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PARENTAL BELIEFS AND THE SOCIALIZATION OF CHILD EMOTION:
THE ROLE OF CHILD RISK AND PARENT GENDER

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Psychology

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ABSTRACT

This study examined links between parental beliefs regarding emotion (attitudes, priorities, and perceptions), and parental socialization of emotion behaviors. Child developmental risk and parent gender were examined as important to these relations. Participants included 165 families of 8-year-old children with ($n = 67$) and without ($n = 98$) early developmental delays. Beliefs were measured through questionnaire and interview measures, and parenting behaviors were evaluated through parents' reports of their reactions to child emotion, parent ratings of family expressiveness, and observations of parents' emotion coaching and emotion focus during parent-child laboratory discussion. Fathers were found to be less emotion supportive than mothers as per self-report, but not in terms of observed behavior. Based on developmental status-group assignment at either age 3 or 5 years, parental emotion-coaching attitudes were positively related to several supportive parenting behaviors for parents of typically developing children, and for fathers of children with delays. Mothers of children with delays did not show any significant belief-behavior links when the child age-3 status assignment was considered, but links between priorities and parenting emerged with consideration of the age-5 years assignment. Priorities did not exhibit many simple relations to parenting, but attitudes moderated some priority-behavior links. Support was generated for the existence of diagnostic overshadowing within families of children with delays, but no differences were found in the behavior of these parents as compared to families of typically developing children. Proposed models of belief-behavior links resulted in good overall fit, after negative-expressiveness was omitted. Implications for the study of parental emotion socialization and for parent training are discussed.

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INTRODUCTION

Research suggests that emotion may play a key role in the development of important child outcomes, including the emergence of psychopathology (Cole & Zahn-Waxler, 1992). Parents are thought to socialize their children's emotion through their assistance with co-regulation in the early years (Kopp, 1989) and through relevant parenting behaviors across childhood, including 1) parental reactions to children's emotions, 2) parents' own expressiveness, and 3) parent-child emotion discourse (Eisenberg, Cumberland, & Spinrad, 1998; Halberstadt, 1991). Although several studies have demonstrated the importance of these parenting behaviors to child outcomes (see Eisenberg et al., 1998, for a review), very few investigations have examined the determinants of parental socialization of emotion.

Parent cognitive factors (i.e., "beliefs") have been linked to several aspects of parenting, from discipline (Holden, Miller, & Harris, 1999) and competence-promoting behaviors (Brody, Flor, & Gibson, 1999), to parent-child pretend play (Haight, Parke, & Black, 1997) and problem solving (Hastings & Grusec, 1998). However, parental beliefs thought to affect the parental socialization of child emotion in particular have been virtually neglected. The lack of information in this area is surprising given the suggestion that direct socialization of emotion can be primarily defined by the translation of parental beliefs into behavior (Eisenberg, Spinrad, & Cumberland, 1998). It is likely that the importance that parents place on emotion, and their attitudes toward emotion and emotional expressiveness, significantly influence their emotion-related parenting. Indeed, parental attitudes toward emotion (e.g., coaching versus dismissing) have been linked to parents' behavior with their children, and with several important child outcomes (Gottman, Katz, & Hooven, 1997).

Investigations of belief-behavior links in parental socialization of emotion would benefit greatly from the inclusion of risk populations. There is evidence that family processes and/or relations to child outcome may operate differently under conditions of risk, often with stronger relations observed when risk is present (Crnic & Greenberg, 1987; Denham et al., 2000; Lagace-Seguin & Coplan, 2005). Families of children with developmental delays represent a particularly relevant risk group for many reasons. First, children with developmental delays are at risk for poor social-emotional outcomes (B. Baker, Blacher, Crnic, & Edelbrock, 2002). Secondly there is a potential for cognitive risk to overshadow the perceived importance of emotion in the development of this population (Floyd & Saitzyk, 1992; Reiss, Levitan, & Szyszko, 1982). Furthermore, it is likely that the presence of a child with developmental risk will affect certain parental beliefs (Kopp, Baker, & Brown, 1992), which, in turn, could affect parenting behavior. Finally, children with developmental delays exhibit many of the characteristics (e.g., developmental risk, behavior problems, difficulties with regulation) that have been identified as having the potential to alter important processes, such as relations between parenting and child outcome and/or continuity of child problems.

The Proposed Study

The proposed study examined the relations between parental beliefs and socialization-of-emotion behaviors in families of children with and without early developmental delays. As discussed, very little work has investigated potential determinants of emotion-related parenting and virtually no research has examined these associations under conditions of risk. In addition, the proposed study included fathers, a particularly neglected group in the study of parental beliefs (Holden & Buck, 2002; Perozynski & Kramer, 1999). Several major hypotheses were explored that addressed: 1)

predicted associations between parent beliefs (e.g., attitudes, priorities, perceptions) and socialization behaviors, 2) group and process differences dependent upon parent gender and child risk status, and 3) investigation into the possibility that parental beliefs would buffer the effects of risk on parenting. Consistent with recommendations in the literature, cross-context measurement was used, including careful observation of parent-child interaction (Holden & Buck, 2002). Furthermore, the above relations were integrated into a comprehensive model for testing via structural equation modeling.

Background Literature

The study of psychopathology in children has only recently begun to fully utilize the knowledge base accumulated by the field of developmental psychology. This integration has marked a shift in understanding child disorder through the use of medical and/or behavioral models to a focus on transactional processes over time that may underlie the development of problems during childhood (Cole & Zahn-Waxler, 1992; Cummings, Davies, & Campbell, 2000; Garber, 1984; Jensen & Hoagwood, 1997). A firm understanding of normal child development provides a foundation from which one can identify mechanisms accounting for deviations from typical developmental paths. The examination of trajectories toward psychopathological outcomes minimizes dichotomous thinking about disorder (i.e., that it is either present or not), and emphasizes the importance of investigating developmental processes that can be seen as precursors to, or risk factors for, the development of more clinically serious problems (Carter, Briggs-Gowan, & Davis, 2004; Cicchetti & Cohen, 1995). In addition to models of behavioral and socio-cognitive development that have been proposed to outline the emergence of externalizing problems in particular (e.g., Patterson, 1982; Crick & Dodge, 1994), it has been suggested that children's emotional development may play a crucial

role in the development of both externalizing and internalizing difficulties (Cole & Zahn-Waxler, 1992). In particular, the notion of *emotion regulation* has been proposed as central to the development of child social-emotional functioning (Cicchetti, Ackerman, & Izard, 1995; Cole, Martin, & Dennis, 2004; Cole & Zahn-Waxler, 1992).

Emotion regulation has been defined as “ the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994). Although there is debate as to whether the concept of emotion regulation can be measured convincingly at this time, there exists a general consensus that emotion regulation remains an important concept that demands continued investigation (Cole, Martin, & Dennis, 2004). Promising methods have been proposed, including an emphasis on context (e.g., goals of the situation) and a strong caution against confounding emotion regulation (i.e., the *process*) with emotional expression per se (e.g., the *valence*; Bridges, Denham, & Ganiban, 2004; Campos, Frankel, & Camras 2005; Cole et al., 2004; Eisenberg & Spinrad, 2004).

Child Emotional Development

Developmental progressions of emotion regulation have been proposed and there is evidence that these processes begin as early as infancy (see Calkins, Smith, Gill, & Johnson, 1998, for a review). Basic regulation of autonomic arousal (Porges, 1996) as well as modulation of sensory input through gaze aversion and elementary distraction can be seen in even young infants (Buss & Goldsmith, 1998; Kopp, 1989). Physical self-soothing behaviors such as thumb sucking and rocking also emerge early (Kopp, 1989), and maturation in multiple domains during the first year further contributes to the infant’s growing ability to engage in contingent co-regulation with caregivers (Cicchetti,

Ganiban, & Barnett, 1991). Across toddlerhood, standards of behavior become increasingly salient and internalized (Kopp, 1982), facilitating movement toward independent regulation and effortful control (Kopp, 1982; Vaughn, Kopp, & Krakow, 1984). By the second and third years of life, children prominently employ instrumental strategies and sophisticated forms of distraction in order to adapt to frustrating contexts (Stansbury & Sigman, 2000; Zimmermann & Stansbury, 2003). Further advances in perspective taking and representation of self and other during the preschool period (Denham, 1986; Harter, 1999; Moore, Barresi, & Thompson, 1998) enable young children to adopt more complex emotion regulation strategies. Indeed, as Calkins et al. (1998) suggest, by the end of the first few years of life, children seem to have a variety of regulatory capacities that support both independent identity and self-sufficient behavior, including distraction (reducing focus on an arousing stimulus), comfort-seeking (usually from the mother), self-soothing (including the use of one's own body and/or the use of verbal soothing statements), constructive coping (problem-solving strategies, similar to the concept of "instrumental coping"), and task protest / venting (including aggression and verbal protest; Calkins, Gill, Johnson, & Smith, 1999; Kopp, 1989; Stifter & Braungart, 1995).

Difficulties in the achievement of developmental tasks and/or or failures to adopt the required competencies may result in significant functional difficulties that could eventually reach criteria for a psychological disorder (Cole & Zahn-Waxler, 1992; Cummings, Davies, & Campbell, 2000). Indeed, Cole, Zahn-Waxler, and Smith (1994) examined the relation between child emotion regulation and psychological risk and provided evidence that these constructs were meaningfully related. They examined the regulation of emotional displays during a disappointment paradigm and found

differences in the management of emotion by children identified as “low” and “high” risk for behavior disorders. Additional research has supported the links between dysregulation and child problems, including conduct problems (Cole, Teti, & Zahn-Waxler, 2003), aggressiveness (de Castro, Bosch, Veerman, & Koops, 2003), and broad externalizing problems (Eisenberg, Cumberland, et al., 2001; Rydell, Berlin, & Bohlin, 2003). Studies have also linked emotion regulation to desirable child outcomes such as kindergarten achievement (Howse, Calkins, Anastopoulos, Keane, & Terri, 2003) and social competence (Eisenberg, Gershoff, et al., 2001; Rydell et al., 2003).

Theory and research on the relations between child emotional development and psychopathology suggest several pathways by which the former can affect the latter. The most direct connection between these factors, as presented by Cole and Zahn-Waxler (1992) is that regulation and certain forms of psychopathology can be considered to be overlapping constructs such that the symptoms of certain disorders can themselves be seen as *manifestations* of poor regulation. For example, the authors propose that depression may reflect the inability to down-regulate sad affect, coupled with difficulties generating positive affect. Similarly, it is argued that many externalizing disorders have emotion either at the core of the diagnostic criteria (as with the anger-related issues included in the criteria for Oppositional Defiant Disorder) or as a reasonable precursor to the behavioral criteria (as with aggressive behaviors considered in the diagnosis of Conduct Disorder; American Psychiatric Association, 1994).

Even when poor emotion regulation does not directly represent disorder, causal pathways can exist. Difficulties with emotion regulation can interact over time with factors within the child and with elements of the child’s environment. With regard to the former, hierarchical models of child development are generally advocated (Cicchetti

& Cohen, 1995; Wapner & Demick, 1999) and argue that developmental systems within children build upon themselves such that earlier difficulties or competencies within a system can significantly affect the emergence of later forms of the system. Furthermore, these models imply holism, which suggests that individual components within hierarchically-organized systems are interrelated such that a disruption in one element of the system affects the entire system and any subsequent developmental forms. From this perspective, it can be seen how a child's difficulties with emotion regulation may influence the functioning of related systems and increase the risk for later psychopathology. For example, recent research has demonstrated close ties between children's emotion and their social-cognitive abilities (Arsenio, Gold, & Adams, 2004; de Castro, Merk, Koops, Veerman, & Bosch, 2005). In fact, findings from one study supported a model in which emotion regulation played a central role in social-information processes leading to aggression (de Castro et al., 2005). Similarly, there is evidence that affect expression is an important factor in children's acquisition of language (Bloom, 1987). Clearly, interrelations between children's emotional development and other domains of functioning suggest that the effects of child emotional difficulties are not limited to emotion outcomes, but rather may span numerous aspects of development.

Transactions can also occur between a child's emotional development and elements of the environment, and thereby place the child at risk for later psychopathology. Emotion-related difficulties can lead to poor relationships with other individuals in the child's environment, including parents (Lengua & Kovacs, 2005) and peers (Lopes, Salovey, Cote, Beers, & Petty, 2005; Miller, Gouley, Seifer, Dickstein, & Shields, 2004). Additionally, emotional problems have been related to increased risk for

academic (Anderson & Hammen, 1993; Kovacs & Goldston, 1991) and criminal problems (Simonoff et al., 2004). All of these factors can in turn have further negative influence on the child, thus increasing the possibility of further deviance in development.

Parents' Contribution to Their Children's Emotional Development

During the first few years of children's lives, parents assist with children's emotion regulatory abilities largely through their participation in co-regulation at times in which children are experiencing high levels of arousal (Kopp, 1982). During these affectively charged moments, a parent may encourage the child to engage in many of the strategies previously mentioned. For example, with infants, parents may shake a toy in order to encourage distraction or supply a pacifier with which the child can self-soothe. As the child gains skills in other domains, parents may limit their supportive effort to being warm and understanding or they may explicitly teach the child instrumental coping strategies. Through early and middle childhood, children make important strides in areas related to general memory (see Siegler, 1998), narrative memory (Harter, 1999), language, morality (Piaget, 1932), and the ability to use psychological descriptors (Barenboim, 1981). These improved abilities allow for movement away from the emphasis on direct, in-the-moment co-regulation to a larger repertoire of parental socialization processes.

In a review of parental socialization of child emotion, Eisenberg, Cumberland, and Spinrad (1998) suggest three primary methods by which parents influence the emotional development of their children. The authors proposed that children learn about emotion through 1) parental reactions to children's emotion, 2) parents' own expressiveness, and 3) parent-child discussion of emotion. This model provides an organizing framework for discussion about parental socialization of emotion.

Halberstadt (1991) also proposed a model of parental contributions to child emotion that was similar to that of Eisenberg and colleagues, but differed primarily by the inclusion of “parental coaching” behaviors by Halberstadt. For purposes of the current study, parental coaching was considered under “parent-child discussion,” although Halberstadt did not limit the concept to this context. Parke (1994) also provided a somewhat overlapping framework for the socialization of emotion. The first of the author’s socialization constructs, “dyadic interaction,” encompassed many natural parent-child exchanges and the author notes that these can include parental reactions to children’s emotion and parent expressiveness. The second construct that Parke presented was didactic coaching or teaching, which included parent-child discussion of emotion. The third of Parke’s constructs is the only one that was not considered in the current study and is parental regulation of opportunities (e.g., exposure to media, facilitation of play experiences). This was also a component of Halberstadt’s “emotion coaching.” Although these factors are important, the current study was focused primarily on parenting in the context of parent-child interaction, thus the construct of regulation of opportunities was beyond the current scope.

Parental reactions to child emotion. Eisenberg et al. (1998) have examined parental reports of how they respond to their children’s negative emotion and have categorized those responses as supportive and non-supportive. They propose that supportive reactions (e.g., encouragement of emotional expression, instrumental support) allow for the child to explore his or her emotions and the events surrounding them, to better understand the processes involved, and to begin learning how to regulate emotions and cope effectively with troublesome situations. In contrast, non-supportive reactions are thought to minimize and discourage expression and exploration of the child’s emotions

and the situation, thereby providing little to no assistance to the child with regard to either regulation or coping. Research supports these notions, with relations found between supportive parental reactions and child emotion regulation and social competence, and non-supportive reactions and child dysregulation and behavior problems (Eisenberg et al., 1999; see also Eisenberg et al., 1998, for additional findings). In addition to broad groupings of supportive and non-supportive parental reactions, categories have also been identified within each of these groupings concerning the *type* of support or lack of support provided by the parent. For example, within non-supportive reactions, Eisenberg lists punitive (i.e., responding with punishment in order to avoid the emotional event), minimizing (i.e., devaluing the child's reaction), and parental distress (i.e., excessive parental matching of negative affect) reactions. The idea that parents can encourage and/or discourage emotional expression in their children is central not only to this particular element of socialization, but it is important to many discussions of emotion-related parenting (e.g., Halberstadt et al., 1999; Katz et al., 1999). It is clear that parent reactions to child negative emotion are important socialization behaviors. Unfortunately, these parenting behaviors do not lend themselves to easy observation and most studies have therefore used only self-report data to capture this form of socialization. Furthermore, much of this report data is based upon parents rating the likelihood of particular behaviors in response to hypothetical vignettes and therefore may not represent the most relevant situations for every family.

Family expressiveness. Although many definitions exist, family expressiveness is often described as "the predominant style of exhibiting nonverbal and verbal expressions within the family," (Halberstadt et al., 1995, p.93). Family expressiveness need not refer to emotion exclusively, but it is frequently related to emotion (Bell, 1998;

Halberstadt et al., 1999), and family expressiveness is often an important factor in discussions of emotional expressiveness (e.g., J. Baker & Crnic, 2005; Eisenberg et al., 1998; Halberstadt et al., 1999). Family expressiveness is related to many child outcomes including social competence (Boyum & Parke, 1995; Cassidy et al., 1992), attachment patterns (Bell, 1998) and psychological adjustment (Bronstein et al., 1993). With regard to child emotional development more specifically, family expressiveness has been linked to both children's emotional expressiveness (Cassidy et al., 1992; Halberstadt et al., 1993), and their emotion regulation abilities (Garner, 1995). Family expressiveness has been thought to relate to the child's expressiveness primarily through modeling (Eisenberg et al., 1998; Halberstadt, 1991; Malatesta Magai & Izard, 1983) and there exists some evidence to support this notion (Halberstadt et al., 1999; Malatesta-Magai et al., 1986). Outcomes resulting from children's own expressiveness include social competence (Garner & Estep, 2001), psychological adjustment (Bronstein et al., 1996; Bronstein et al., 1993), and popularity with peers (Garner & Estep, 2001). In addition to modeling, family expressiveness may influence children's emotion regulation abilities through the detrimental impact of maternal negativity on child regulation (Eisenberg, Gershoff, et al., 2001; Ramsden & Hubbard, 2002) and the lack of supportive co-regulation thought to come from parents who do not value the expression of emotion (Gottman et al., 1996)

Discussion of emotion. As supportive parental reactions to children's emotions can allow for the child to learn about emotion and regulation, and family expressiveness can create an environment for such learning, parental discussions of emotion are rich with opportunities for parents to assist with their children's emotional development. As suggested by Denham & Kochanoff (2002), "Discussing emotions provides children with reflective distance from feeling states themselves, and space in which to interpret and

evaluate their feelings and to reflect upon causes and consequences (p. 316).” Parents’ discussions of emotion with their children are believed to provide children with support, validation, and understanding of emotional issues (Malatesta Magai & Haviland, 1985). Indeed, studies have linked parent-child discussions of emotion to child awareness and understanding of emotion (Denham, Cook, & Zoller, 1992; Dunn, Brown, & Beardsall, 1991), children’s own speech about emotion (Dunn et al., 1987), and children’s later affective perspective taking abilities (Dunn et al., 1991). These abilities are of increased importance in light of the suggestion that a child’s ability to discuss and understand emotions may be causally related to their ability to regulate their emotions (Kopp, 1992). Due to difficulties observing natural parent-child discourse about emotion (e.g., low base rates), most research in this area has used contrived situations in which parents and children are asked to talk about an event (see Lagatutta & Wellman, 2002, for an exception). It is likely that this procedure allows for measurement of a parent’s *ability* to engage in emotion talk, regardless of whether or not the dialogue *naturally* occurs. Indeed, evidence suggests that the particular instructions given to the parent (e.g., to talk about a topic versus to talk about emotion) influences parental behavior in this task (Fivush, Brotman, Buckner, & Goodman, 2000), underscoring the importance of considering details in the design of these tasks.

Parent gender differences in the socialization of emotion. Little is known regarding differences in the socialization of emotion by mothers and fathers. At the time of Eisenberg et al.’s (1998) review of parental socialization of emotion, so few studies included fathers that no mention of them occurred in two of the three primary discussions (emotion expressiveness and discussion of emotion). Only three studies were reviewed concerning father’s reactions to child emotion (the third category). All

three studies suggested important differences between mothers and fathers in socialization behaviors. One study found that fathers reported more punitive responses and less supportive responses to child emotion than mothers did (Eisenberg, Fabes, & Murphy, 1996). Mother-father differences were also found in processes relating to child outcome, with fathers' reactions demonstrating stronger relations to child functioning in one study (Carson & Parke, 1996), and weaker relations in another (Eisenberg et al., 1998). Evidence has also suggested that fathers' reactions to their children's emotions may be more dependent upon child gender than mothers' reactions (Chaplin, Cole, & Zahn-Waxler, 2005).

More recent studies on parental emotion talk have begun to incorporate fathers and there is support for the existence of mother-father differences. Fivush et al. (2000) examined parent-child conversations about emotional experiences in families of 3-year-old children. Their findings indicated that mothers participated more in emotional discourse, exhibiting longer discussion periods, a heavier focus on emotion, and more use of emotion words than fathers. Mother-father similarities were present but fewer in number and indicated that mothers and fathers were equally interpersonally oriented in discussions with daughters and discussed attributions of emotions equally (although mothers discussed causes of emotion more frequently). The striking gender differences presented by Fivush et al. (2000) were contrary to earlier studies that found no parent-gender differences for emotion language in discussions of events with 3-year olds, or at a 3-year follow-up (Kuebli & Fivush, 1992, and Adams, Kuebli, Boyle, & Fivush, 1995, respectively). However, in these earlier studies, parents were not explicitly asked to discuss emotion and Fivush et al. (2000) reconcile these discrepant findings by concluding that parent-gender differences in emotion talk may depend upon the

instructions given to the parent regarding the task. Other studies on father-child emotion discourse have suggested that fathers may perceive their socialization role as different from that of mothers (Denham & Kochanoff, 2002). Gottman et al. (1996) also found that fathers performed less scaffolding and praising during parent-child interactions than mothers.

Few studies have examined parent-gender differences in emotional expressiveness as a socialization construct. Garner, Robertson, and Smith (1997) found that mothers of preschoolers rated themselves as higher on positivity and sadness than did fathers, with fathers rating child directed anger higher than mothers did. In contrast, Denham et al. (2000) found no differences between mothers' and fathers' reports of hostility or levels of observed happiness and anger in parent-child interactive tasks. Formal analyses were not conducted on the latter because mothers were observed in many more interactions with their children than were fathers, and the authors felt that formal comparisons were therefore not appropriate. Although the findings are mixed, there is growing evidence suggesting that mothers and fathers may socialize emotion differently. Additional research into the potential similarities and differences is clearly warranted.

Parental Beliefs as Predictors of Parenting Behaviors

Given the importance of child emotional development to a child's overall functioning, and the importance that parenting seems to have for children's emotional development, it is therefore essential to investigate factors that may contribute to parental socialization of emotion. Parental beliefs about emotion have been suggested as important in determining the manner with which parents approach emotional interactions with their children (Eisenberg et al., 1998; Gottman et al., 1996). More

specifically, Eisenberg, Spinrad, and Cumberland (1998) list among the likely parental predictors the sex of the parents, their emotion-related beliefs and values, and their goals. Speculation concerning the role that parental beliefs may play in determining emotion socialization requires further definition of the parameters of what it means to socialize emotion. As Mayer and Beltz (1998) point out, the definition of emotion socialization must be specific enough so as not to include *all* possible interactions between children and parents in which emotion is involved. In response to these concerns, Eisenberg et al. (1998) suggested a distinction between *direct* and *indirect* socialization of emotion. While indirect socialization may encompass a large range of parent-child interactions (e.g., exposure to marital conflict), direct socialization, according to the authors, is defined *primarily* by the potential link between parental beliefs and behavior. The notion that all direct socialization of emotion necessarily represents parental beliefs is a bold proposition, considering the difficulty that research has experienced in establishing belief-behavior relations (see Holden & Buck, 2002; Sigel & McGillicuddy de Lisi, 2002). Indeed, Sigel and McGillicuddy de Lisi (2002) presented a dynamic systems model describing several factors that can interfere with the translation of reported beliefs into parental behavior. For example, they argue that parents who share similar beliefs may still differ in many ways that could change the nature of the belief-behavior chain, including the intensity of the held belief, the accompanying affect, the manner in which the belief is enacted, and the parents' ability to implement the relevant practices. Nonetheless, most researchers accept that parental beliefs are likely contributors in some fashion to parental socialization behaviors.

The term parental beliefs is one that is not easily defined (Holden & Buck, 2002; Sigel & McGillicuddy de Lisi, 2002). One way of thinking about parental "beliefs" is to

use this term to define a range of parental cognitions that includes parent expectancies, attitudes, goals, perceptions, attributions, and/or values. Although this broad term may be appropriate when discussing multiple elements that necessitate reference to a superordinate category (such as in this paper), it has been argued that consideration of any individual factor requires more specificity in label application (Sigel & McGillicuddy de Lisi, 2002). Indeed, in a review of parental “attitudes,” Holden and Buck (2002) propose that a decreased interest in the study of attitudes has resulted in part from what they have labeled “turf erosion” of the construct (i.e., confusion over how parental attitudes differ from related constructs). Clearly, specification of certain *types* of parent cognitions is warranted and is appropriate. However, it must also be acknowledged that some parent-cognitive constructs may be difficult or even impossible to separate and that some distinctions may boil down to arguments of semantics (e.g., is the *belief* that emotion is good to discuss with children a *belief* about child development and parenting, an *attitude* toward emotion, or a parenting *style*?). The most pragmatic conclusion is that studies must attempt to discriminate among belief components and clearly define the terms used. Examination of the relations *among* specific types of parental “beliefs” has proven informative (e.g., Brody et al., 1999; Hastings & Grusec, 1998; Wentzel, 1998) and is a fruitful area for future research.

The study of parental beliefs over time. One of the most studied aspects of parental cognition, and most often tied to the concept of “beliefs,” is that of parental attitudes. Holden and Buck (2002) reviewed the progression of attitude research, which began at the turn of the century and reached an apex in the 1950s. At that time, parental attitudes were considered a “basic tenet” of the field of child development (Burchinal, Hawkes, & Gardner, 1957, as quoted in Holden & Buck, 2002) and an intergenerational model was

emphasized in which a parent was thought to carry forward the attitudes of his or her parents. At the center of the study of attitudes was the link between parental attitudes and parenting behavior. It was a relatively simple model that, unfortunately, was very difficult to support. By the late 1980s little data existed to support the attitude-behavior link (Holden & Edwards, 1989). Interest in the study of parental attitudes showed a steady increase from the 1960s to the 1980s, which dropped from the 1980s to the 1990s (Holden & Buck, 2002). The authors attribute the reduced interest in the study of attitudes to numerous factors including turf erosion (as previously discussed), the tenuous link between attitudes and behavior, and the dearth of theory in most attitude research.

While perhaps in an “identity crisis” (Holden & Buck, 2002), the study of parental beliefs is by no means dead. Indeed, a whole line of research has been developed that attempts to explain the belief-behavior gap (e.g., Sigel & McGillicuddy de Lisi, 2002). As discussed, contributions of this research include investigation into factors that may moderate and/or attenuate links between parental beliefs and behaviors. In addition, a great deal of recent research has indeed been successful in linking parental beliefs to behaviors. This has been achieved through more complex consideration of the nature of parental beliefs, and the translation of that thought into research design. Examples of progress include improved specificity of the cognitive and parenting constructs under consideration, inclusion of context, attention to a broader range of socialization areas, and examination of the interrelations between various parent-cognitive areas, to name a few.

Recent research on parental beliefs. Recently, studies examining links between parental beliefs and behaviors have flourished. While some of these lines of research

have a long history (e.g., child cognitive development; see Miller, 1988), studies of parent-child conflict resolution and child play, for example, are expanding the interest in parental beliefs into exciting new directions. Furthermore, new perspectives on parental beliefs have promoted novel methods for examining older issues.

Child disciplinary methods continue to receive attention in the beliefs literature and creativity and complexity have been demonstrated in recent studies. For example, Holden, Miller, & Harris (1999) examined group differences in the efficacy expectancies of spanking between parents who engaged in this behavior often and those who did not. They concluded that many parents are likely to spank because they believe that it is an effective way of achieving the goals upon which they are focused. This study demonstrates a clear link between beliefs and behavior. However, several limitations apply, including shared method variance (both beliefs and behavior were measured through self-report) and implications of questionable causality. Support for belief-behavior links has also been found for the relations between feelings of efficacy and parenting. Brody, Flor, and Gibson (1999) examined the relations between financial risk, efficacy beliefs, developmental goals, and competence-promoting parenting practices and found an indirect path from efficacy beliefs to parenting through the parents' developmental goals for their 6- to 9-year-old children. Furthermore, these parenting practices were in turn indirectly related to child academic and psychosocial outcome through child regulation. This study is commendable for many reasons. The examination of the interrelations among parent-belief constructs (efficacy and developmental goals) helps to clarify the structure of parental belief systems and how certain components may influence behavior. Additionally, the focus on mechanisms through mediation analyses adds further depth to the understanding of these

interrelations. Examination of an at-risk population and the inclusion of specific parental belief constructs thought to be especially relevant to that population allowed for a high level of specificity, and increased the application potential of the findings. Finally, the use of structural-equation modeling in this study provided a clear and convincing model of potential pathways.

Haight, Parke, and Black (1997) examined the role of parental beliefs in mothers' and fathers' participation in their toddler's play and also revealed clear belief-behavior links. Findings indicated that mothers' participation in pretend play with their children related to maternal beliefs regarding the importance of pretend play to child development and to the perceived significance of their participation in the play. In addition to significant mother-father differences (discussed later), this study is interesting in that it contrasted parents' beliefs about what is best for their children, with the parents' motivation for participation in the activities. Furthermore, the observation of parental behavior closely tied to the beliefs in question is applauded. Research on parental intervention into sibling conflict has also generated support for belief-behavior associations. Perozynski and Kramer (1999) found evidence that parents' use of certain conflict-management strategies related to their perceptions of the strategy's efficacy and to their beliefs about their own ability to carry out the strategy. The latter underscores the observation that two parents may hold similar beliefs, but that other factors may interfere with how the belief is translated into behavior (Sigel & McGillicuddy de Lisi, 2002).

Impressive work has been conducted in the area of parental responses to parent-child conflict. Hastings and Grusec (1998) examined the role that parental goals play in parent-child disagreement. Hypothetical and real-life events were discussed and parents

were asked to focus on their goals for the situation and to report on their behavior in reaction to the conflict. Findings demonstrated clear connections between the goals that parents held and reported reactions. Parent-centered goals predicted more power assertion, whereas child-centered goals were associated with more reasoning. Parents with relationship-centered goals reported more warmth, negotiation, and cooperative parenting behavior in these situations. In a creative twist, the authors included a follow-up study in which goals were experimentally manipulated. Parents were asked to achieve certain goals within hypothetical situations and the findings generally supported those from the earlier studies. Obviously, a limitation of this work is the use of hypothetical and/or recalled situations. As Holden & Buck (2002) suggest, future studies on the belief-behavior connection should utilize careful observation of the parenting variables of interest.

As can be concluded from the above studies, recent research on parental beliefs shows new hope in support of the belief-behavior connection. Each study examined different aspects of parent cognition and several of them included multiple cognitive constructs in order to examine interrelations among belief variables and/or to suggest mechanisms. As mentioned, Brody et al. (1999) provided support for the notion that parental efficacy beliefs may influence parenting through goals. In addition to examining the relations between goals and parent behavior, Hastings and Grusec (1998) examined parental attributions of intentionality and causation as potential mediators for these relations and generated support for the notion. In another study, Wentzel (1998) examined the predictors of parents' aspirations for their children's educational attainment and found that social-address variables (e.g., sex and age of child, community, race, etc.) related to beliefs which, in turn, related to aspirations. The

success of these studies in supporting belief-behavior connections no doubt results from the specificity, complexity, and strong theoretical bases of the designs exhibited.

Parent-gender differences in beliefs. Little research exists that examines differences in parental beliefs between mothers and fathers. Indeed, fathers have been noted as a “major omission” in the belief literature (Haight, et al., 1997). However, some research exists on this topic and studies that included fathers have provided convincing evidence for parent-gender differences in parental beliefs. As mentioned, Haight et al. (1997) found that mothers’ participation in pretend play related to their beliefs in the importance of this play for their children’s development, and to their belief in the importance of their participation. In contrast, neither relation was found for fathers. Instead, fathers’ participation in pretend play related only to their personal preference for engaging in the activity. These findings paint an unfortunate picture whereby mothers’ parenting is influenced by what is thought best for the child, while father-participation is largely determined by what the father likes to do. In fairness to fathers, this study did not take into account feelings of efficacy in the activity. It is possible that fathers who are not confident in their ability to engage in certain activities may have less of a desire to do so. Indeed, feelings of efficacy have been shown to predict fathers’ parenting. Perozynski and Kramer (1999) found that fathers’ use of control strategies while intervening in sibling conflict was associated with low confidence in carrying-out more child-centered techniques (and this was not the case for mothers). There is some evidence that belief-behavior links may be stronger for fathers than mothers, in that Gottman et al. (1996) found stronger and more consistent relations between parental emotion coaching attitudes and parenting behaviors, and between coaching attitudes and child outcome, for fathers than for mothers.

Clearly, parent-gender differences in the belief-behavior connection are evident. Mother-father differences appear to take two forms: process differences in belief-behavior links (as described above), and group differences. It is likely that group differences exist in the parental beliefs of mothers and fathers. For example, Hastings and Grusec (1998) found that men held less empathetic and bonding goals in parent-child exchanges, whereas mothers were more concerned with child happiness. Similarly, Gottman et al., (1996) found fathers to be less aware of emotions and to hold less emotion coaching attitudes with their children than mothers. Hastings and Grusec (1998) propose that mother-fathers differences in emotion attitudes are not specific to parents, but instead reference literature suggesting a general tendency for females of all ages to report a higher focus on other's needs and a higher concern for intimacy than males. Although it seems clear that parent gender differences in beliefs exist, this is not always the case. Holden et al. (1999) indicated no significant parent gender differences (neither main effects nor interactions) concerning the expectancies regarding spanking and related behaviors.

Child effects on parental beliefs. Historically, parental beliefs were thought to originate primarily from the parent's family of origin (see Holden & Buck, 2002, for review). However, increased recognition of the potential for bi-directionality in parent-child relationships (Bell, 1979) led to an interest in examining child factors that may influence parent cognition. Child sex has been the focus of many studies and there is some evidence that parents hold different beliefs for their sons and daughters. This seems to be evident in the area of educational attainment. Wentzel (1998) found that parents held lower expectations for educational performance, but higher achievement values, for daughters than for sons. Less evidence for child gender differences has been

exhibited in other areas of child development. For example, Hastings & Grusec (1998) reported that child sex was not a significant predictor of parenting behavior during parent-child disagreements. Similarly, Holden et al. (1999) dropped child gender in analyses examining the relations between parental beliefs and spanking due to the lack of significant differences in the frequency of spanking sons and daughters. However, the authors' decision to drop this factor may have been premature given the possibility that gender differences could exist in parental beliefs despite a lack of differences in the specific behavior measured.

Surprisingly, child age has not been a major focus in the study of child effects on parenting beliefs (e.g., Holden & Buck, 2002). This is perhaps due to the manner in which parental beliefs tend to be measured, as constructs that are stable over time. For example, parents are not typically asked, "How important do you feel that reading to your children is for 6-year-olds?" but rather "Is it important to read to children?" Changes in parental beliefs and attitudes relevant to particular child developmental milestones would be a fascinating area for future study. Wentzel (1998) argued for the importance of studying child-age effects on parental beliefs concerning the educational attainment of their children. Surprisingly, no such effects were found in their study. The author suggested that the cross-sectional approach used may not have captured possible cumulative effects of beliefs over time and suggests the need for longitudinal studies in this area. In another cross-sectional study, Perozynski & Kramer (1999) found child-age effects in parental responses to sibling conflict. Fathers indicated that they expected child-centered strategies to be more effective for older sibling dyads. Surprisingly, these fathers actually engaged in child-centered strategies *less* with older dyads than with younger ones. Research has also demonstrated that having a child with special needs

can affect parental attitudes (Floyd & Saitzyk, 1992), a possibility that will be explored at length later.

Future needs in the study of parental beliefs. Review of the literature on parental beliefs suggests clear lines for future research. One need is the inclusion of fathers and the examination of how parent gender may affect parent cognitions, through group differences and/or by altering the nature of belief-behavior relations (Haight et al., 1997; Holden & Buck, 2002). Indeed this has been suggested as a “critical” focus for study in this area (Perozynski & Kramer, 1999). Second, studies must clearly indicate which aspects of parental beliefs are being considered and attempt to discriminate these from other related constructs (Holden & Buck, 2002). Indeed, studies examining multiple types of parental cognitions and the interrelations between them represent strides in this area (e.g., Brody et al., 1999; Hastings & Grusec, 1998; Wentzel, 1998). Research that relies on parent report of both beliefs and behaviors may be efficient and provide a breadth of information, but studies that include careful observation of parent behavior are necessary in order to overcome possible method variance and/or report bias.

Final suggestions for future research in the area of parental beliefs involve expanding the area of study in terms of the samples and domains considered. As discussed, the field of developmental psychology has much to offer the study of psychopathology in children. However, little to none of the above research has been applied to the clinical study of children. The study of parental beliefs in risk populations would greatly inform our understanding of both typical development and deviant trajectories. Floyd & Saitzyk (1992) examined parenting beliefs and behaviors among families of children with mental retardation but, surprisingly, omitted certain data that would have been interesting if presented. This study examined relations between socio-

economic status (SES) and parental beliefs and behaviors in these populations. Relations between SES and both beliefs and behaviors were supported. However, the authors did not report on any of the associations between beliefs and behaviors within the sample. It is not clear why these data were not presented.

Although the study of parental beliefs has recently expanded into novel territory, there remains a need for further examination into the full range of child development. Indeed, Sigel and McGillicuddy de Lisi (2002) reported that research in the social area of child development is, "sparse and does not address the range of personal-social competencies that comprise the social domain." (p.490). While the social domain of development has received little attention in the parental beliefs literature, another area of child development has been so neglected to the extent that it is rarely even considered in these discussions. In a review of the literature of parental beliefs, Sigel & McGillicuddy del Lisi (2002) concluded that, "parents hold beliefs about virtually every facet of the parenting role" (p. 497). However, not one study spoke directly to parental beliefs concerning the *emotional development* of their children. There are many potential explanations as to why the study of parental beliefs has not tended to address the domain of children's emotional development (with a few exceptions below). One possibility is that the area of parental socialization of emotion has only recently been considered as a primary focus of study. Similarly, as Eisenberg et al. (1998) recognized, the parameters of parental socialization of emotion have not historically been clear. A logical precursor to the study of parental beliefs about emotion socialization is the identification of parental behaviors thought to be affected by such beliefs. As discussed, these behaviors have been outlined recently (Eisenberg et al., 1998), paving the way for a

clear examination of belief structures that may predict to parental socialization of child emotion.

Parental Beliefs and the Socialization of Child Emotion

There has been little to no work examining belief-behavior links in the socialization of child emotion. Thus, the kinds of beliefs that may relate to parental reactions to child emotion, parent expressiveness, and parent-child discussion of emotion, remain largely unknown. One possible predictor is the importance that parents place on this area of development. It is likely that parents are concerned about all aspects of their children's development. However, individual differences can exist in the priorities that parents hold for their children that may reflect differential attention to certain developmental domains over others. Once an area of development becomes a focus, parents may also hold different attitudes concerning the proper way to socialize children in that area. Parents vary in their attitudes toward emotions and emotionality and are likely to translate these feelings into parenting behavior, as Eisenberg et al. (1998) suggest.

Some indirect work on parental beliefs about emotion is present in the literature regarding cultural and child gender socialization. It is likely that culture affects parental socialization of emotion through the shared values, expectations, and beliefs of the cultural group (see Eisenberg et al., 1998; Cole & Dennis, 1998). For example, Miller & Sperry (1987) concluded that mothers in more dangerous neighborhoods valued the expression of anger in their daughters due to potential self-protective benefits. Studies of child-gender group differences in parenting behavior may allow for inferences into the role of parental beliefs, even if these beliefs are not tested directly. For example, parents have been found to discuss anger more with sons (Fivush, 1989) and sadness more with

daughters (Fivush et al., 2000). These findings have been interpreted as reflecting, in part, parental beliefs concerning gender roles and expectations (Brody, 2000).

To date, there have been few studies that have directly examined parental beliefs about emotion. One line of research is that of Dunsmore and colleagues, who adapted the Caregiver's Beliefs about Feelings (CBAF) questionnaire in order to assess parental beliefs about emotion. A factor analysis revealed two reliable subscales, Emotion Language and Developmental Beliefs (Dunsmore & Karn, 2001). The Emotion Language scale has been found to relate positively to maternal positive expressiveness (Dunsmore & Karn, 2004) and children's knowledge of emotion terms (Dunsmore & Karn, 2001), and was related to increases in kindergartener's emotion-script knowledge over time (Dunsmore & Karn, 2004). The Developmental Beliefs scale was related positively to maternal negative expressiveness. The central focus of this research appears to be on the links between parental beliefs and child outcome. As such, these studies measured child outcomes in detail (e.g., through observation), but relied primarily on self-report for parent behavior. The strong correlations between the belief and behavior variables (e.g., $r = .51$) should therefore be interpreted with caution. Furthermore, there appears to be some doubt as to the nature of the Emotion Language scale, to which most of the findings relate. Given the title of the measure from which the scale was adapted (*Caregiver's Beliefs about Feelings*), it would be expected that this scale represents *beliefs* about emotions. However, the exemplar given by the authors may lead one to think otherwise: "I spend a lot of time talking with my children about why they feel the way they do." This item clearly represents parent report of their *use* of emotion language, rather than their belief of its importance. As such, there is some doubt as to this measure's ability to reflect parental *beliefs* about emotion. The Developmental Beliefs

scale more clearly represents beliefs in that it deals with the parent's beliefs about their children's ability to learn about emotion communication and control (e.g., "My child is too young for me to discuss the causes of her feelings with her."). However associations with this scale have not been nearly as consistent or as impressive as those involving the Emotional Language scale. In general, the work of Dunsmore and colleagues is unique in that it specifically targets parental beliefs about emotion. However, this work has not primarily focused on elucidating the belief-parenting link and the measurement of the primary belief construct is questionable. Furthermore, the sample included only mothers and was 98% Caucasian.

One of the few lines of research to directly study parental beliefs as determinants of emotion-related parenting is the study of *meta-emotion philosophy* (Gottman et al., 1997). Through this lens, parents can be described as having either an emotion coaching, or emotion-dismissing philosophy. Parents with an *emotion coaching philosophy* are comfortable with emotion in themselves and their children and see child emotion as an opportunity for intimacy and teaching. In contrast, *emotion-dismissing* parents see emotions as harmful and perceive their task as needing to quickly rid the child of the emotions. Dismissing parents may want to be helpful, but their strategies for dealing with emotional events are to deny, ignore, and/or attempt to "fix" the situation. These parental attitudes toward emotion in children have been linked to both parent-child interaction and directly to child outcome. Gottman et al. (1996) found that parents with emotion coaching philosophies performed better scaffolding during parent-child interactions and had children with better physiological regulation. Hooven, Gottman, and Katz (1995) found that parental emotion coaching when the children were 5 predicted less negative play and fewer behavior problems at age 8, and Ramsden and

Hubbard (2002) reported that meta-emotion philosophy related to child aggression indirectly through parent report of their 9-year-olds' regulation. Parents reporting an emotion coaching philosophy also seem to exhibit less derogation in parent-child interactions, and derogation has been related to peer problems (Gottman et al., 1996). Gottman et al. (1997) found no associations between coaching philosophies and parental emotional expressiveness. However, expressiveness was only measured by the amount of time that the parent spent in "neutral" states, and only during a parent-child laboratory task. The authors acknowledge the measurement limitations and leave open the possibility that coaching philosophies may relate to more patterned and more diverse aspects of parent expressiveness (e.g., the "family expressiveness" construct, Halberstadt et al., 1999). Meta-emotion philosophy, or parents' attitudes toward emotion in their children, appears to be an important parental belief, and one that relates to both parent behavior and child functioning. More studies are necessary, however, in order to fully examine this construct. Specifically, studies that include observation of parent behavior (rather than report), include fathers, and examine this construct and its relations to other relevant factors under conditions of risk would be particularly useful.

Risk, Parental Beliefs, and the Socialization of Child Emotion

There is evidence that the presence of risk can alter family processes and/or associations between parenting and child outcome. Denham and colleagues (2000) examined relations between parenting and behavior problems in families of preschoolers ranging in problematic behavior from non-problem to clinical levels. Findings revealed that observed maternal anger predicted more child behavior problems over time, and that proactive parenting predicted fewer problems, even when controlling for earlier child behavior problems. Most relevant to the present study were

the findings regarding risk. The parenting findings appeared to be especially important for children who exhibited high levels of behavior problems at the first time point. The authors conclude that certain forms of parenting may take on increased importance for populations with early vulnerability. The fact that positive parenting related to fewer problems in families of children high in behavior problems indicates that many families of children with difficulties can continue to provide desirable parenting and suggests that this type of parenting may remediate deviant behavior and therefore serve as a buffer in risk contexts.

The potential for childhood risk to alter and increase the importance of family processes has also been suggested for biological/developmental risk status. Greenberg and Crnic (1988) examined the parenting of full-term and pre-term infants from birth to age 2. Although no group differences were observed by age 2, findings identified different predictors of child developmental and social outcomes for full- and pre-term infants. Furthermore, associations between the predictors and child outcome were particularly strong for the vulnerable infants, with 40% - 60% of the variance in child outcomes explained (as opposed to 15% - 30% for the full-term group). The increased importance of the environment under conditions of risk has been demonstrated for parental beliefs in particular. Lagace-Seguin and Coplan (2005) found that the link between parent's meta-emotion philosophy and child social competence was moderated by child regulatory abilities, with stronger relations present for children with poor regulation. This suggests that parental beliefs about emotion show more powerful associations to child outcome for groups that present with a risk for emotional problems.

Families of children with early developmental delays represent a particularly relevant risk group in which to study parental beliefs and the socialization of emotion

due to 1) the fact that developmentally-delayed children are at risk for poor social-emotional outcomes, 2) the potential for cognitive risk to overshadow the perceived importance of emotion in the development of this population, 3) the likelihood that the presence of a child with developmental risk will affect certain parental beliefs, and 4) the fact that children with developmental delays share many of the specific characteristics (e.g., developmental risk, behavior problems, difficulties with regulation) that have been identified as having the potential to alter important processes.

Children with developmental delays are at risk for poor social-emotional outcomes.

Children with early developmental delays show an increased risk for many difficulties associated with parental socialization of emotion. B. Baker et al. (2002) investigated parent reports of child behavior problems and how these differed as a function of child developmental status. Mothers of 3-year-old children with developmental delays reported significantly more behavior problems on the Achenbach Child Behavior Checklist for Total Behavior Problems, Internalizing Problems, Withdrawal, and Attention Problems than mothers of typically developing children. Father-reported differences were identical to those of mothers but also included higher ratings in the areas of Externalizing Problems, Emotional Reactivity, and Aggression. Follow-up with the children at age 4 indicated that the relations between developmental status and child behavior problems held over time (B. Baker et al., 2003). Status differences were also found based on observational use of the Behavior Rating Scale (BRS) portion of the Bayley Scales of Infant Development II (Bayley, 1993). Children with developmental delays were rated lower on the BRS scales of Emotion Regulation and Orientation / Engagement. Indeed, there is evidence that children with developmental delays as a whole may exhibit less and/or poorer use of certain emotion-regulation strategies (J.

Baker, Crnic, & Hoffman, 2004; Wilson, 1999), suggesting that regulatory behaviors may mediate the link between delay status and behavior problems. Regulation has been shown to partially mediate the association between child status and later social skills in this sample, beyond the contribution of early behavior problems (Crnic, Fenning, & Baker, 2006).

The potential for diagnostic overshadowing. The risk for socio-emotional difficulties in children with developmental delays is particularly interesting given that this population is defined by risk to aspects of development not often associated with emotion (i.e., cognitive performance and adaptive functioning). As Reiss, Levitan, and McNally (1982) suggest, “Intellectual subnormality is such a salient aspect of mental retardation that emotional problems tend to be overshadowed in importance and attributed to retardation rather than psychosocial history (p.364).” Not only are many parents of children with developmental delays most likely unaware of the increased risk for emotional difficulties, but even those who are may need to weigh the relative importance of this area of development with the need to concentrate their efforts on helping the child learn and gain independent living skills. Floyd & Saitzyk (1992) suggest that the increased need for greater parental directiveness and control in families of children with delays may make it more difficult to value initiative and independence in these children (Davis, Stroud, & Green, 1988). For these same reasons, the emotional development of children with developmental delays may be overlooked or may be difficult to focus upon when parenting this population. There is some evidence of diagnostic overshadowing with regard to the social experience of children with developmental delays. Kopp et al. (1992) found that while families of children with and without developmental delays did not differ on reported levels of teaching social skills,

parents of children with developmental delays reported higher levels of teaching “other skills” than parents of typically developing children. This suggests a differential profile contingent upon child status in which social skills represent less of a priority (as compared to “other” skills) within families of children with developmental delays.

The diagnostic overshadowing thought to occur in families of children with developmental delays has a parallel in the professional community. Despite the increased risk for socio-emotional difficulties in these children, the majority of research and parent-training that has historically been performed with these families has emphasized behavioral interventions and skill training (e.g., B. Baker & Brightman, 2004). Indeed, Reiss, Levitan, & Szyszko (1982) found striking evidence for the existence of diagnostic overshadowing in the field of psychology. This study asked psychologists to consider a case in which a clinically significant phobia was clearly linked to an event in the individual’s psychosocial history. The psychologists were given further information that the individual was either 1) diagnosed with mental retardation, 2) showed signs of alcoholism, or 3) exhibited average intellectual functioning. Given this identical scenario, the phobia was rated as less neurotic and less indicative of emotional disturbance in the individual with mental retardation than the other two groups. Furthermore, a follow-up study provided evidence that this phenomenon is not specific to the field of psychology, in that similar findings were obtained in the area of social work (Levitan & Reiss, 1983). A better understanding of emotion and emotion-related parenting in populations with developmental delays would inform our understanding of the factors that contribute to the increased rates of socio-emotional problems in these children, and thereby aide in efforts to mitigate this risk.

Child status may affect parental beliefs and behaviors. Another reason for the need to examine parental beliefs in families of children with developmental delays stems from the assumption that emotion-related parenting is likely influenced by the priorities, attitudes, and expectations of parents (Eisenberg et al., 1998). There is little doubt that having a child with a developmental delay can influence a parent's perception of the child and what is best for her or him. In this sense, families of children with developmental delays can be thought of as a "culture," complete with their unique ecology, preparatory practices, expectations and attitudes (Crnic, Friedrich, & Greenberg, 1983). As Youniss (1994) points out, "Psychologists can enrich their theories of child rearing by studying parents' understanding of the society that their children will enter . . . parents seem to base their practices on the behavior they think will be useful for their children in particular settings." (p.48). Clearly, children with developmental delays will face unique experiences as they grow and enter society, and parents, who are all too aware of this, are likely to adapt their beliefs and behaviors to this realization.

Research with typical populations has demonstrated the importance of many parent-cognitive factors that would seem especially relevant to families of children with developmental delays including attributions of intentionality and dispositional causation (Hastings & Grusec, 1998), perceptions of the malleability of certain child characteristics (Wentzel, 1998), parents' feelings of efficacy in their role in an intervention strategy (Peroszynski & Kramer, 1999), and expectations of future needs (Miller & Sperry, 1987). Surprisingly, little research has examined the effects of having a child with developmental delays on parental beliefs. This lack of investigation is surprising, given that models of adaptation for families of children with delays have identified parental beliefs as an important component for coping (Crnic et al., 1983).

When examined within groups of children with special needs, child functioning has been shown to relate to differences in parental attitudes toward independence outside of the home and toward family expressiveness, with parents of children with moderate functioning valuing more independence and more expressiveness than parents of children with milder delays (Floyd & Saitzyk, 1992). Differences in perceptions dependent upon child delay status can then be translated into parenting behavior that may differ from that of non-risk families. Indeed, parenting differences dependent upon child delay status have been identified. For example, parents of children with developmental delays have been shown to issue more commands and directives than parents of typically developing children, and there is evidence for diminished positive reciprocity in these parent-child dyads (Floyd & Phillippe, 1993). Interestingly, even within groups of children with delays, child functioning has been shown to relate to differences in parental behaviors. Floyd & Saitzyk (1992) found that parents of children labeled as “trainable” (similar to moderate mental retardation) were more controlling in their behaviors than parents of those children labeled “educable” (similar to mild mental retardation). Furthermore, there is evidence that the effects of child developmental status on parenting may exhibit specificity with regard to parent gender. Bristol, Gallagher, and Schopler (1988) found that fathers of children with developmental disabilities assumed less responsibility for childcare than fathers of comparison children.

Certain parenting differences dependent upon child developmental status would seem particularly relevant to parent meta-emotion philosophy. Diagnostic overshadowing, if present, would likely promote less value for emotion and thereby suggest that parents of children with delays would exhibit fewer emotion coaching

attitudes. Furthermore, there is some evidence that parents of children with delays may be more prone to emotion-dismissing attitudes. Longer periods of over-protectiveness have been found between parents and their children with delays (Schoolcraft, Edelbrock, & Crnic, 2005), and parents of children with developmental delays have been rated as more intrusive than parents of age-matched, typically developing peers (Fenning & Baker, 2005). A key aspect of an emotion-dismissing attitude is that these individuals are likely to see negative emotions as “toxic” and want to rescue their children from these feelings or otherwise “fix” the situation for their children. If parents perceive their children with delays as in need of higher levels of protection and involvement, they may be more likely to adopt these dismissing attitudes.

Potential process differences dependent upon risk status. As discussed, it is possible that child delay status may affect parental beliefs, which, in turn, could affect parent behaviors (Watson & Midlarsky, 1979). However, there is another possible explanation for why these processes might differ between risk and non-risk families. In interpreting findings that child functioning related to controlling parent behaviors but not to controlling parental attitudes, Floyd & Saitzyk (1992) proposed that child functioning (and relevant difficulties) may present parents with certain demands that could outweigh the parents’ personal beliefs. This notion suggests that, under certain risk conditions, the associations between beliefs and behaviors may differ on a process level (i.e., that status could moderate these associations), with the connection being weaker under conditions of risk. However, the measure used in this study was a fairly general measure of parental attitudes, and it is possible that measures asking parents more specifically about their beliefs regarding the *focal* child would result in stronger associations. Indeed, given the possibility that parents of children with special needs are

often required to consciously consider, discuss, and possibly adjust their perceptions and expectations more frequently than parents of typically developing children, it is highly likely that, if asked about their beliefs regarding the specific child, these families may in fact exhibit *stronger* belief-behavior associations. Indirect evidence supporting this notion comes from earlier findings from the current sample that show significantly higher agreement between mother and father ratings of child behavior problems in the group with delays (B. Baker et al., 2002), thus suggesting more communication and thought between parents of at-risk children. These competing hypotheses can only be examined in a study that includes samples of both children with and without delays, in which each group is large enough to examine within-group relations.

A final argument for the importance of studying parental beliefs in families of children with developmental delays concerns research on risk and families that has suggested that family processes may be more powerful contributors to child outcome under conditions of risk. As reviewed above, evidence suggests family and developmental processes may be altered for groups that present with developmental, emotional, and/or behavioral risk. Children with developmental delays experience all three of these risk conditions. In addition to the clear developmental risk, children with early developmental delay show increased rates of behavior problems (B. Baker et al., 2002) and emotion and behavior dysregulation (J. Baker et al., 2004; Crnic et al., 2006; Gaze, Hoffman, & Low, 2002; Wilson, 1999). The deficits in regulation observed in this population are particularly notable given evidence that parental beliefs may play a particularly important role for children who have difficulty regulating (Lagace-Seguin & Coplan, 2005). The possibility that parental beliefs may buffer the effects of child risk on

later functioning has direct implications for intervention strategies designed to address the parenting of children with developmental delays.

The Proposed Study

The proposed study examined relations between parental beliefs and socialization of emotion behaviors in families of children with and without early developmental delays. As discussed, very little work has investigated potential determinants of emotion-related parenting and virtually no research has examined these relations under conditions of risk. Families of children with developmental delays present as a particularly relevant risk group due to the increased risk for child social-emotional problems, the potential for diagnostic overshadowing, and the evidence of altered family processes observed in this population.

This study focused on parental socialization behaviors thought to be most important to child emotional development: parent reactions to child emotion, parent/family expressiveness, and parent-child discussion of emotion / emotion coaching (Eisenberg et al., 1998; Halberstadt, 1991). Furthermore, it has been suggested that these socialization behaviors are most affected by parental beliefs about emotion (Eisenberg et al., 1998), but little evidence currently exists to support this notion. As recommended (e.g., Holden & Buck, 2002), parenting behaviors were measured through the use of both questionnaires and careful observation of parent-child interaction. Parental-belief constructs were examined in relation to these socialization behaviors. Recognizing the need for specificity in the labeling of parent-cognitive components, these target “beliefs” were best represented by the terms *attitudes*, *perceptions*, and *priorities* regarding their children’s emotional development. Belief constructs were examined through questionnaires and interviews with parents. Parents’ meta-emotion

philosophy (coaching and dismissing) represented parental attitudes toward emotion in their children. Parenting priorities were measured by ratings of the importance that parents placed on their children's emotional development as compared to other aspects of development. Finally, parents' reports of their children's developmental progress in emotional and other domains served as a measure of perceptions of risk. The inclusion of multiple belief constructs allowed for investigation of the interrelations between these components of beliefs, and provided an opportunity for the examination of the unique effects of each factor on parenting behaviors.

As recommended (Haight et al., 1997; Holden & Buck, 2002; Perozynski & Kramer, 1999), the current study included fathers in order to examine potential group differences in parental beliefs and/or socialization behaviors, as well as potential gender differences in belief-behavior links (i.e., process differences). Furthermore, given the evidence that child developmental status may affect parent factors differently for mothers and fathers, the interplay between status and parent-gender was investigated. Consistent with several studies on parental beliefs (e.g., Personzynski & Kramer, 1999; Brody et al., 1999), children in middle childhood (age 8) and their parents were the focus of the proposed study. Around this age, children become capable of more complex thought about emotions in themselves and others (Harter, 1999). Furthermore, there is some evidence that parental moral reasoning is more effective for children's internalization after age 7 (Brody & Shaffer, 1982), which suggests that this may represent an important period for parental socialization of abstract concepts.

Predictions

Hypothesis I: Relations between parental attitudes and socialization behaviors. It was predicted that parents reporting more coaching attitudes toward child emotion would

show more supportive and fewer unsupportive reactions to child negative emotion. These parents were also expected to exhibit higher emotion coaching behaviors, lower dismissing behaviors, and more emotion focus during parent-child discussion than parents with less coaching attitudes. Finally, parents higher on emotion coaching attitudes were expected to exhibit more positivity, more sadness, but less anger than those scoring lower. The differential predictions to negative emotional expression were due to the belief that parents with coaching attitudes would be comfortable exposing their children to expressions of both sadness and anger, but that less coaching parents would exhibit higher levels of anger unintentionally. As discussed, Gottman et al. (1997) did not find relations between coaching philosophies and parent expressiveness, but there were acknowledged limitations to the measurement of the latter construct. Furthermore, Gottman et al. (1996) found that parents high in coaching philosophies performed less derogation (e.g., criticism, mockery) toward their children, which would support the idea that these parents would exhibit less negative-dominant emotion. Coaching parents were also rated higher in scaffolding/praising, in which parents are expected to be positively engaged and empathetic, thus providing additional evidence for relations between coaching attitudes and expressiveness. Indeed, the authors described coaching philosophies as nested in a web of positive parenting, and as preventing negativity in parenting (Gottman et al., 1996).

Hypothesis II: Relations between parenting priorities and socialization behaviors. It was predicted that parents who placed more value on their children's emotional development would display more supportive reactions, more coaching and emotion focus during discourse, and patterns of expressiveness similar to those outlined above for parents high in coaching attitudes. Although these relations were expected, it is

possible that parents could place a high value on their children's emotional development while still holding less positive attitudes toward emotion. The following predictions followed from this possibility 1) that relations between parent priorities and attitudes would be weak (in a positive direction), but 2) that an interaction would occur in which a high value on emotion contributed positively to supportive parenting primarily in the context of high emotion coaching attitudes. This was predicted for all parenting variables except for emotion-focus during the emotion-discourse task, in which a high emotion priority score was also thought to be sufficient on its own.

Hypothesis III: Relations between parent perceptions of their children's emotional development and socialization behavior. The expectations for parental perceptions were less clear. It is possible that parents who perceive their children as struggling emotionally may place more of a focus on assisting with this area of development and may make it a point to act in a supportive way toward their child. However, it is equally likely that parents could perceive their child's difficulty in this area but not feel that the area is important and/or may not know how to support their children in this area.

Furthermore, since parents' perceptions of their children's development most likely have some basis in reality, it is likely that parents who do not value emotion and who are unsupportive will have children who struggle more in this area. Due to these conflicting possibilities, predictions were not generated in this area, and support for these competing theories was assessed. The relations between parent perceptions and parent priorities were expected to be moderated by child developmental status, as explained below.

Hypotheses IV: Parent gender: group and process differences. Consistent with the little existing literature on parent-gender differences in the socialization of emotion

(Eisenberg et al., 1996; Fivush et al., 2000), group differences were expected between mothers and fathers in two of the three behavior areas. Fathers were expected to be rated lower on emotion coaching, higher on dismissing, and lower in emotion focus during parent-child discourse. Similarly, fathers were expected to exhibit less supportive and more unsupportive reactions to children's negative emotion. With regard to beliefs, fathers were expected to report less coaching attitudes and to rate emotion as a lower priority in their children's development than mothers. Indeed, support for these hypotheses has been generated by Gottman et al. (1996), who found that fathers were rated significantly lower on numerous indices of emotion coaching attitudes than mothers.

Process differences were also expected between mothers and fathers. Fathers were expected to show stronger belief-behavior relations than mothers. This prediction was made for three reasons. First, because fathers generally have less exposure to their children than mothers (especially in the realm of emotion-related exchanges), fathers may approach these interactions in a way that is less influenced by histories of parent-child interaction and/or child behavior and therefore may rely upon their own belief systems more heavily. Secondly, given evidence that fathers play a more dominant role in gender socialization than mothers (Siegal, 1987), and that emotion socialization and gender socialization are often closely tied (Brody 2000; Chaplin et al., 2005), it is possible that fathers' beliefs about how they prefer to socialize emotion in their children are more powerful and/or more accessible than mothers'. Finally, it was predicted that more variability would exist among fathers than among mothers on the constructs of interest. Although each gender is likely to have individuals who break stereotypic associations between gender and emotion, it was expected that fathers would be more likely to

support and value emotion (beliefs that contradict stereotypes) than mothers were to dismiss or devalue emotion when parenting their children. More variability would likely result in higher relations for the group of fathers. For all these reasons, the belief-behavior link was expected to be stronger for fathers than for mothers, although significant relations were expected for both groups.

Indeed, there is some empirical evidence for the above predictions. Gottman et al. (1996) found that relations between coaching philosophies and parenting behaviors, and between philosophies and child outcome were stronger and more consistent for fathers than for mothers (indeed, fathers appeared to drive the model). Hooven et al. (1995) also provided support for the notion that stronger links are observed with fathers in that links between father coaching of anger (the only belief considered) and paternal negativity and intrusiveness during father-child interaction were found, but were not present for mothers. Support for the argument that stronger links among fathers would be due to increased variability in this group was also present, in that groups of mothers and fathers have demonstrated significant inhomogeneities of variance in scaffolding/praising behavior and derogation, with fathers showing significantly more variance than mothers (Gottman et al., 1996).

Hypothesis V: Developmental status differences. It was generally expected that relations between beliefs and behaviors would function similarly for children with and without delays. However, these processes were predicted to be stronger and more consistent for the risk group (based on the rationales outlined previously). Furthermore, group differences were expected to exist in that parents of children with developmental delays were expected to exhibit less emotion-supportive parenting behaviors, less coaching attitudes, and to hold emotional development as less of a priority for their

children (as compared to other areas of development). This latter relation was expected to be particularly strong in discriminating the two groups. As previously discussed, reduced value for emotion may be present in families of children with developmental delays due to diagnostic overshadowing. Lower levels of coaching attitudes were predicted due to the evidence of increased over-protectiveness and intrusiveness in this population, as well as the potential for diagnostic overshadowing to be present. It was also predicted that parents of children with developmental delays would report more difficulties in their children's emotional development than parents of typically developing children, but would value this area of development less. The construct of diagnostic overshadowing was also tested through factor analysis, in that parents of children with delays were expected to show a pattern in which living skills were prioritized over the children's emotional development.

Hypotheses VI: Moderation by parental beliefs. Parents of children with developmental delays who maintained value and acceptance of emotion were expected to exhibit higher levels of supportive parenting. Thus it was also expected that parental beliefs would serve as a buffer against (i.e. moderate) the detrimental impact of child status on socialization behaviors.

Hypothesis VII: Testing of Model. Finally, given the many relations being analyzed separately, an entire model was to be tested as a whole through the use of structural equation modeling (SEM). Given that the three areas of emotion-related parenting under examination (reactions, expressiveness, and coaching/discussion) are each measured by only one measure or task, it was not sensible to treat these areas as separate latent variables. It was also the assertion of this study that these parenting variables would "hang together" in a way such that the shared variance would represent a general

construct of “Emotion-Supportive Parenting.” Therefore, as seen in Figure 1, it was predicted that all the measured parenting variables would load onto a latent variable of Emotion-Supportive Parenting (with unsupportive reactions, negative-dominant expressiveness, and dismissing behaviors reverse coded). It was hypothesized that this variable would be predicted by coaching attitudes and emotion priority, which, in turn, would be predicted by child status. Perceptions of risk would be predicted by status and would predict priorities. Moderation by child status was not considered at this level (due to the presence of status as a main-effect variable and because the sample size would be too small) but the models were tested for mothers and fathers separately in order to consider potential parent-gender differences.

METHOD

Design overview

Data for the current study were drawn from the Collaborative Family Study (CFS), an ongoing longitudinal study of children age 3-9 years and their families. The CFS was designed to address the role of family factors and child regulation in links between early developmental delay and later psychopathology. Data from the larger study were collected through laboratory and home visits with families and through questionnaires administered yearly to both parents. Children’s cognitive abilities were assessed at entry to the study (age 3 years), and at ages 5 and 9 years. All data for the current study, with the exception of the cognitive assessments, were drawn from the age 8-year data-collection period, with specific focus on observational data collected in the home, as well as parent interview and questionnaires.

Participants

The proposed study utilized data collected for all participants involved with the project at age 8. The sample included both typically developing children, as initially defined by a Bayley MDI greater than 85, and children who met criteria for having an early developmental delay, as defined an MDI lower than 85. Children with significant motor problems, and identified syndromes were excluded from the study. Although autism was an exclusionary factor in sample selection at age 3, some children ($n = 14$) were subsequently diagnosed as on the autism spectrum. These children were included in the current study due to the belief that the processes under consideration would operate similarly for families of children with autism and those with other developmental delays. The larger study was a multi-site study, with one quarter of the families recruited from rural/suburban Central Pennsylvania and three quarters of the families from the greater Los Angeles area. Families were recruited through preschools, community agencies that worked with families of children with developmental delays, and through fliers in the community.

One hundred and sixty five families (72 female focal children, 93 male) were involved with the CFS at age 8. Of the children who were the focus of the study in these families, 98 were typically developing (age 3 mean MDI = 105.13, SD = 11.81) and 67 had an early developmental delay (mean = 61.22, SD = 13.10). Sixty percent of the children were Caucasian and not Hispanic, 16 percent were Hispanic, 7 percent were African-American, 2 percent were Asian, and 15 percent identified themselves as "other," most likely indicating that the children were biracial. Father data was available from 79 of the families of typically-developing children and 48 of the families of children with developmental delays.

Status-group differences existed on maternal and paternal educational grade completed, with parents of children with delays reporting lower grade levels (mothers = 14.51 / fathers = 13.85) than parents of typically developing children (15.96 / 15.48), $t = 3.67 / 2.77, p < .001 / .01$. Education levels were also related to two variables used in the current study (emotion coaching behaviors and emotion focus) for both mothers and fathers, thus were controlled in these between status-group comparisons. Parental education levels were not related to any parental belief (i.e., independent) variable, thus these variables were not controlled in any correlational analysis. Family income did not differ between groups, with 19% of parents reporting income under \$25,000, 21% reporting income between \$25,001 and \$50,000, 35% between \$50,001 and \$95,000, and 25% over \$95,000.

Procedures

Once identified as potential participants at child age 3 years, the Bayley Scales of Infant Development (BSID-II; Bayley, 1993) were administered to determine whether or not the child met criteria for inclusion in the typically developing group or the group with developmental delay. The larger study then conducted home visits every six months and laboratory visits yearly when the child was age 3 through 5 years. At age 6, the laboratory tasks were combined with the naturalistic home visits (which were then scheduled yearly) such that all observational data were collected in the home for ages 6-8. Developmental status was re-assessed at age 5 using the Stanford-Binet (Thorndike, Hagen, & Sattler, 1986). With the exception of results from the developmental assessments, the proposed study used data obtained at age 8 only. The 8-year time-point consisted of a single home visit and parent completion of questionnaires.

Home visit outline and initial observation. Families were reimbursed \$50 for the entire 8-year data collection period. The home visits were scheduled to begin close to dinnertime. Two trained experimenters entered the home to (1) conduct a naturalistic dinnertime observation, (2) structure parent-child interactive tasks, (3) administer interviews with parents and children, and (4) provide the parent questionnaires. At the beginning of the visit, each parent completed measures rating his or her daily hassles and current mood and then participated in the dinnertime observation (these measures are not used in the proposed study).

Structured tasks. After the dinnertime observation, the parent and child were led by the experimenter in structured tasks designed to elicit parent-child interaction and/or child regulation. Parents were asked to identify a table that was located indoors and where other family members did not need to be for the designated time-period. All tasks were videotaped by a second experimenter. The progression of tasks included (1) a moderately difficult problem-solving task (involving manipulatives) with the child and his or her father (3 min), (2) a moderately difficult problem-solving task (involving homework problems) with mother (3 min), (3) a child self-regulatory task involving the child attempting to open a locked box with a follow-up interview (7 min), and (4) an emotional discourse task with father (3 min) and then mother (3 min). Of the parent-child interaction tasks, only the emotion discourse activity was used in the proposed study.

The emotional discourse task was adapted from procedures used to elicit parent-child discussion of emotion (e.g., Fivush, Brotman, Buckner, & Goodman, 2000). Each parent was told to think of a recent incident when the child was "upset." The parent and child were then asked to talk about the incident until they felt that they were finished.

The discourse was ended at 3 minutes if the dyad did not indicate that they had finished prior to this period. Mothers and fathers had the conversations separately with the focal child and were asked not to discuss the generated incidents with each other and not to overhear each other's discussion.

Administration of interviews and questionnaires. Following the structured tasks, the parents and the child were separated and each was interviewed simultaneously. The child interview examined aspects of social cognition and these measures were not used in the current study. The parent interview consisted of (1) an update of demographic information with the mother (15 min), (2) a parenting interview with the mother (7 min), and (3) a parenting interview with the father (7 min). Portions of the two parenting interviews were used for the proposed study. The same experimenter interviewed both the mother and father in succession, and each parent was asked not to observe the interview of the other so that independent perspectives could be obtained. The interview for each parent was identical and included two open-ended questions about the child's development (not used in the current study), and one "priorities" task. For the priorities task, the parent was given 10 poker chips and told that these chips represented "importance." A sheet was then placed in front of the parent with 5 circles, each labeled with an area of child development (e.g., "Development of Living Skills / Independence," "Emotional Development," etc.) and the parent was told to assign poker chips to each circle. If they placed many chips in a circle, they were indicating that, with regard to the focal child, the area was very important to them as parents. If they placed none, they were indicating that area was not very important to them. They were informed that they did not have to use all the chips. At the end of the visit, the parents were given a packet of questionnaires to complete and to return by mail. The parents

were asked to fill these out separately so that the independent perspectives of each could be obtained.

Measures

Child developmental status. As discussed above, the BSID-II at age 3 years was used to determine early developmental group status. Assessment at age 3 years was chosen because it was thought that the toddler and preschool years may represent a sensitive period for the formation of parental beliefs and that once a child exhibits a risk status and beliefs are formed, it may be difficult for parents to change the way that they think about the child, despite some remediation of risk (virtually all of the movement over time was from risk status into the typical range). However, the age 5-year assessment (Stanford-Binet; Thorndike, Hagen, & Sattler, 1986) was also considered in order to examine any potential differences in status group means and/or processes.

Assessment of parental beliefs. Parent priorities were measured through the priorities poker-chip task. The areas that appeared on the sheet included: development of living skills / independence, academic development, emotional development, physical development, and development of social skills. The number of chips placed in each circle was summed and recorded on the sheet. This allowed for a quantitative representation of the *relative* importance that parents place on each area, on a scale ranging from zero (no chips) to 10 (all the chips). This strategy allowed for assessment of both the absolute value that parents assigned to emotional development and the importance of emotional development relative to other areas. Because this measure was created for the current study, construct validity was addressed through its relations to other relevant variables.

Parent perceptions of their child's developmental risk was measured through a brief set of questions that appeared in the parent booklets. This scale simply asked the parents to report on how well they perceived their child to be developing in the areas that were included in the priorities task (e.g., academic development, emotional development, etc.). Parents were asked to rate their child's progress on a scale ranging from 1 ("My child is progressing very well in this area") to 5 ("My child is not progressing well in this area at all"), with 3 as a midpoint ("My child is progressing somewhat well in this area"). This set of questions was developed for the current study and the psychometric properties were assessed through convergence with other relevant constructs and through parental agreement. Although the validity of this scale did not require that responses necessarily related to actual child progress (given that the scale attempted to measure perceptions and not actual development), it was reasonable to assume that some relation would be present. Therefore, each parent's responses were compared with those of their spouse in order to partially assess the validity of this scale. Mother-father agreement on the two relevant variables in the current study were consistent with expectations in that some agreement existed, but was not high enough to exclude the role of independent perceptions (independent living skills $r = .47, p < .001$; emotion = $.60, p < .001$).

Parental attitudes about emotionality in their children were measured through the *Maternal Emotional Styles Questionnaire* (MESQ; Lagace-Seguin & Coplan, 2005). This measure was adapted from the *Meta-Emotion Interview* (MEI-Revised; Katz & Gottman, 1999), and assesses emotion coaching and emotion-dismissing parenting styles. The form consists of 14 statements that describe parental feelings about their children's emotions, and about children's emotion in general. Parents are asked to rate the degree

to which they agree or disagree with each statement on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). These items relate to either a dismissing or emotion coaching style. Examples of emotion coaching statements include, "When my child is sad, it's an opportunity for getting close," and "When my child is angry, I want to know what he/she is thinking." Examples of emotion-dismissing statements include, "When my child is sad, I am expected to fix the world and make it perfect," and "When my child gets angry, my goal is to get him/her to stop." Internal consistency for each scale has been demonstrated (alphas for coaching ranging from .78 to .90, dismissing from .78 to .92), and test-retest over a 6-month period indicated moderate stability ($r = .58, .53$ Lagace-Seguin & Coplan, 2005). The MESQ is highly correlated with the original MEI for both scales ($r = .89, .86$) and the authors present some initial convergent validity with parental goals (Lagace-Seguin & Coplan, 2005). Although the psychometric properties of the MESQ have not yet been studied with fathers, it was believed that no modifications were necessary for use with this population (Lagace-Seguin, personal communication). Furthermore, the original MEI upon which the MESQ is based was used with fathers. Internal reliabilities for the current study resulted in alphas of .73 for coaching (for both mothers and fathers), .77 for maternal dismissing, and .70 for paternal dismissing.

Assessment of parental socialization of emotion behaviors. Three areas were examined under the umbrella of emotion-socialization behaviors: (1) Family expressiveness, (2) parent reactions to children's emotion, and (3) parent-child discussion of emotion.

Family expressiveness was measured using the *Family Expressiveness Questionnaire* (FEQ; Halberstadt, 1986). This measure asks parents to rate the frequency at which

certain emotional expressions occur in their households. Events such as “spontaneously hugging a family member,” and “crying after an unpleasant disagreement,” are rated on a 7-point Likert scale ranging from “not at all frequently” to “very frequently.” This scale yielded three sub-scores: positive expressiveness, negative expressiveness-dominant (e.g., criticism, anger), and negative expressiveness-submissive (e.g., sadness). The FEQ was originally designed to measure an individual’s family-of-origin expressivity and adequate internal consistency (Halberstadt, 1986), test-retest reliability (Halberstadt, 1986), and convergent and divergent validity have been demonstrated for this form (Burrows & Halberstadt, 1987; Eisenberg et al., 1991; Halberstadt, 1986). Recent studies have used this measure for assessment of current family expressiveness and have shown evidence of internal consistency and construct validity (Ramsden & Hubbard, 2002). Internal reliabilities for maternal report in the current study (alphas) were .91 for positive, .83 for negative-dominant, and .75 for negative submissive. Father reliabilities were .82 for positive, .83 for negative-dominant, and .75 for negative-submissive.

Parental reactions to child emotion were assessed through the *Coping with Children's Negative Emotions Scale* (CCNES; Fabes, Eisenberg, & Bernzweig, 1990). This scale presents parents with vignettes involving child negative emotion and asks them to rate the likelihood that they would respond in certain ways. These responses relate to subscales that include: expressive encouragement (alpha for current study = .88 mothers / .83 fathers), emotion-focused reactions (.78/ .85), punitive reactions (.77/ .79), problem-focused reactions (.82/ .83), minimization (.80/ .78), and distress reactions (the parent experiencing high levels of self distress; .60/ .61). Fabes, Poulin, Eisenberg, and Madden-Derdich (2002) reported adequate internal, test-retest, and construct validity for this

scale. The above categories are often combined into “supportive” (expressive-encouragement, emotion-focused, and problem-focused reactions) and “unsupportive” reactions (punitive, minimizing, and distress reactions). Internal reliability for these composites in the current study were .77 (unsupportive) and .77 (supportive) for mothers, and .70 (supportive) and .75 (unsupportive) for fathers.

Parental discussion of emotion was measured through coding of the emotion discourse task. Trained undergraduate coders rated from videotape (1) the amount of event-related (i.e., not relating to emotional aspects of the event) discussion by the parent versus discussion about the emotional aspects of the event (i.e., “Emotion-Focus”), and (2) the number and diversity of specific emotion words used by the parent, using procedures outlined by Fivush, Brotman, Buckner, and Goodman (2000). Interrater reliability was calculated on 20% of the tapes, using correlations rather than kappa due to the continuous nature of the scale. Acceptable reliability was obtained for emotion focus (father $r = .80, p < .001$ / mother $r = .81, p < .001$), and high reliability was achieved for number of emotion words ($r = .98 / .97, ps < .001$), and for number of different emotion words ($r = .91 / .92, ps < .001$).

A global system was also used in which coders assessed parental emotion coaching and emotion dismissing behaviors during the discussion. The emotion coaching code was comprised of components thought to represent behavioral manifestations of an emotion coaching philosophy, as outlined by Gottman et al., (1997) including the amount of structuring that the parent provided, the parent’s general sensitivity and acceptance of the child, the parent’s validation and encouragement of emotional expression, the parent’s enthusiasm for the task, and the amount of intimacy, warmth and affection present in the dyad. Coders rated each of these dimensions

separately but also provided an overall code for emotion coaching, based on the parent's ability to integrate these factors in a way that characterized Gottman et al.'s "emotion coaching parent." The dismissing code was similarly based on the work of Gottman and colleagues and was comprised of parental derogation of the child, parental intrusiveness, parental minimization and/or discouragement of emotion, and parental detachment from the discussion. As with coaching, an overall dismissing code was also assigned. Inter-rater reliability was performed on approximately 20% of the tapes and was adequate for mothers (coaching $r = .76$, dismissing $r = .82$) and fathers (coaching $r = .79$, dismissing $r = .74$).

RESULTS

Data Reduction

Meta-emotion as a construct has been conceptualized in many ways. Gottman et al., (1996) used only the coaching aspects of the construct due to the high interrelation between the two philosophies. However, the MESQ has demonstrated a two-factor structure, with emotion coaching and dismissing discussed separately (Lagace-Seguin & Coplan, 2005). Because the two scales were moderately, positively correlated in the current study ($r = .22, p < .01$ for mothers; $r = .18, p < .05$ for fathers), it was not reasonable to choose one scale over the other. However, a composite score for coaching was preferable to multiple variables for the analyses, and was thought to provide a more robust measure of emotion coaching attitudes. Parents' dismissing scores on the MESQ were therefore subtracted from their coaching scores on the measure. The resulting variable was significantly correlated with the coaching ratings for each parent (mother $r = .52, p < .001$, father $r = .61, p < .001$), as well as the dismissing ratings ($r = -.72, p < .001$,

and $r = -.45, p < .001$, respectively). Consideration of the coaching and dismissing scales separately did not dramatically alter the overall conclusions of the current study.

Hypothesis I: The Relation of Attitudes to Parenting Behaviors.

As predicted, ratings of coaching attitudes (MESQ) were correlated with several parenting behaviors (see Table 1). Mothers and fathers with higher coaching attitudes reported fewer unsupportive reactions to children's negative emotions, more positive expressiveness in the family, and were observed to engage in fewer dismissing behaviors during emotional discourse with their children. In addition, mothers with higher coaching attitudes were also observed to exhibit more coaching behaviors and higher emotion focus during the emotion discourse, and fathers with higher coaching attitudes reported more supportive reactions. The only parenting areas that did not relate to coaching attitudes were negative expressiveness and the use of emotion words during discourse.

Hypothesis II: Relations with Priorities, and Priority-Attitude Interactions.

Relations with priorities. As predicted, the relations between priorities and other constructs were complex. Overall, Hypothesis II received mixed support. As predicted, the relations between priorities and behaviors were weak, but, contrary to predictions, most were not significant. As per simple correlations, priorities related only to unsupportive reactions for fathers, and emotion focus for mothers. Fathers who rated emotion as a higher priority reported less of a tendency to respond to their children's emotion in unsupportive ways, and mothers giving higher priority score to emotion were observed to focus more on emotion during the parent-child discourse (see Table 1). It was predicted that the strongest bivariate correlation for priorities would be a positive relation with emotion focus, thus this prediction was supported for mothers.

Priority-attitude interactions. Because priorities were thought insufficient for supportive parenting, interactions between priorities and attitudes were hypothesized. Separate hierarchical regressions were performed for each of the parenting variables. This resulted in ten regressions per parent. For each regression, priorities and attitudes were each entered on Step 1, with the interaction term entered on Step 2. Prior to creation of the interaction term, each predictor variable was standardized and a constant (10) was added to each so that the centering would not result in any negative values for the creation of the interaction term. The interaction term was then created by calculating the product of the two variables.

As seen in Tables 2 and 3, two of the ten regressions were significant for fathers, and only one regression was significant for mothers. Paternal priorities and attitudes interacted to predict fathers' observed frequency and diversity of emotion words during the discourse task. The interaction predicted FEQ Negative-Dominant Expressiveness for mothers. For ease of interpretation, interaction graphs were generated, as recommended by Aiken and West (1991), with the use of MODGRAPH v. 1.0. As seen in Figure 2, higher priorities were associated with higher frequency and diversity of emotion words for fathers also high in emotion coaching attitudes. This relation was in a similar direction for fathers with medium coaching attitudes, but the association was milder. In contrast, as fathers low in coaching attitudes rated emotion more highly, they actually exhibited fewer and less diverse emotion words. These findings are consistent with the prediction that higher priorities would be most beneficial under conditions of high coaching attitudes. However, it was not anticipated that higher priorities would actually result in *less* emotion talk under conditions of low coaching attitudes.

Interaction findings for mothers supported predictions in that higher priorities were associated with less negative-dominant expressiveness when mothers also held high coaching attitudes. Under conditions of low coaching attitudes, mothers who rated emotion as a higher priority actually expressed more negative-dominant emotion. As discussed later, findings for the above interactions differed when each status group was considered separately.

Hypothesis III: Perceptions of Developmental Risk to Priorities and Behaviors.

Although not a large focus of the current study (indeed, these relations were not hypothesized for the larger SEM model), associations between perceptions of risk and parenting behaviors were examined. Very low support was found for these hypotheses, with the exception of status-specific findings, discussed later. For the overall group, there were no relations between perceptions and parent behaviors, with the exception of a trend for mothers who rated higher emotional risk to report more unsupportive reactions, $r = .16, p < .10$

For associations between perceptions of developmental risk and parent priorities, findings supported a model in which more developmental concern about emotion by the parent was associated with the parents ranking emotion as a higher priority. This positive correlation was observed for mothers, $r = .20, p < .05$, and was at the level of a trend for fathers, $r = .16, p < .10$. Hypotheses relating to perceptions of risk and parent priorities within the DD group were supported and are discussed later.

Hypothesis IV: Parent Gender Differences: Mean- and Process-Level Differences.

Mean-level differences. As seen in Table 4, mixed support was found for these hypotheses. As predicted, fathers rated themselves as less supportive and more dismissive in both their attitudes and in their reactions to their children's negative

emotions. They also rated emotion as a lower parenting priority. The predicted gender differences were therefore found for all parent *report* measures. In contrast, the *observational* data did not support the hypotheses. Not only were fathers no less coaching or less focused on emotion than mothers, but they were actually rated *lower* on dismissing behaviors than mothers. A trend also existed for fathers to use more emotion words with their children (see Table 4).

Process-level differences. It was predicted that relations between beliefs and behaviors would be different, and perhaps stronger, for fathers than for mothers. For the overall group, the associations between beliefs and behaviors presented differently for mothers and fathers, thus supporting predictions. Furthermore, fathers' belief-behavior relations were somewhat more consistent for *reports* of parenting behavior (four significant relations as compared to two for mothers), but mothers showed more consistent relations between beliefs and *observed* parenting behavior (four significant relations as compared to one; see Table 1). Although differences in the strength of associations paralleled the above findings (with fathers' correlations stronger for reported behavior and mothers' stronger for observed behavior), these differences were not statistically significant as per *r* to *z* transformations. One exception was a difference at the level of a trend, with fathers demonstrating stronger positive relations between coaching attitudes and supportive reactions than mothers, $p = .06$.

Parent gender process-level differences were found to be highly dependent upon child developmental status. As seen in Table 5, findings with regard to relations between beliefs and behaviors for mothers and fathers were substantially different depending upon whether the TD or DD group was considered. Fathers of children with delays showed the most consistent belief-behavior links (6 significant relations), followed by

fathers and mothers of typically developing children (4 significant relations each). However, *no significant belief-behavior links were found for mothers of children with delays.* The hypothesis that stronger evidence for belief-behavior links would be observed for fathers was therefore supported in the DD group, but not in the TD group. With regard to the strength of the associations (as opposed to the consistency of significant relations), no mother-father correlation differed as per r to z transformation, although all differences were in the expected direction (fathers stronger) within the DD group.

Hypothesis V: Developmental Status Differences: Mean-Level, Process-Level, and Diagnostic Overshadowing.

Mean-level differences. The prediction that parents of children with developmental delays would exhibit less coaching attitudes and fewer coaching and more dismissing behaviors garnered the least support of any hypothesis in the current study. No status differences emerged for any parenting variable with the exception of lower emotion-focus during discourse for mothers and fathers of children with delays, at the level of a trend (see Table 4). There were no group differences in coaching attitudes for TD and DD parents.

Process-level differences. As discussed above, the prediction that belief-behavior links would be stronger among families of children with developmental delays was partially supported. Fathers of children with developmental delays exhibited somewhat stronger and more consistent relations than fathers of typically developing children (see Table 5). For mothers, the status difference was much more substantial and in the opposite direction from the predictions. Mothers of typically developing children exhibited far more consistent significant relations than mothers of children with delays, who exhibited no significant relations.

With regard to the priority-by-attitude interactions, the pattern of findings remained similar to that of the entire group for only one of the analyses. As seen in Table 6, the interaction predicting to the diversity of emotion words exhibited by fathers remained significant for the typically developing group and significant at the level of a trend for the group with delays (with very similar partial correlations). The two remaining interactions that were significant for the entire group appeared to be driven by one or the other status group when examined separately. Priorities and attitudes interacted to predict the number of emotion words for fathers of children with developmental delays only. In contrast, the interaction of these variables predicted Negative-Dominant Expressiveness for mothers of typically developing children at the level of a trend, but not for mothers of children with delays.

As predicted, the roles of parenting priorities and developmental risk were found to depend upon child developmental status. Fathers of children with developmental delays who rated emotion as a higher priority reported fewer unsupportive reactions (see Table 5). This was not the case for fathers of typically developing children, whose unsupportive reactions were associated with coaching attitudes and not priorities. Similarly, the association between perceptions of developmental risk for emotional problems and higher emotion priorities were found for fathers in the DD group, $r = .31, p < .05$, but not the TD group, $r = .14, n.s.$ This association was found for TD mothers, $r = .24, p < .05$, and for DD mothers at the level of a trend, $r = .25, p < .10$.

Relations between perceptions of developmental risk and parenting behaviors only emerged for fathers and with different profiles depending on child status. Fathers of children with delays who perceived their children at higher risk for emotion problems

used a higher number of different emotion words with their children during observed discourse. In contrast, fathers of typically developing children who perceived these children as at higher risk for emotional problems rated themselves higher on negative-submissive expressiveness.

In short, the roles of parental priorities and perceptions of developmental risk seemed to depend highly on both child status and parent gender, with these constructs appearing most important for fathers of children with delays.

Diagnostic overshadowing. As predicted, mothers and fathers of children with delays rated their children at higher risk for both emotional and independent-living problems than did parents of typically developing children. Furthermore, parents of children with delays rated living skills, *but not emotion*, as a higher priority than TD parents, thereby providing some support for the notion of diagnostic overshadowing. Providing additional support for this hypothesis, DD mothers exhibited a trend for rating emotion as a *lower* priority than TD mothers (see Table 4).

Factor analysis supported the diagnostic overshadowing hypothesis for DD fathers, but not for mothers. Principal component analyses with varimax rotation were performed for mother and father priority ratings, for each status group. All priority ratings were entered into the analyses (living skills, academics, emotion, physical, and social) and the criteria for a significant factor required an eigenvalue over 1. As predicted, the strongest significant factor emerging for fathers of children with developmental delays was one in which living skills loaded highly positive, and emotion loaded highly negative (see Table 7). Indeed, this was the only factor for DD fathers in which emotion rated negatively. This factor provides strong evidence for the construct of diagnostic overshadowing, accounting for over 28% of the variance, and

was not observed in the typically developing mothers or fathers. Mothers of children with delays did not exhibit this factor, with emotion never loading negatively on any significant factor and the largest factor reflecting the prioritization of social and living skills, over physical and academic areas of development . Although the diagnostic overshadowing factor emerged for fathers of children with developmental delays, this factor did not significantly relate to parenting behaviors within this group.

Consideration of the age 5 assessment. Overall, findings were not dramatically altered as a function of whether child status was based on the age 3 or the age 5 years assessment. There were, however, a few exceptions.

Mean-level status group findings were virtually identical to those reported at age 3 (see Table 8). Although there existed some movement between insignificant findings and significance at the level of a trend, only two findings crossed the formal level of significance (i.e., .05). Mothers of children with delays rated emotion as a lower priority than mothers of children without delays, and mothers of typically-developing children were rated higher on dismissing behaviors than mothers of children with delays (these findings were previously at trend levels when age 3 status was used). All of the status differences established according to the age 3 assessment remained significant when considering status assignment at age 5 years.

With regard to the relations between beliefs and behaviors, the following previously-significant relations fell to the level of a trend: DD father priorities with CCNES Unsupportive, $r = .32, p < .10$, and TD mother MESQ with CCNES Unsupportive, $r = -.18, p < .10$; and one relation lost all significance (DD father MESQ with dismissing behaviors, $r = -.27, p = .15$). An additional significant relation emerged (that was previously at a trend level) between TD mother's MESQ and coaching

behaviors, $r = .28, p < .01$. The most substantial change in results when the age 5 assessment was considered concerned the emergence of two new significant relations for the emotion-priority ratings of mothers of children with delays. The higher that these mothers rated emotion as a priority, the better quality coaching behavior they demonstrated, $r = .38, p < .01$, and the more focused they were on emotion during discussions, $r = .31, p < .05$. In short, the additional consideration of age 5 assessment, in comparison to age 3, resulted in roughly similar results, with the exception of some loss in relations for fathers and with attitudes, an emergence of a new significant relation for TD mothers, and a substantially larger role for priorities (in relation to status and emotion discourse) for mothers of children with delays.

Hypothesis VI: Parental Beliefs as Buffers for the Relations Between Developmental Status and Less Supportive Parenting.

This hypothesis was not directly examined, as the foundation for the hypothesis was an expected relation between developmental status and parenting behaviors, which was not observed. It did not make sense to examine the potential for beliefs to buffer against the detrimental effect of child status on parenting behavior if status did not seem to exhibit such an effect.

Hypothesis VII: Testing the Model.

The full model (see Figure 1) was tested separately for mothers and fathers via structural equation modeling with the AMOS computer program. The model was examined with regard to general overall fit, and in order to determine the significance of individual pathways. Several indices were examined in order to determine the overall fit of the model. The most commonly used statistic is chi-square, which compares the interrelations proposed in the model to those observed in the data. A large and

significant chi-square value indicates that there is a large discrepancy between the proposed and observed model, or that the proposed model does not fit the data. Because interpretation of fit via chi-square values is fallible, the use of multiple fit statistics is encouraged. Another index of fit is the Comparative Fit Index (CFI; Bentler, 1990), which evaluates the proposed model as compared to a fully "independent" model (i.e., one with no relations amongst measures). Higher values on the CFI represent better fitting models, with values greater than .95 indicative of a good-fitting model. Chi-square is highly dependent upon sample size, with larger samples resulting in more difficulty fitting a model and lower sample sizes running the risk of over-estimating fit. The Root Mean Square Error of Approximation (RMSEA), which compares the lack of fit in the model to a perfect (saturated) model, is less dependent upon sample size than chi-square (Marsh, Balla, & Hau, 1996), and was therefore referenced due to the relatively small sample size in the current study.

The model presented in Figure 1 is a simplification of the tested model. For testing, error terms were added to each endogenous (dependent) variable and the appropriate parameters were fixed in order to insure proper identification of the model. Furthermore, certain error terms (e.g., those associated with ratings from the same informant or ratings from the same task) were correlated in the model so as to account for nonrandom error due to shared method variance (Cole, Martin, Power, & Truglio, 1996). Model specification required that one pathway from the latent variable to an indicator be specified at a non-zero value (e.g., 1). In doing so, it is recommended that this indicator be thought to best represent the underlying construct. Theoretically, the two most representative indicators of emotion-supportive parenting were supportive reactions and emotion coaching during discussion. Indeed, the former was most

significantly related to coaching attitudes for fathers as per simple correlations, and the latter was most related for mothers. However, supportive reactions did not relate to attitudes for mothers and coaching did not relate for mothers. Different indicators were therefore specified for each model, consistent with earlier findings from this study that suggest that these parenting behaviors may hang together differently for mothers and fathers. Supportive reactions were specified for fathers and observed emotion coaching was specified for mothers.

Tests of overall fit. The full, proposed father model was tested first. The initial model resulted in a poor fit for the data, with a high and significant chi-square value. A process of “trimming” the model was then initiated in which the parameters with the lowest regression weights were systematically omitted from the model. The trimming process necessitated that only two variables, the FEQ Negative factors, be removed from the model. The remaining model, seen in Figure 3, resulted in a chi-square of 24.27, $p = .84$, indicating a good fit with the data. The CFI index was very high (1.00) and the RMSEA was very low (.00), further supporting the appropriateness of the model. Findings for the mother model were similar to that of fathers in that the original model did not fit the data, but an appropriate model was identified with the removal of the FEQ Negative scales only. The resulting model for mothers, seen in Figure 4, resulted in a chi-square value of 35.30, $p = .31$, a high CFI (.98), and a low RMSEA (.03).

Identification of significant pathways within the model. It is possible that a model with good overall fit may include one or more pathways that are not significant. The balance between examining overall fit and the investigation of individual significant pathways depends upon the aims of each particular study. The present study was interested in both testing the appropriateness of an overall model of emotional belief-

behavior links in parenting, *and* in the identification of specific pathways. Each mother and father model was therefore trimmed until every remaining pathway was associated with a regression weight that was significant at least at the one-tailed level. Fortunately, the overall fit of each model was not compromised in the process. The resulting models are seen in Figures 5 (father) and 6 (mother), and represent models closest to the original proposed model, for which every pathway is significant at least at the level of a trend. In each model, standardized parameter estimates are presented for each pathway, and the amount of variance explained for each observed variable appears above the right top corner of the relevant variable. The father model in Figure 5 resulted in a relatively low and insignificant chi-square (23.29, $p = .76$), a very high CFI (1.00) and a very low RMSEA (.00). The mother model was similarly supported with a low chi-square (24.26, $p = .33$), a high CFI (.98) and a low RMSEA (.03).

The trimming of the father model resulted in the loss of one additional variable (different emotion words during discourse), and the removal of two causal pathways (from Status to Attitudes and from Priorities to Emotionally-Supportive Parenting). All other variables and pathways remained. Coaching Attitudes related significantly to the Emotionally-Supportive Parenting variable, accounting for 22% of the variance. In turn, this latent variable accounted for variance ranging from 9% to 58% in its indicators, including both reaction variables, positive expressiveness and three of the four discussion variables. In contrast to earlier findings, status remained in the model as a predictor of perceptions of risk and father priorities. A pathway from risk to priorities was also supported. Although status appeared to play a role in father priorities and perceptions of risk, priorities did not in turn relate to any behavior variable within this SEM model.

The mother model required two of the same alterations that were necessary for the father model (deletion of the Different Emotion Words variable and of the pathway between Status and Attitudes), and an additional omission of the Supportive Reactions variable. However, the relation between Priorities and the parenting composite remained, at the level of a trend. Attitudes and Priorities collectively accounted for 32% of the variance in the parenting construct. The latent variable in turn explained between 9% and 21% of the variance in its indicators. In short, the trimmed mother model was very similar to that described for fathers, with the exception of a slightly larger role for priorities in the prediction of Emotionally-Supportive Parenting and the omission of supportive reactions. Furthermore, the predictors explained a larger amount of variance in the parenting variable for mothers, but the amount of variance that the latent variable explained in its indicators was generally higher for fathers.

DISCUSSION

Findings from the current study provide substantial evidence for belief-behavior links in parental socialization of child emotion. Parents' attitudes toward emotion, or "meta-emotion philosophies," were associated with several emotion-related parenting behaviors. Indeed, parent attitudes exhibited relations with aspects of parental reactions, expressiveness, and discussion, each of the areas identified as central to the socialization of child emotion (Eisenberg et al., 1998). Furthermore, associations emerged between parent-reported attitudes and *observed* parenting behavior, suggesting that these links cannot be explained by shared method variance, and supporting the notion that attitudes do in fact translate into actual parenting behavior. Consistent with previous work (Gottman et al., 1996), current findings suggest that parental coaching attitudes may promote emotion-supportive parenting through the inhibition of unsupportive

parenting. However, relations also emerged between coaching attitudes and positive parenting (e.g., supportive reactions, positivity, coaching, emotion focus), suggesting that coaching attitudes may also promote supportive parenting directly. These additional findings may be due in part to the inclusion of dismissing attitudes in the coaching composite, as Gottman et al. used only coaching dimensions. Perhaps the absence of dismissing attitudes fosters more supportive parenting. Regardless, the mechanisms connecting coaching and positive parenting may be more complex than Gottman initially considered.

Although parental attitudes related to positive expressiveness of the parent, few findings emerged for associations with negative expressiveness. Expressiveness was included in the current study due to the identification of this construct as important to parental socialization of emotion. However, theoretical links between meta-emotion attitudes and expressivity are not as clear as those involving reactions and coaching. This is even more the case for negative expressiveness, as relations with these forms of expressiveness have proven to be more complex than those involving positivity (Baker & Crnic, 2005; Halberstadt et al., 1999). For example, it has been debated as to the form and level of negative expressiveness most appropriate for emotion-supportive parenting, with theories suggesting the presence of nonlinear effects (Halberstadt, 1998).

The role of priorities appears to be more complex than that of attitudes. Few correlations were found between priorities and parenting behaviors for the full sample, and those found could be interpreted as emerging due to chance, given the large number of relations examined. Although associations with priorities were hypothesized, it was predicted that these main effects would not be strong, but rather that priorities would have the clearest association in combination with parenting attitudes. The main

effect correlation that was predicted to be strongest was with emotion focus, and this relation was indeed found for mothers. The consistency of this finding with a-priory theory, reduces the possibility that this simply represents a chance finding. Nonetheless, evidence for simple relations with priorities was not strong in the full sample. Significant relations emerged, however, for priorities in combination with attitudes, in relation to other belief variables, and within the group with delays specifically.

Overall, the current study provides evidence for belief-behavior links, but these processes seem to depend to some extent upon child developmental status, parent gender, and the combination of these two considerations.

The Role of Parent Gender

Group differences for fathers and mothers paralleled those identified in previous work for attitudes, priorities, reactions, and expressiveness (Eisenberg et al., 1996; Garner et al., 1997; Gottman et al., 1996). Fathers consistently rated themselves as less emotion-supportive, and more unsupportive and/or dismissing, than mothers, thereby suggesting that these fathers were relatively similar to those who participated in previous studies. In contrast to the above self-reported beliefs and behaviors, observations of parenting behavior produced a different profile. Fathers were not rated as less coaching during discussions than mothers, nor did they use less diverse emotion words or exhibit reduced focus on emotion. In fact, fathers were found to exhibit *less* dismissing during discussions than mothers, and there was some evidence for increased use of emotion words among fathers. These parent-gender findings can be interpreted in a variety of ways. First, a significant methodological limitation must be considered. Due to considerations of the larger study from which the data were drawn, the discussions of mothers and fathers were not counterbalanced, thus all mother-fathers differences in

observed parenting must be interpreted with caution. It is likely that mother-child discussions occurred with consideration of the fact that the child had just participated in the same task with the father. Each parent generated his or her own event and the events that were discussed rarely overlapped. However, it was not uncommon for the child and/or the mother to reference the previous discussion. It is possible that some mothers may have sensed boredom or fatigue in their children during the second discussion and that these perceptions may have affected maternal behavior. Although not presented for the current study, it is worth noting that raters also recorded the length of time for each discussion and that mothers did not, as a group, speak for less time than fathers. Nonetheless, the presence of this methodological limitation necessitates further investigation of mother-father differences in emotion coaching.

A second possibility for the seemingly contradictory gender findings is the possibility that fathers are *not*, in fact, less emotion supportive. It is possible that fathers may report themselves to be less supportive than they actually are. When interacting with their children, fathers have been found to act as playmates more than mothers do (see Lamb & Lewis, 2004, for a review). It is possible that a similar type of engagement during parent-child discussions of emotion may manifest itself in behaviors more consistent with coaching, and less consistent with dismissing. Indeed, many fathers in the current study appeared to see their role in the discussion as providing support for the child and encouraging the child's exploration of their thoughts and feelings. In contrast, many mothers, while still supportive, appeared to have a more salient agenda. Given that most mothers in the current study were the primary caregivers for their children, they often seemed more apt than fathers to use the discussion to address ongoing conflicts or specific child behaviors that were stressful for the dyad, presumably in

hopes of promoting change in the child. Indeed, the tendency for mothers to push a specific agenda rather than to validate and encourage the child's exploration is most likely responsible for the higher dismissing score exhibited by mothers (as intrusiveness was considered under dismissing). Studies have also highlighted the unique role that fathers seem to play in parent-child discourse in particular. In a review of the literature, Lamb and Tamis-LeMonda (2004) discussed evidence suggesting that fathers present children with more complex forms of speech, and place more linguistic demands on their children, than mothers, including asking more wh- questions, referencing past events more, and making more requests for clarification. Within the emotion discourse task, these behaviors could have easily contributed to effective coaching and may have also fostered increased attention to emotion.

Another possibility for the findings is that the structured nature of the discourse task may have fostered more supportive behavior on the part of fathers, and that more unsupportive behavior might be observed under naturalistic circumstances. Indeed, mother-fathers differences have not been found as consistently under these structured discourse conditions as compared to findings from self-report measures. Adams et al. (1995) and Kuebli & Fivush (1992) found no parent-gender differences in emotion talk during structured discussions. However, Fivush et al. (2000) found gender differences, explaining that the lack of differences in the earlier studies may have been due to the fact that the parents were not explicitly told to talk about emotion. Parents in the current study were told to talk about an emotional event specifically, suggesting that differences in instructions for the task may not fully explain the discrepant findings of earlier studies.

Although the current findings are intriguing, it remains necessary to tease apart the conditions or contexts under which parent gender differences can be identified. From a methodological perspective, paternal reactions to children's negative emotions and family emotional expressiveness should be measured through observation and compared to father's reports of these constructs in order to determine the accuracy of fathers' reports of emotion socialization. It could also be of benefit to attempt to differentiate father emotion talk from other linguistic elements that may be conflating emotion focus with fathers' language in general. Finally, counterbalancing the order that mothers and fathers interact with their children to insure that order is not influencing parental behavior should prove of value. Assuming that the mother-father similarities in emotion talk were not due solely to measurement error, it is also possible that fathers *can* in fact be as emotion supportive as mothers. However, this does not necessarily mean that they often *are* as supportive. Research should continue to consider strategies for naturalizing the context of family observations in order to distinguish parental ability from parent's motivation and/or habitual tendencies.

Although it cannot be said that mothers and fathers exhibited significantly different belief-behavior links on any set of variables (because the strength of the correlations did not differ), the consistency of these links, and the particular variables that were meaningfully related to belief constructs, were different for mothers and fathers. Overall, fathers showed somewhat more consistent associations between beliefs and self-reported parenting, with mothers showing more consistent relations to observed parenting. As discussed, this may be in part due to the potential for fathers to report themselves in a consistent manner, but in ways that may not necessarily map on to their actual behavior. However, given that mother-father process differences

appeared to depend heavily upon child developmental status, interpretation of the process differences for the overall group may be less useful than consideration of these relations for each status group.

The Role of Developmental Status

The weakest support for any set of hypotheses in the current study concerned differences in parenting as a function of child developmental status. Contrary to previous findings (Floyd & Phillippe, 1993), the current study did not identify any substantial differences in the parenting of children with and without developmental delays. These findings suggest that either parenting differences are not as present as previously thought, or that they are more subtle and/or more complex. Indeed, earlier findings from this sample suggest similar discrepancies, with differences found in some cases and not others. Crnic, Baker, and Fenning (2006) found no differences in maternal scaffolding of their 3-year old children during a laboratory problem-solving task. In contrast, Fenning and Baker (2005), found, within the same sample, that parents of children with delays were more intrusive during naturalistic home interactions with their 5-year-old children than parents of typically developing children. It is likely that parenting differences depend upon the context under examination, both with regard to setting and to the content of the interaction. Perhaps differences in the parenting of children with and without delays are best examined under naturalistic conditions and/or are not as evident in the area of emotion socialization. Despite the failure to find group differences in parenting, differences in links between beliefs and behaviors were present as a function of child developmental status. These process-level differences suggest that, while child status may not necessarily lead to less supportive parenting, the presence of a child with a developmental delay may alter associations between how

parents think about the emotional development of their children and their parenting behavior.

Although some differences in profiles of belief-behavior links emerged when all four status-gender groups were compared, the most striking finding is that no relations emerged for mothers of children with developmental delays. The lack of significance for this group was not solely due to power issues, as the sample with the fewest number of participants, fathers of children with delays, actually demonstrated the highest number of significant findings of any group. It was hypothesized that the beliefs of parents of children with delays would be more salient and would therefore manifest themselves more readily in parenting. An alternative theory was discussed, however, which suggested that these links would be disrupted by the unique behavioral challenges of children with delays (Floyd & Saitzyk, 1992). It is possible that both of these theories are correct, but that it depends upon the gender of the parent. Perhaps fathers of children with delays do in fact rely more heavily upon their beliefs, for the reasons that were presented for parent-gender hypotheses (e.g., less exposure to the child, more variability, more gender socialization) and status-group hypotheses. It was predicted that mothers in general would rely less upon their beliefs than fathers due in part to their increased exposure to their children. Perhaps, as consistent with the notion of Floyd & Saitzyk, this is even more the case for mothers of children with delays.

In addition, it should be noted that consideration of the age 5 data revealed an increased role for priorities among mothers of children with delays. Mothers of children identified with delays at age 5 rated emotion as a lower priority than mothers of children without delays, and lower value on emotion among mothers of children with delays was associated with poorer emotion coaching and less emotion focus. These

findings represent some of the most consistent support for the proposed priorities model. With regard to the lack of these findings as per the age 3 year assessment, it is possible that too much time had passed and/or too much change in development occurred since the early assessment, which may have resulted in shifts in maternal priorities. However, it is interesting that findings were stronger for attitudes and for fathers in general when the age 3 assessment was considered. It is possible that attitudes may be less susceptible to change than priorities, and that fathers' beliefs systems may be more fixed than mothers'. Findings from the current study therefore suggest the possibility of different "sensitive periods" for the establishment of certain parental beliefs.

Across both developmental-assessment periods, attitudes played a role in emotion-related parenting for all fathers, and for mothers of typically developing children. Priorities, however, played a somewhat greater role for mothers and fathers of children with delays. As mentioned, priorities of mothers of children with delays were associated with supportive behaviors during the discourse. Fathers of children with delays who rated emotion as a higher priority were less apt to engage in unsupportive reactions and, if they were also high in coaching attitudes, high emotion-priority fathers used a higher frequency and variety of emotion words. Indeed, evidence suggests that a high priority placed on emotion by fathers of children with delays may serve to reduce unsupportive reactions to child emotion, whereas unsupportive reactions seem to be inhibited by high coaching attitudes among fathers of typically developing children. Although no simple relations emerged for priorities in families of typically developing children, priority-attitude interactions predicted the diversity of emotion words used by

fathers of children without delays in a manner similar to that of fathers of children with delays.

The other interaction finding for parents of typically developing children was that mothers high in coaching attitudes reported less negative dominant expressiveness (e.g., hostile, critical, angry) as prioritization of emotion increased. In contrast, when mothers with low coaching attitudes ranked emotion more highly, they actually expressed *more* dominant negative emotion. This is similar to the findings for father emotion words in that higher priorities in the context of low coaching attitudes had less supportive effects. Hypotheses for the current study were therefore supported in that, in every case, priorities was most positively associated with supportive parenting in the context of high coaching attitudes. However, priorities did not predict less to supportive parenting in the context of lower coaching attitudes. Instead, priorities appeared to have a *negative* association with supportive parenting, suggesting that high priorities in the context of low coaching attitudes may actually be detrimental to supportive parenting. These findings are consistent with the proposition that coaching attitudes inhibit unsupportive parenting (Gottman et al., 1996), and further suggest that high emotion priorities may actually exacerbate unsupportive parenting among parents low in coaching attitudes.

The current study suggests that the construct of diagnostic overshadowing can be measured empirically and that this phenomenon may exist for parents of children with delays. Results suggest that both mothers and fathers of children with delays recognize an increased risk for emotional problems in their children but do not, in response, rank emotion as a higher parenting priority (as they may for other areas such as living skills). Indeed, as per the 5-year assessment, mothers of children with delays

actually rated emotion as a lower priority than mothers of typically developing children. Examination of the response profiles for priorities suggested that diagnostic overshadowing may be more salient for fathers of children with delays. Indeed, these fathers exhibited a very unique cognitive profile, placing low value on the emotional and social development of their children, and high value on living skills. In general, fathers continue to be portrayed as placing a low value on emotion, a stereotype that was supported by the findings from the current study. Furthermore, parent gender and child delay status appeared to have a cumulative effect on the prioritization of emotion, with mothers of typically developing children rating emotion highest and fathers of children with delays rating emotion lowest. As predicted, fathers of children with delays replaced the focus on emotion with the prioritization of living skills. Regardless of child delay status, fathers in general continue to fill the role of primary breadwinner for the family (Lamb & Tamis-Lemonda, 2004). In this vein, fathers of children with delays may be more focused than mothers on financial aspects of the child's delay status and what it means to the family and to the child's future.

A paradox seems to exist with regard to the status-priorities findings in the current study. Results suggest that diagnostic overshadowing may exist, and that priorities relate to parenting behavior for mothers and fathers of children with delays (at least with respect to bivariate correlations). However, these parents do not show deficits in emotion supportive parenting as compared to parents of children without delays. Kopp et al. (1992) revealed that, although parents of children with delays reported teaching social skills to their children less than other skills, the actual level of teaching of social skills of parents of children with delays did not differ from that of parents of typically developing children. The fact that a *relative* lower priority within an

individual's rankings does not necessarily signify a deficit within any particular area may explain why parents of children with delays in the current study reported lower emotion priorities but did not exhibit less supportive parenting. Perhaps these families have increased their attention to all areas of their children's development, thus a low relative ranking among parents of children with delays could manifest itself in ways similar to that of higher rankings among parents of children without delays. The measurement of priorities used in the current study was purposefully designed to assess priorities as they related to other priorities within an individual. In order to address the possibility of general increased attention across the board within parents of children with delays, a system more sensitive to comparisons across individuals could be used.

Although there was evidence that priorities related to the parenting behavior of fathers of children with delays (as per correlations), support was not universal. Both factor analysis and the SEM model suggested that child developmental status played a large role in the cognitive structure of fathers, promoting a profile of diagnostic overshadowing and relating to perceptions of risk and priorities. However, in each of these analyses, father priorities did not in turn relate to parenting behavior. The lack of priority-behavior links suggests that, while fathers may indeed cognitively respond to their children's delays in the predicted manner, these particular beliefs may not have an effect on the aspects of their parenting measured in the current study. Further research is necessary in order to address whether the priorities of fathers of children with delays are indeed important predictors of parenting behaviors in the manner hypothesized. Future examinations should consider other possible mechanisms for the transfer of father beliefs (e.g., allocation of resources, messages given directly to the child), and should

examine the effects of these cognitive structures on the father himself, and on the family system as a whole.

The Overall Structure of Belief-Behavior Links in Parental Socialization of Emotion

When examined as a whole, the predicted models for mothers and fathers were supported with very little alteration (only negative expressiveness was omitted from the final model). The model proposed by the current study thus closely approximated the interplay among child status, parent perceptions of risk, parental attitudes, parent priorities, and parenting behavior. With any use of SEM, especially when alterations are made, support for the model must be replicated. However, the consistency between the resulting individual models for mothers and fathers lends additional support for the validity of each model independently. Trimming of the model to contain only significant pathways resulted in findings relatively similar to those observed in the initial correlations.

Limitations

Several limitations were present in the current study. First, although casual modeling was used, all the data for the current study were collected at one time period, thus direction of effects cannot be convincingly established. Longitudinal studies are therefore necessary in order to provide stronger evidence that beliefs actually *drive* parenting behavior. Furthermore, evidence that some of the status-specific results differed depending upon which developmental assessment time-point was employed suggests the need to consider the influence of developmental change on the attitudes and priorities of parents of children with developmental delays. Most children who changed status groups between age 3 and 5 years did so due to *increases* in measured cognitive ability. Therefore, the stronger priority-maternal behavior links found for the

(age 5) group with delays is likely due to the omission of children who improved substantially in cognitive ability. Given that mothers of children of the age-5 group with delays rated emotion as a lower priority, and that these ratings were meaningfully related to their behavior, results suggest that diagnostic overshadowing is most salient for mothers of children who consistently scored in the delayed range at both time-points. One obvious explanation is that the children who consistently remained in the group with delays exhibited more severe impairment than those who no longer scored within this range.

It is understandable that diagnostic overshadowing would be more salient for parents of children with more substantial delays. Alternatively, it is possible that the stronger priority-maternal behavior links in the (age 5) group with delays was less related to change over time, or to child abilities, but rather was an artifact of the age of the later assessment. At age 5, many of the children were entering a more formal school setting, where comparisons with other children and an increased emphasis on cognitive abilities are more common. It is possible that parents of children who exhibited significant difficulties at this time (regardless of their earlier abilities) began to adapt their priorities away from emotion. These priority ratings were more meaningfully associated with maternal behavior, suggesting that priorities at this time may be more salient or accessible to the mothers as well. Consideration of additional ages would help to piece out whether diagnostic overshadowing in mothers of children with delays is more a function of a lack of change in child abilities, or the salience of the age-5 years time-point.

Given that little work has attempted to link beliefs to the socialization of child emotion, the current study relied upon several measures that were either created for this

study, or were relatively new to the field. The measure of coaching attitudes, although based on an established interview, has been used as a report measure only once (Lagace-Seguin & Coplan, 2005). Furthermore, the current study is the first to use this measure with fathers. Results suggest that its use with fathers is reasonable, in that the measure exhibited similar internal reliability to that of mothers, and demonstrated more convergent validity with other constructs. The three observational parenting systems were all created for the current study. Each demonstrated adequate to very good inter-rater reliability and related in predicted ways to relevant constructs. However, replication is necessary in order to provide additional support for these systems, especially given the surprising lack of differences observed between mothers and fathers, and between parents of children with and without delays. Replication of these systems, and the application of additional measures of these constructs, may help determine whether the failure to find gender and status differences resulted from inadequate measurement, or whether the processes of interest may not be sensitive to risk and/or gender issues. The priorities and risk systems were also created for the current study. Although these systems showed some evidence of working in predicted ways, the lack of correlations between priorities and parenting behavior may have resulted from measurement shortcomings. Interestingly, priorities related best to observations of parenting behavior rather than self-report, indicating little to no effect of shared reporter bias, and providing support for the measure.

Although this study examined parenting through both self-report and observation, all belief variables in this study were obtained through parent report or interview. Future studies should attempt to use more open-ended interviews with parents in order to obtain information about their belief systems. Nonetheless, the

questionnaire used in the present study has been shown to be highly correlated with interviews assessing emotion-coaching attitudes (Lagace-Seguin & Coplan, 2005). The current measure may therefore represent a reasonable and more time- and cost-efficient alternative. Similar examinations should be performed to assess the validity of parents' reports of their priorities.

A final limitation concerns the small sample size in the current study. When all families were considered together, a reasonable sample size was obtained (although still relatively small for SEM). However, process differences in families of children with and without delays suggested that it was most appropriate to consider these groups separately. In doing so, the sample sizes were reduced considerably. Interestingly, the group with the smallest sample size (fathers of children with delays) exhibited the most consistent findings, suggesting that differences in profiles across groups were not primarily a function of power.

Conclusions and Implications

Evidence suggests an important role for parental beliefs in the socialization of child emotion. Research continues to document the significance of parental socialization of emotion for children's psychosocial functioning, highlighting the crucial need to identify potential determinants of these parenting behaviors. The current study reminds us that, although there are many child, family, and environmental factors that influence parenting behavior, parents are first and foremost thoughtful human beings whose behavior is often purposeful. Research on the determinants of parenting must continue to focus on parents' internal characteristics, even as we appreciate the powerful influence of external factors. In addition to examining broad individual traits (e.g., personality), research on parental beliefs, and even more importantly on *specific* beliefs

and attitudes, can contribute to a better understanding of the structure of parenting cognitions and the myriad of ways that these cognitions may manifest themselves in parent-child interaction.

Consideration of parental beliefs may be key to interventions aimed at improving parent-child emotion-related interactions. Behavioral parent training for externalizing behavior problems has emphasized the need for parents to overcome permissive or authoritarian attitudes toward childrearing in favor of attitudes that may facilitate improved management of child behavior. As evidence increasingly emphasizes the important role that emotion may play in the development of both internalizing and externalizing behavior problems (Cole et al., 1994; de Castro et al., 2003; Eisenberg, Cumberland, et al., 2001), interventions targeting diverse child problems may benefit from a greater focus on emotion-related parenting. From this perspective, parental beliefs may become a primary target in structured parent training. Indeed, it is likely that clinicians are already considering parental beliefs about children's emotions. Cognitions such as, "My child should always be happy, and I'm expected to provide a perfect world so this can happen," would not escape a challenge from a good cognitive therapist. In this way, research may need to "catch-up" to the clinical field and provide empirical guidance concerning the role of beliefs about emotion, in the same way that has been outlined for behavior management styles. In the absence of established belief-behavior links in parental socialization of emotion, clinicians cannot confidently judge the appropriateness of parental beliefs about emotion and cannot rely upon scientific evidence when attempting to effect change parent cognitions. As links between certain parental beliefs, parenting behaviors, and child outcomes are established, treatment recommendations can be empirically supported and may also increase parental "buy-in"

of programs. Finally, attention to parental-belief systems may promote generalization and maintenance of treatment progress, as new parenting behaviors in the context of contradictory cognitive structures are likely to collapse over time and/or context.

Consideration of beliefs about emotion may be even more important for families of children with delays. The current study suggests an increased role for parental beliefs in the parenting of fathers of children with delays, and there is also evidence for an increased importance for the role of priorities in these families. Although more work is clearly necessary in this area, preliminary evidence suggests the importance of encouraging parents of children with delays to recognize competing priorities and to consider how these cognitions might influence their parenting. However, a critical gap must be filled first. Although there is a host of evidence suggesting that the emotion-supportive parenting behaviors examined in the current study relate in expected ways to outcomes for typically developing children, much less is known about emotion socialization in populations with developmental delays. Future studies should examine links between emotion-socialization behaviors of parents and outcomes in children with delays, in order to evaluate whether these process work similarly for these families. Limited evidence from this sample suggest not only similar parenting-child outcome relations for families of children with and without delays, but also suggest that relations between parenting and child outcome may be even stronger under conditions of developmental risk (Crnic et al., 2006).

The current study can be conceptualized as a first step in the construction of a model of belief-behavior links in the study of emotion-socialization, highlighting the need to consider process differences as a function of parent gender and child developmental risk. Replication of current results, and consideration of additional

parent cognitions, would facilitate improved understanding of the importance of cognitive factors in how parents approach the emotional development of their children.

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APPENDIX: TABLES AND FIGURES

Table 1.

Correlations between Attitudes and Priorities, and Parenting Behaviors for the Overall Group.

		CCNES		FEQ			Coaching (Obs.)		Emotion Focus (Obs.)		
		Sup.	Unsup.	Pos.	Neg. Sub.	Neg. Dom.	Coach	Dismiss	Global	# Words	# Diff.
Dad	MESQ	.37***	-.26**	.33***	-.03	.06	.18+	-.19*	.14	.05	.11
	Priorities	.01	-.21*	.01	-.02	.00	.05	-.11	.09	-.02	.04
Mom	MESQ	.15+	-.17*	.17*	-.08	-.07	.24**	-.21*	.20*	.14+	.10
	Priorities	-.15+	-.04	.06	.00	-.01	.10	-.10	.20*	.10	.11

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2.

Significant Regressions for Interactions Between MESQ and Priorities for Fathers.

	# of Emotion Words			# of Different Emotion Words		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Step 1: MESQ Dad	.23	.49	.05	.14	.13	.10
Priorities Dad	-.02	.51	-.01	.04	.14	.03
Step 2: Interaction	1.72	.86	4.82*	.61	.23	6.32**

* $p < .05$, ** $p < .01$.

Note.

Regression to Emotion Words: $R^2 = .01$, $p = .92$, for Step 1; $\Delta R^2 = .04$, $p < .05$, for Step 2.

Regression to Different Emotion Words: $R^2 = .01$, $p = .59$, for Step 1; $\Delta R^2 = .07$, $p < .01$, for Step 2.

Table 3.

Significant Regression for Interaction Between MESQ and Priorities for Mothers.

	FEQ Negative-Dominant		
	<i>B</i>	<i>SE B</i>	β
Step 1: MESQ Mom	-.47	.75	-.05
Priorities Mom	-.01	.75	.00
Step 2: Interaction	-1.46	.71	-2.45*

* $p < .05$

Note.

$R^2 = .00$, $p = .82$, for Step 1; $\Delta R^2 = .03$, $p < .05$, for Step 2.

Table 4.
Means / Adjusted Means by Parent Gender and Child Status at Age 3.

	Fathers				Mothers				Gender Diff. <i>t</i>
	TD	DD	Diff. <i>t (F)</i>	All	TD	DD	Diff. <i>t (F)</i>	All	
MESQ	1.41 (.521)	1.76 (8.12)	-.28	1.58 (6.22)	3.47 (5.18)	2.52 (5.77)	1.06	3.20 (5.53)	2.51*
<u>Priorities</u>									
Living Skills	1.96 (.87)	2.42 (.85)	-2.89**	2.13 (.89)	2.02 (.69)	2.26 (.77)	-2.00*	2.14 (.72)	.16
Emotion	2.10 (.65)	1.85 (.97)	1.57	2.01 (.80)	2.37 (.64)	2.18 (.68)	1.81+	2.28 (.65)	3.16**
<u>Perceived Risk:</u>									
Living Skills	1.77 (.86)	2.44 (1.25)	-3.17**	2.02 (1.08)	1.56 (.86)	2.50 (1.18)	-5.38***	1.89 (1.04)	-1.27
Emotion	1.83 (.92)	2.64 (1.13)	-4.10***	2.12 (1.07)	1.74 (.97)	2.29 (1.14)	-3.09**	1.97 (1.14)	-1.67+
<u>CCNES</u>									
Supportive	4.78 (.78)	4.85 (.90)	-.45	4.82 (.82)	5.20 (.71)	5.35 (.81)	-1.19	5.30 (.75)	4.89***
Unsupportive	2.68 (.73)	2.80 (.76)	-.87	2.71 (.74)	2.41 (.57)	2.49 (.70)	-.73	2.45 (.63)	-3.14**
<u>FEQ</u>									
Positive	50.39 (9.48)	50.34 (8.73)	.03	50.32 (9.27)	54.38 (7.32)	53.94 (8.64)	.33	54.94 (6.90)	-5.19***
Neg. Submissive	33.55 (8.48)	33.64 (8.65)	-.06	33.41 (8.48)	37.26 (8.71)	37.61 (9.83)	-.24	37.09 (8.69)	-3.58***
Neg. Dominant	29.03 (8.35)	28.13 (8.37)	.57	28.50 (8.25)	30.97 (8.74)	30.24 (9.42)	.49	30.36 (8.65)	1.75+
Coaching [^]	3.21 (.10)	3.06 (.13)	(.86)	3.12 (.89)	3.06 (.09)	3.02 (.11)	(.08)	3.08 (.92)	.37
Dismissing	1.44 (.65)	1.52 (.72)	-.66	1.47 (.70)	1.75 (.79)	1.65 (.77)	.81	1.71 (.78)	-2.77** ^a
<u>Emotion Focus</u>									
Global [^]	2.57 (.15)	2.14 (.19)	(3.03+)	2.36 (1.32)	2.47 (.14)	2.08 (.16)	(3.24+)	2.33 (1.35)	.17
# of Words	5.89 (4.70)	7.11 (5.52)	-1.29	6.39 (5.04)	5.71 (4.05)	5.34 (4.19)	.53	5.32 (4.11)	1.80+ ^a
Different Words	2.33 (1.51)	2.04 (1.21)	1.08	2.23 (1.40)	2.38 (1.28)	2.28 (1.54)	.45	2.23 (1.36)	.00

^aThese group differences contradicted the hypothesized directions.
+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

[^]Adjusted means and standard errors are presented due to control for education

Table 5.
Correlations between Attitudes and Priorities, and Parenting Behaviors, by Status Group.

		CCNES		FEQ			Coaching (Obs.)		Emotion Focus (Obs.)		
		Sup.	Unsup.	Pos.	Neg. Sub.	Neg. Dom.	Coach	Dismiss	Global	# Words	# Diff.
<i>Dad</i>											
TD	MESQ	.30*	-.36**	.30**	.21+	.12	.24+	-.04	.15	-.05	-.07
	Priorities	.01	-.08	.01	.01	-.09	.14	-.14	.16	.09	.10
	Risk	-.05	.15	-.06	.28*	.20+	-.05	.03	-.05	.04	.04
DD	MESQ	.45**	-.17	.39**	-.09	-.19	.15	-.34*	.17	.13	.33*
	Priorities	.03	-.35*	.01	-.06	.09	-.07	-.07	-.04	-.09	-.07
	Risk	.06	-.15	-.02	-.08	.11	.30+	.04	.25	.26+	.32*
<i>Mom</i>											
TD	MESQ	.14	-.21*	.25*	-.02	-.13	.22+	-.24*	.25*	.13	.06
	Priorities	-.09	.07	.09	.00	.06	.06	-.17	.16	.14	.20+
	Risk	.03	.12	.02	.17	.05	.10	.01	.09	.13	.06
DD	MESQ	.19	-.12	.08	-.15	-.01	.25+	-.18	.09	.15	.14
	Priorities	-.21	-.14	.01	.01	-.11	.13	-.04	.21	.03	-.02
	Risk	-.19	.18	-.25+	.05	.09	.05	-.07	-.02	.16	.15

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6.

Partial Correlations and Variance Explained for Priority-Attitude Interactions, for Each Status Group.

	Partial <i>r</i> of interaction (controlling for main effects of each measure)		Significance of difference between partial correlations	% of variance (adjusted R^2) predicted from the interaction (without main effects)	
	TD	DD		TD	DD
Father # Emotion Words	.07	.41*	$p < .10$.01	.16*
Father # Different Emotion Words	.30*	.27+	n.s.	.09*	.07+
Mother FEQ Negative Dominant	-.18+	-.11	n.s.	.03+	.01

+ $p < .10$, * $p < .05$

Table 7.
Factors and Factor Loadings for Priorities.

Factor	Fathers						Mothers					
	TD			DD			TD			DD		
	1	2	3	1	2	3	1	2	3	1	2	3
Eigenvalue	1.40	1.31	1.17	1.44	1.21	1.17	1.87	1.18	1.03	1.61	1.27	1.22
% of Variance	27.91	26.25	23.37	28.81	24.10	23.38	37.48	23.55	20.56	32.20	25.42	24.47
<u>Factor Loadings</u>												
Living Skills	-.96	.01	.00	.73	.23	.13	-.93	-.18	-.26	.57	-.74	-.08
Emotion	.31	.73	-.01	-.86	.23	.13	.69	-.27	-.23	.18	.54	.79
Social	.22	.13	.85	.03	-.94	.07	.59	-.40	-.27	.63	.37	-.39
Academic	.40	-.83	.02	.29	.40	.67	-.05	-.10	.98	-.61	.35	-.60
Physical	.37	.22	-.72	.17	.30	-.85	-.08	.97	-.13	-.70	-.42	.30

Factor Labels

Fathers, TD:

1. Living Skills not a Priority
2. Emotion over Academics
3. Social over Physical

Fathers, DD:

1. **Diagnostic Overshadowing: Living Skills over Emotion**
2. Social not a Priority
3. Academic over Physical

Mothers, TD:

1. Social-Emotional over Living Skills
2. Physical is a Major Priority
3. Academics a Priority

Mothers, DD:

1. Social-Living Skills over Physical-Academic
2. Living Skills not a Priority
3. Emotion over Academics

Table 8.
Means / Adjusted Means by Child Status at Age 5.

	Fathers				Mothers			
	TD	DD	Diff. <i>t (F)</i>	All	TD	DD	Diff. <i>t (F)</i>	All
MESQ	1.67 (5.56)	1.21 (8.39)	.35	1.58 (6.22)	3.60 (5.40)	1.96 (5.40)	1.74+	3.20 (5.53)
<u>Priorities</u>								
Living Skills	1.98 (.86)	2.54 (.82)	-3.34**	2.13 (.89)	1.98 (.86)	2.54 (.82)	-3.09**	2.14 (.72)
Emotion	2.05 (.67)	1.89 (1.05)	.88	2.01 (.80)	2.05 (.67)	1.89 (1.05)	2.08*	2.28 (.65)
<u>Perceived Risk:</u>								
Living Skills	1.77 (.86)	2.70 (1.29)	-3.83***	2.02 (1.08)	1.77 (.86)	2.70 (1.29)	-6.35***	1.89 (1.04)
Emotion	1.84 (.93)	2.91 (1.07)	-5.41***	2.12 (1.07)	1.82 (.93)	2.91 (1.07)	-4.04***	1.97 (1.14)
<u>CCNES</u>								
Supportive	4.78 (.80)	4.89 (.88)	-.66	4.82 (.82)	5.24 (.72)	5.31 (.83)	-.53	5.30 (.75)
Unsupportive	2.66 (.73)	2.88 (.75)	-1.43	2.71 (.74)	2.38 (.56)	2.59 (.73)	-1.84+	2.45 (.63)
<u>FEQ</u>								
Positive	50.31 (9.40)	50.55 (8.66)	-.13	50.32 (9.27)	54.40 (7.44)	53.76 (8.78)	.47	54.94 (6.90)
Neg. Submissive	33.22 (8.51)	34.55 (8.56)	-.76	33.41 (8.48)	36.86 (8.47)	38.58 (10.48)	-1.00	37.09 (8.69)
Neg. Dominant	28.71 (8.34)	28.64 (8.44)	.05	28.50 (8.25)	30.60 (8.94)	30.83 (9.22)	-.15	30.36 (8.65)
Coaching ^a	3.15 (.09)	3.17 (.15)	(.01)	3.12 (.89)	3.07 (.09)	2.99 (.13)	(.25)	3.08 (.92)
Dismissing	1.45 (.63)	1.53 (.78)	-.60	1.47 (.70)	1.79 (.83)	1.52 (.65)	2.02*	1.71 (.78)
<u>Emotion Focus</u>								
Global ^a	2.44 (.14)	2.33 (.22)	(.16)	2.36 (1.32)	2.42 (.13)	2.07 (.19)	(2.34)	2.33 (1.35)
# of Words	5.74 (4.50)	7.91 (6.01)	-1.90+	6.39 (5.04)	5.54 (3.89)	5.60 (4.55)	.07	5.32 (4.11)
Different Words	2.20 (1.45)	2.26 (1.31)	-.23	2.23 (1.40)	2.32 (1.28)	2.38 (1.62)	-.26	2.23 (1.36)

^aAdjusted means and standard errors are presented due to control for education
+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 1.
Proposed SEM model

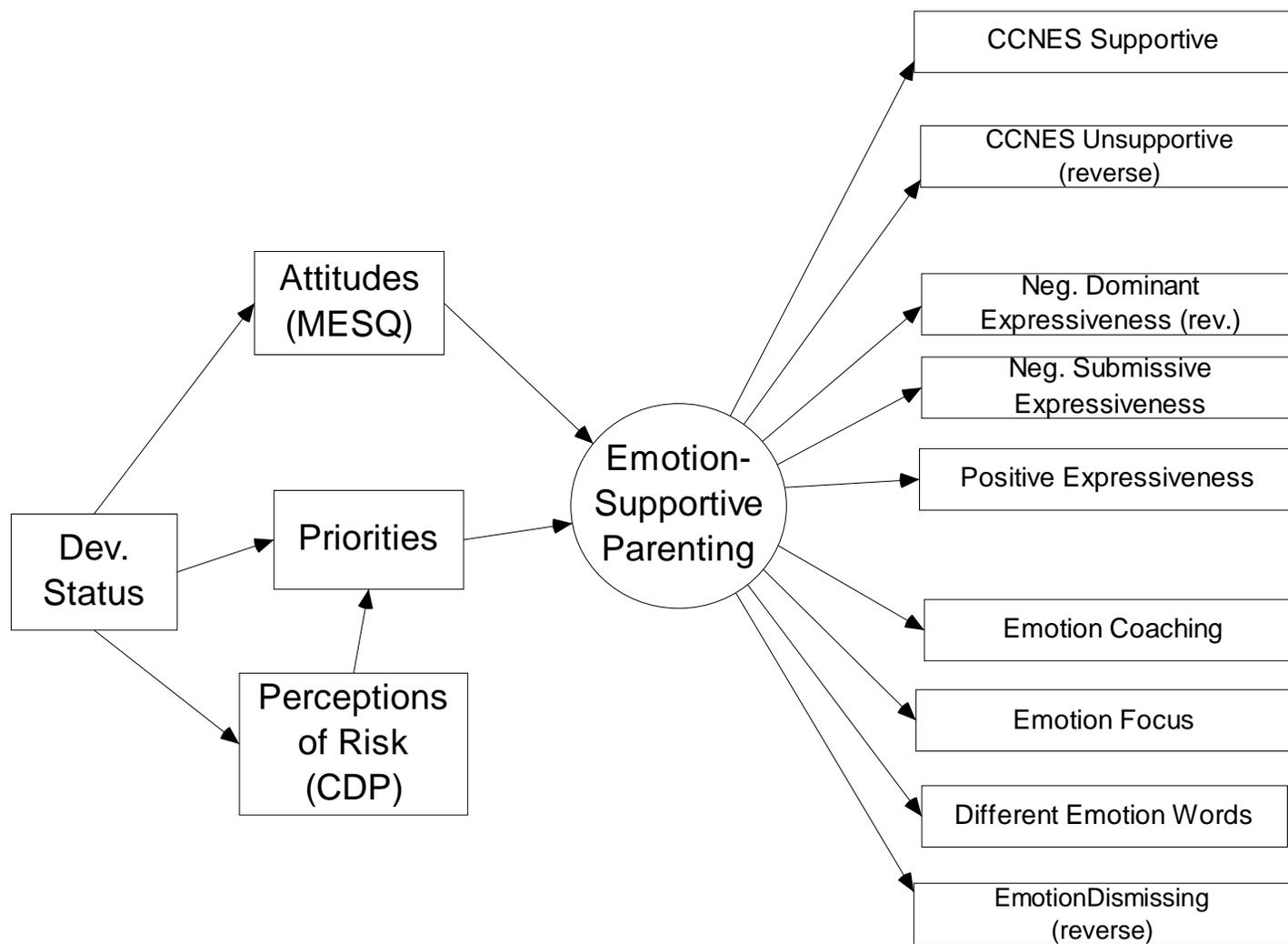


Figure 2.
Interaction plots for interpretation of significant interactions.

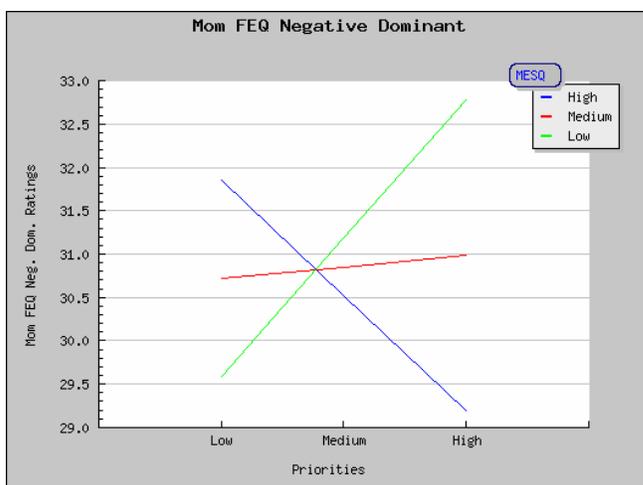
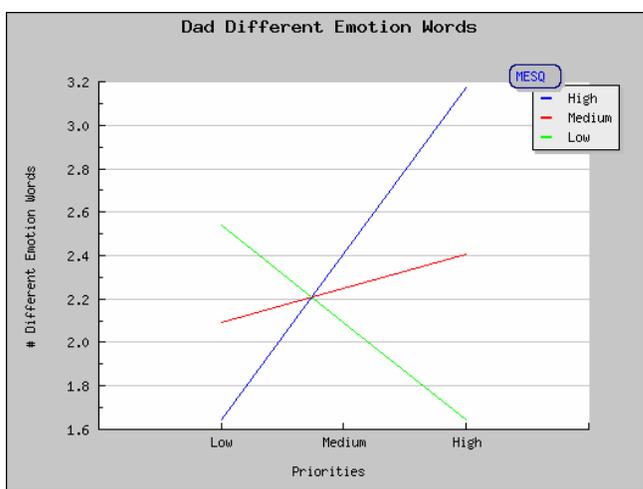
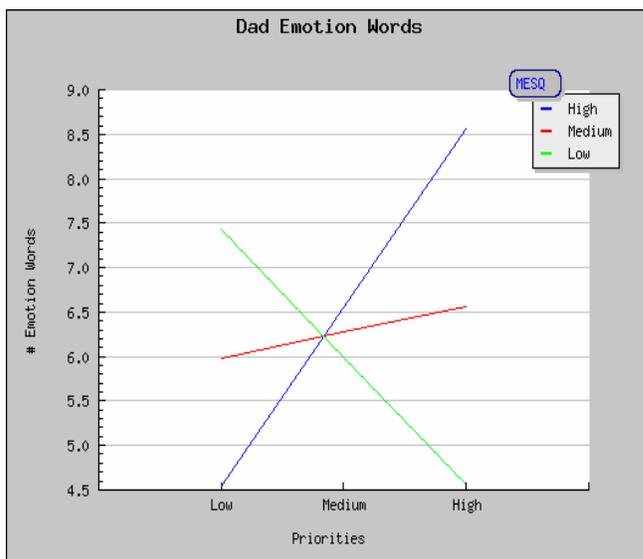


Figure 3.
Fullest father model with good overall fit.

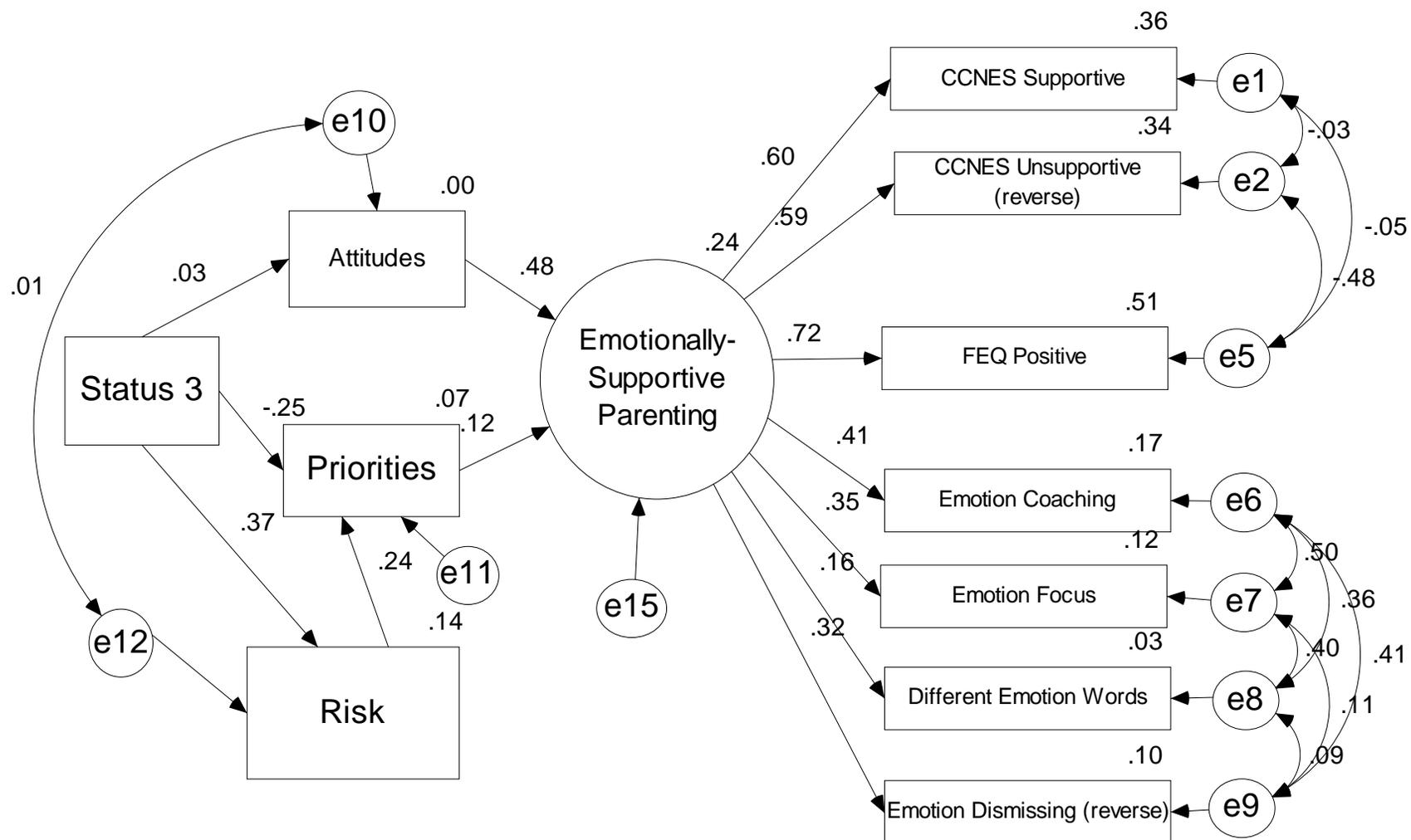


Figure 4.
Fullest mother model with good overall fit.

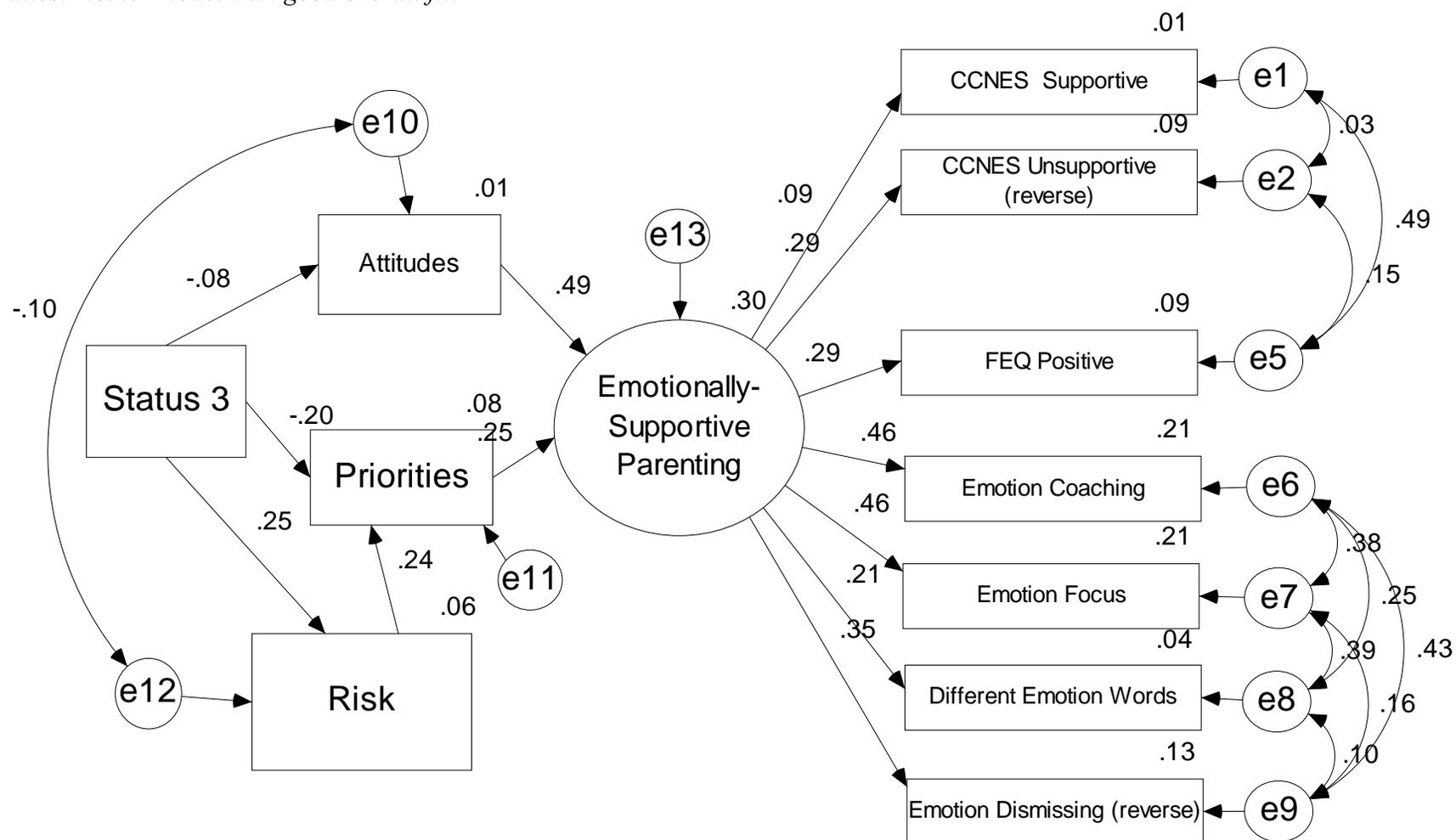


Figure 5.
Fullest father model with good fit and all parameters significant.

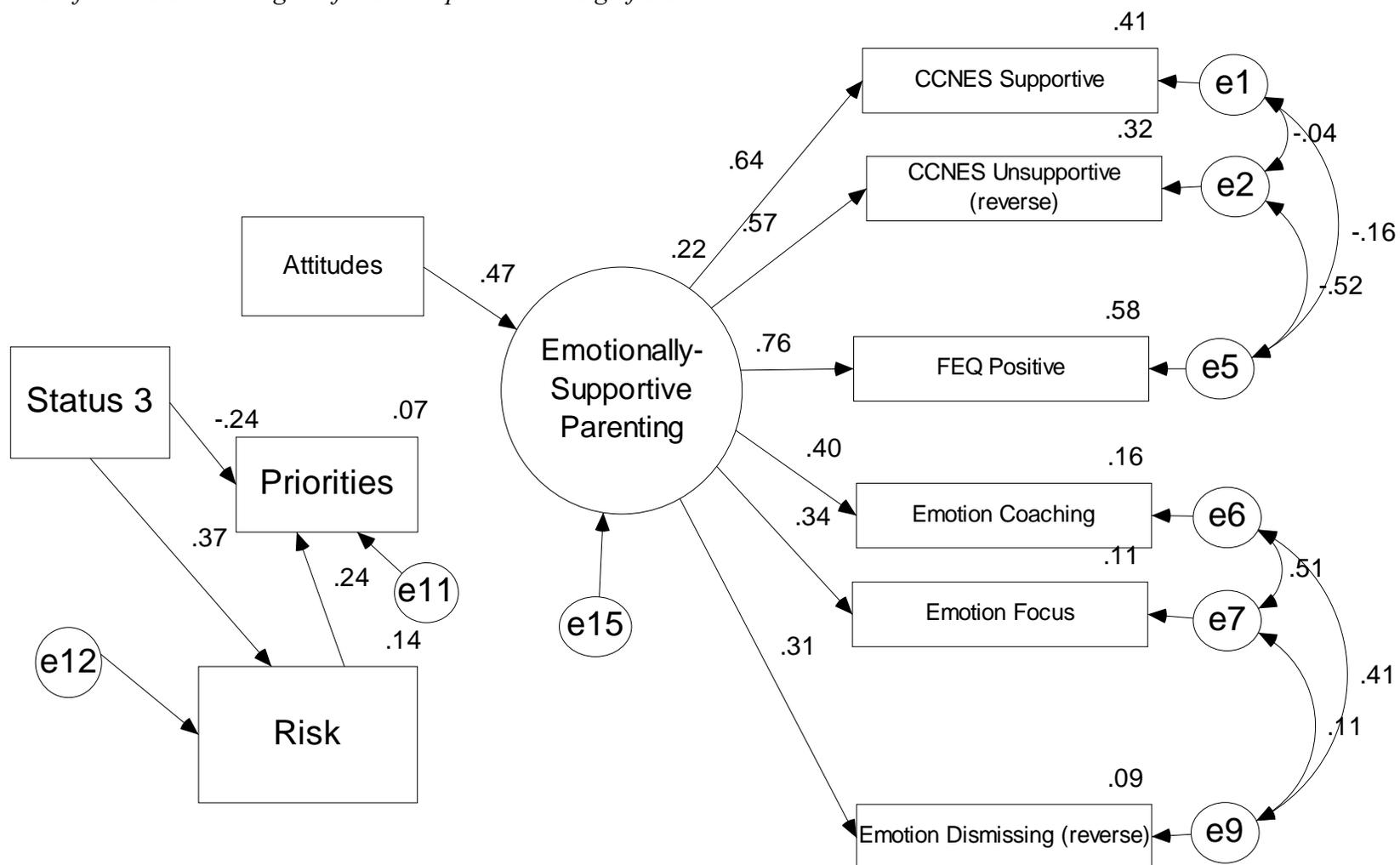
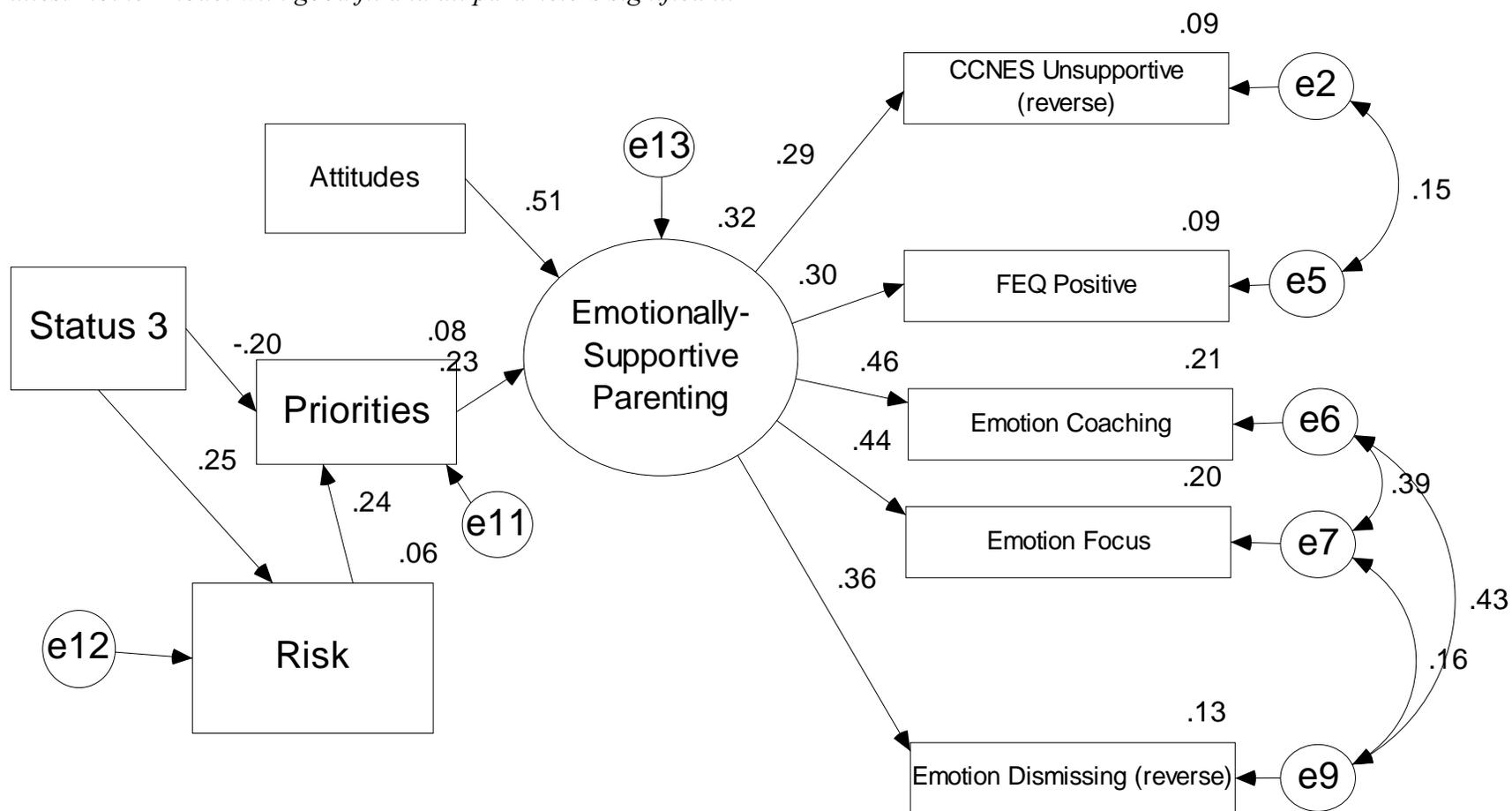


Figure 6.
Fullest mother model with good fit and all parameters significant.



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