation models of attachment	Explores Bowlby's internal representational models concept and clarifies specific concepts	Delineated concepts of focus, memory, content, cognitive functioning, attachment quality, behavioral strategies, and attitude toward attachment within the notion of internal representational models; provides new terms to clarify meanings; proposes areas for research, assessment, and clinical intervention
Sherman (1990)	Family narratives	Internal representations, affective themes	Study included eight volunteer families with infants between 24 to 26 months of age	Conducted structured interviews, coded family narratives	Emotional themes regarding parents stories about self paralleled the parent-child relationship patterns
Bretherton et al. (1989)	Parental attachment	Parent internal working model	Interviewed 36 mothers with 25-month-old children	Conducted content analysis on interview transcripts to explore specific attachment themes and global attachment quality	Found the Parent Attachment interview assessed themes relevant to parent attachment to a target child; with the sensitivity/insight scale as a complement to the Strange Situation and other attachment measures

APPENDIX B
 NEGATIVE MATERNAL REGARD ITEMS, MEASURES,
 TRANSFORMATIONS, AND COMPONENTS

Story	Item			Measure	Component
Let's start by talking about the children in the family. Describe each of the children in a few sentences.					
	Description of Target Child (reverse coded)				
	1	2	3		
	Mostly Negative	Mixed, Hard to say	Mostly Positive	DVI	Negative Attitude
	Distinctiveness of Descriptions (reverse coded)				
	1	2	3		
	Vague, indistinct	Somewhat distinct	Distinct, insightful	DVI	Negative Attitude
Mother's behavior towards children (during warmup, transitions, interruptions, etc.)					
	Shouts at target child			N 0	Y 1
	Otherwise expresses overt hostility or annoyance towards kid			N 0	Y 1

(table continues)

Story	Item						Measure	Component
Story 1	Let's imagine that you visit your child at kindergarten and see him or her playing on the playground in a running race. Your child tries real hard to win the race, but loses instead. After the race, you child says it was a stupid race and calls the winner a bad name.							
	Why do you think your child acted this way?						CCQ	
	0	1	2	3	4	5	6	
	no interp.	OK	other blame	situation	state	trait	child misint.	
	transformed to							
	no blame	no blame	no blame	no blame	no blame	blame	no blame	Negative Attributions
	0	0	0	0	0	1	0	
Story 2	Let's imagine that you go to your child's school to pick him or her up. You see all the kindergarten children running to get into line. One of the other children runs hard and bumps into your child. The other kids laugh. You child gets upset and pushes the other kid to the ground.							
	Why do you think your child acted this way?						CCQ	
	0	1	2	3	4	5	6	
	no interp.	OK	other blame	situation	state	trait	child misint.	
	transformed to							
	no blame	no blame	no blame	no blame	no blame	blame	no blame	Negative Attributions
	0	0	0	0	0	1	0	

(table continues)

Story	Item	Measure	Component				
Story 3	Pretend it's Saturday and you carry your child to the park. He or she sees a bunch of kids from kindergarten playing catch with a ball. Your child runs over to them and asks if he or she can play too. They don't hear your child so they just keep on playing. Your child gets upset and grabs the ball and yells, "If you don't let me play, I'm going to throw this ball down the sewer!"						
	Why do you think your child acted this way?	CCQ					
	0 no interp.	1 OK	2 other blame				
	3 situation	4 state	5 trait				
	6 child misint.						
	transformed to						
	no blame	no blame	no blame	no blame	blame	no blame	Negative Attributions
	0	0	0	0	1	0	
Story 4	Your child's birthday is coming up and you have decided to give him or her a party. You let your child invite a bunch of kids from kindergarten. One of the kids in the classroom is your child's cousin, named Lisa, who wants to come to the party a whole lot. Your child does not invite her. When you tell your child how much Lisa wants to come and how important it is to the family, your child says, "Too bad, It's my party and I'll invite who I want."						
	Why do you think your child acted this way?	CCQ					
	0 no interp.	1 OK	2 other blame				
	3 situation	4 state	5 trait				
	6 child misint.						
	other blame	OK	child misint.				
	no interp.	situation	state				
	no interp.	situation	state				
	no interp.	state	trait				
	no interp.	state	trait				
	no interp.	state	trait				
	transformed to						
	no blame	no blame	no blame	no blame	blame	no blame	Negative Attributions
	0	0	0	0	1	0	

(table continues)

Story	Item	Measure	Component
Story 5	Let's pretend that you notice your child playing outside with a bunch of other kids. Your child starts teasing one kid, named Eric, saying to him, "You can't count to 10 and you can't even write your name. Ha=ha! Boy am I glad I'm smarter than you."		
	Why do you think your child acted this way?	CCQ	
	0 no interp. 1 OK 2 other blame 3 situation 4 state 5 trait 6 child misint.		
	no blame no blame no blame transformed to no blame no blame blame no blame		Negative Attributions
	0 0 0 0 0 1 0		
Story 1	Your child throws a temper tantrum, so you send him to his room. You hear him get quieter, and a little while later you go back to check on him. You find him sitting on the floor with crayons and paper, and there are crayon marks all over the floor and walls. This probably happened because:		
	Why do you think your child acted this way?	PPQ	
	not why unlikely maybe probably		
	1 2 3 4		
	he was upset and getting back at you		Negative Attributions
Story 2	You are working on a craft project or hobby, and your child comes in and starts to mess with your stuff. This probably happened because:		
	Why do you think your child acted this way?	PPQ	
	not why unlikely maybe probably		
	1 2 3 4		
	she was trying to get in your way and give you a hard time.		Negative Attributions

(table continues)

Story	Item					Measure	Component
Story 3	Your child asks for a snack right before dinner, and you say no. He goes off and starts to roll a large toy car along the floor. The car hits a lamp and it crashes to the floor. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	he was angry because he couldn't have a snack.						
Story 4	You and your child are playing together and you two start to 'rough house' a little. You are having fun, your child is laughing, but suddenly she pulls your hair real hard. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	she thought it would be fun.						
Story 5	You ask your child to help set the table and hand him a plate to take to the table. You hear a crash and you look. The plate is in pieces at your child's feet. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	he didn't like having to do the chore.						

(table continues)

Story	Item					Measure	Component
Story 6	You and your child are out walking. You trip on the sidewalk and nearly fall. You're a little embarrassed. Your child laughs. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	she enjoyed seeing you stumble.						
Story 7	Imagine you are in the kitchen making dinner. Your child is bouncing a ball in the other room. You tell him or her to stop and your child starts getting upset. The next thing you know the ball hit you in the back and it hurts. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	your child threw the ball at you.						
Story 8	Your child has asked permission to spend the night at a friend's house and you said no. You know your child is upset. Later you hear a crash in the next room and find your child next to a broken lamp. This probably happened because: Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4	PPQ	Negative Attributions
	your child got angry at you.						

(table continues)

Story	Item					Measure	Component
Story 9	Imagine that you are sitting at the dinner table with your child. Your child is playing with his/her food and looks a little upset. You tell your child to hurry up. You look away for a moment and the next thing that happens is that your child's food has been spilled in your lap. This probably happened because:					PPQ	Negative Attributions
	Why do you think your child acted this way?	not why 1	unlikely 2	maybe 3	probably 4		
	your child got angry and spilled it on you.						

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

REC'D URC
MAR 03 2011

Oklahoma State University Institutional Review Board
Request for Determination of Non-Human Subject or Non-Research

Federal regulations and OSU policy require IRB review of all research involving human subjects. Some categories of research are difficult to discern as to whether they qualify as human subject research. Therefore, the IRB has established policies and procedures to assist in this determination.

1. Principal Investigator Information

First Name: Paul	Middle Initial: M.	Last Name: Emrich
Department/Division: Human Dev. & Family Science		College: Human Environmental Sciences
Campus Address: NA		Zip+4: NA
Campus Phone: NA	Fax: NA	Email: paul.emrich@okstate.edu
Complete if PI does not have campus address:		
Address: 1800 S. Broadway Blvd.		City: Ada
State: OK	Zip: 74820	Phone: 580-399-8835

2. Faculty Advisor (complete if PI is a student, resident, or fellow) NA

Faculty Advisor's name: Amanda Harrist, PhD		Title: Associate Professor and Bryan Close Professor
Department/Division: Human Dev. & Family Science		College: Human Environmental Sciences
Campus Address: 233 HES		Zip+4: 74078
Campus Phone: 405-744-7043	Fax: 405-744-2800	Email: Amanda.harrist@okstate.edu

3. Study Information:

A. Title

An Examination of Maternal Regard for Child and Its Relation to Parenting Practices and Child Behavior Problems

B. Give a brief summary of the project. (See instructions for guidance)

This first goal of this project will be to explore the construct validity of mother's regard for her child based on her attitudes towards, general descriptions about her child, interpretations of her child's hypothetical behaviors, and her report of child problems relative to other reports (father and teacher). Subsequent goals will be to investigate if mother's negative regard for her child is associated with higher levels of harsh parenting and lower levels of positive parenting; next, to see if mother's negative regard for her child predicts higher levels of externalizing and internalizing behaviors in her child; then, to see if mother's positive regard for her child is associated with lower levels of harsh parenting and higher levels of positive parenting; and to see if mother's positive regard for her child is associated with lower levels of harsh parenting and higher levels of positive parenting; and see if mother's positive regard for her child predicts lower levels of externalizing and internalizing behaviors in her child. Final analysis will examine whether specific parenting behaviors mediate the relation between maternal regard for her child and child behavior outcomes. This project will use longitudinal data collected via multiple methods (viz., self-reports, observations, interviews, and standardized assessments). Planned analyses include using quantitative methods to test the proposed latent construct and its associations with parenting and child outcomes. Structural Equation Modeling will be used to test the proposed mediation model. There will be no interventions included in this project because it will be conducted using archival data.

Oklahoma State University Institutional Review Board

Request for Determination of Non-Human Subject or Non-Research

- C. Describe the subject population/type of data/specimens to be studied. (See instructions for guidance)

This study will use data from the Child Development Project (CDP), a multi-site longitudinal study of how early family experiences affect child social and behavioral adjustment. Families were recruited in 1987 and 1988 from Tennessee and Indiana when children were entering Kindergarten. This study will include two cohorts totaling 585 families. In this sample, eighty percent are European American, eighteen percent are African American, and two percent are from other groups. Forty eight percent of the children were female and twenty six percent of the parents were single at the time of recruitment. Parents, teachers, and trained researchers provided data via questionnaires, interviews, coded observations, checklists, and self-report. Data has been ongoing since the CDP began in 1987, but this project will use data collected during the child's Kindergarten, First, Second, and Third grade years. Data used for this project has been previously coded and put into digital files, which can only be accessed by personnel approved by CDP principle investigators Drs. Gregory Pettit, Kenneth Dodge, and John Bates. Once approved, this investigator will store de-identified data files on a password protected computer storage device. When not being used, this computer storage device will remain in a locked file cabinet within a locked office. Personal information, such as those listed under 5C of this document, will not be included in the data files.

4. Determination of "Research".

45 CFR 46.102(d): *Research* means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy whether or not they are conducted or supported under a program which is considered research for other purposes.

One of the following must be "no" to qualify as "non-research":

- A. Will the data/specimen(s) be obtained in a systematic manner?
 No Yes
- B. Will the intent of the data/specimen collection be for the purpose of contributing to generalizable knowledge (the results (or conclusions) of the activity are intended to be extended beyond a single individual or an internal program, e.g., publications or presentations)?
 No Yes

5. Determination of "Human Subject".

45 CFR 46.102(f): *Human subject* means a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) data through intervention or interaction with the individual or (2) identifiable private information. Intervention includes both physical procedures by which data are gathered (for example venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes. Interaction includes communication or interpersonal contact between investigator and subject. Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

- A. Does the research involve obtaining information about living individuals?
 No Yes
**If no, then research does not involve human subjects, no other information is required.
If yes, proceed to the following questions.**

All of the following must be "no" to qualify as "non-human subject":

- B. Does the study involve intervention or interaction with a "human subject"?
 No Yes
- C. Does the study involve access to identifiable private information?

Oklahoma State University Institutional Review Board
Request for Determination of Non-Human Subject or Non-Research

No Yes

D. Are data/specimens received by the Investigator with identifiable private information?
 No Yes

E. Are the data/specimen(s) coded such that a link exists that could allow the data/specimen(s) to be re-identified?
 No Yes
If "Yes," is there a written agreement that prohibits the PI and his/her staff access to the link?
 No Yes

6. Signatures

Signature of PI: Paul Enright Date 2/20/2011

Signature of Faculty Advisor Shelia Kennison Date 3/2/11
(If PI is a student)

Based on the information provided, the OSU-Stillwater IRB has determined that this project **does not** qualify as human subject research as defined in 45 CFR 46.102(d) and (f) and **is not subject to oversight by the OSU IRB.**

Based on the information provided, the OSU-Stillwater IRB has determined that this research **does** qualify as human subject research and **submission of an application for review by the IRB is required.**

Shelia M. Kennison
Dr. Shelia Kennison, IRB Chair

3/3/11
Date

VITA

Paul Michael Emrich

Candidate for the Degree of

Doctor of Philosophy

Dissertation: AN EXAMINATION OF NEGATIVE MATERNAL REGARD FOR
CHILD AND ITS ASSOCIATION WITH PARENTING BEHAVIORS AND
CHILD PROBLEM BEHAVIORS

Major Field: Human Environmental Sciences

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Human
Environmental Sciences at Oklahoma State University, Stillwater,
Oklahoma in December, 2011.

Completed the requirements for the Master of Science in Marriage and
Family Therapy at Oklahoma Baptist University, Shawnee, Oklahoma in
May 1999.

Completed the requirements for the Bachelor of Arts in Family
Psychology at Oklahoma Baptist University, Shawnee, Oklahoma in 1996.

Name: Paul Michael Emrich

Date of Degree: December, 2011

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: AN EXAMINATION OF NEGATIVE MATERNAL REGARD FOR
CHILD AND ITS ASSOCIATION WITH PARENTING BEHAVIORS
AND CHILD PROBLEM BEHAVIORS

Pages in Study: 105

Candidate for the Degree of Doctor of Philosophy

Major Field: Human Environmental Sciences

Scope and Method of Study: This study explored the validity of Negative Maternal Regard and its association with problematic parenting and child longitudinal problem behaviors in a community sample of 585 mother-child dyads. Exploratory Factor Analysis (EFA) was used to examine the latent connection between the parental psychological operations of negative maternal attitude, negative maternal affect, and negative maternal attributions. Negative Maternal Regard was assessed prior to childrens kindergarten year and then its association with problematic parenting behaviors (harsh parenting and limited supportive parenting) and longitudinal child problem behaviors (child internalizing and externalizing behaviors) was investigated. Regression analysis was used to examine whether harsh parenting and supportive behaviors mediated the association between Negative Maternal Regard and longitudinal child internalizing and externalizing behaviors across first, second, and third grades.

Findings and Conclusions: EFA results indicated the validity of the Negative Maternal Regard construct by showing a significant latent connection among parental psychological operations of maternal negative attributions, affect, and attitude. Further analysis showed Negative Maternal Regard was significantly related to low levels of supportive parenting behaviors and high levels of harsh parenting behavior, and longitudinal child internalizing and externalizing behaviors across first, second, and third grades. Limited supportive parenting and harsh parenting were also found to significantly predict longitudinal child internalizing and externalizing behaviors across first, second, and third grades. Furthermore, a series of regression models showed problematic parenting behaviors (low levels of supportive parenting and high levels of harsh parenting) significantly mediated Negative Maternal Regards effect on longitudinal child externalizing behaviors across first, second, and third grades. In contrast, problematic parenting behaviors (low levels of supportive parenting and high levels of harsh parenting) only partially mediated Negative Maternal Regards effect on longitudinal child internalizing behaviors across first, second, and third grades. As a result, Negative Maternal Regard continued to have a direct effect on child internalizing behaviors across first, second, and third grades even when controlling for problematic parenting behaviors.

ADVISER'S APPROVAL: Dr. Amanda Harrist
