Family Implicit Rules, Child Self Regulation, and Observed Child Emotional Responsiveness to Parents

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Family Implicit Rules, Child Self Regulation, and
Observed Child Emotional Responsiveness
to Parents

Mark J. Mauzy

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

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ABSTRACT

Family Implicit Rules, Child Self Regulation, and Observed Child Responsiveness to Parents

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Doctor of Philosophy

The purpose of this study was to examine how implicit family process rules are related to observed child emotional responsiveness with child self regulation as a possible mediating variable. Data from Wave 1 of the Flourishing Families project was used and included 337 two parent families and a target child between the ages of 10 and 13. Mother and father perception of family implicit rules were used to measure family implicit rules; child and mother report of the child’s self regulation were used to measure self regulation, and child’s emotional responsiveness to mother and father were taken from coding data. The Iowa Family Interaction Rating Scales (Melby, et. al., 1998) were used to code the behavior of the child with mother and with father. Multiple Group Comparison using AMOS 16 was used to compare differences based on child gender. Results showed that family implicit rules were positively related to emotional responsiveness to mother for both sons and daughters and to emotional responsiveness to father for sons but not for daughters. Family implicit rules were positively related to child self regulation for both sons and daughters, and self regulation was related to both emotional responsiveness to mother and to father. Results indicated child self regulation significantly mediated the relationship between family implicit rules and emotional responsiveness to mother as well as the relationship between implicit rules and emotional responsiveness to father. Implications for family therapy are discussed.

Keywords: Family implicit rules, self regulation, emotional responsiveness to parents
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Family Implicit Rules, Child Self Regulation, and Observed Child Responsiveness to Parents

**Introduction**

The capacity to be emotionally responsive has been linked to personal, social, academic, and workplace success in adults (Armstrong, Galligan, & Critchley, 2011; Kafetsios, Nezlek, & Vassious, 2011; Mayers, Roberts, & Barsade, 2008). Recent findings from developmentally varied samples (child, adolescent and adult) have shown that emotional responsiveness is related to teacher and peer-rated prosocial and antisocial behaviour (Mavroveli, Petrides, Rieffe, & Bakker, 2007; Petrides, Frederickson, & Furnham, 2004; Petrides, Sangareau, Furnham, & Frederickson, 2006), adaptive coping (Mavroveli et. al, 2007), leadership (Villanueva & Sanchez, 2007), and happiness (Chamorro-Premuzic, Bennet, & Furnham, 2007). In preadolescent children, this ability to be emotionally responsive has also been shown to be a better predictor of academic achievement than personality and self concept variables (Ferrando, Prieto, Almeida, et. al., 2010). Because emotional responsiveness appears too affect so many aspects related to well-being, it is important to understand what leads to its development, specifically to understand what characteristics of the family environment might be related to it.

While parenting as a family process has been shown to be associated with the development of emotional responsiveness in children, family processes other than parenting have not been studied. One contribution of this study is in the examination of how family systems processes, specifically implicit family rules, are related to a children’s emotional expressiveness toward mothers and fathers. Implicit rules within the family are likely to be related to the development of children’s emotional responsiveness, but no empirical studies have examined this relationship. Family process rules tend to be the way by which family tasks are
accomplished (Hoopes & Harper, 1992); and may be the means of expressing the value systems underpinning family operations and regulation of expressions of emotion (Blevins, 1993). Some family rules are more clearly understood from within the family and are overt in nature, thus more clearly understood. However, some rules are less obvious and largely develop through repetitive family interactions; these are generally referred to as implicit rules (Jackson, 1965; Ford, 1983; Constantine, 1986; Nuechterlein, 1993). In either case, if the family rules are facilitative, they tend to be more flexible, promote openness, confirm each family member’s intrinsic self worth and dignity, encourage acceptance and love, serve the entire family, allow differences, and promote discovery of appropriate, functional, and acceptable behaviors (Goldenberg & Goldenberg, 1996; Blevins, 1993; Hoopes & Harper, 1992; Satir, 1988). If the family process rules are constraining, they may the opposite effect and hamper emotional development and responsiveness. For example, if the redundant interactions in the family send the message “don’t express feelings”, this process would constrain emotional responsiveness.

It is likely that this hypothesized relationship between family implicit rules and children’s emotional expressiveness is filtered through other characteristics of the child. Self regulation has been found to be related to the quality of parent-child and sibling relationships (Lunkenheimer, Shields, & Cortina, 2007; Padilla-Walker, Harper, & Jensen, 2010) so it is likely to be related to broader family systems characteristics such as implicit rules. In turn, self regulation has been found to be related to emotional responsiveness (Cassidy, 1994; Trentacosta & Shaw, 2009). This may be one child characteristic through which family process affects emotional responsiveness in children. The purpose of this study was to examine the relationship between specific family process rules including encouragement of play and fun among family members, sharing with each other, and open acceptance of friends of family members, and a preadolescent
The following review of literature will explore theoretical concepts and empirical findings related to each of the variables in this study.

**Review of Literature**

**Emotional Responsiveness**

Emotional responsiveness is generally defined as the ability to effectively express emotion appropriate to the context (Goodvin, Carlo, & Torquati, 2006; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Eisenberg, Fabes, Carlo, & Troyer, 1992). Emotional responsiveness is often used synonymously with the verbal expression of warmth in research studies (Prinzie, Stams, Deković, Reijntjes, & Belsky, 2009). Emotional responsiveness may be more than one emotional state and may also involve a combination of emotion states, knowledge of display, or explicit rules, and motivation and ability to control one's emotional expression (Halberstadt, 1991). Emotion has been defined as “a strong and complex feeling state that is consciously perceived, like anger, fear, happiness, or love” (Kabbaj, 2004, p.1010). These feelings, when experienced in relationship tend to foster closeness-related goals (Mikulincer, Shaver, Bar-On, & Ein-Dor, 2010).

Research has found that children who have the capacity to respond in emotionally appropriate ways relate better to others, show more prosocial behavior, and have positive relational outcomes later in life (Davidson, Pizzagalli, Nitschke, & Putnam, 2002). Stollak and Woike (1994) reported a benefit of fostering emotional responsiveness in children is that these children are better able to make contact with other people, become more deeply engaged in tasks, are better able to appropriately express themselves, and respond to others with more emotional connection. Miller and Eisenberg (1988) found that children who are able to respond with
constructive other-focused emotion tend to show more prosocial and helping responses to others and less aggression or antisocial behavior toward others. Robinson, Roberts, Strayer, and Koopman (2007) found greater emotional responsiveness contributes to greater empathy which in turn lowers the risk of juvenile delinquency status.

**Developmental stages and emotional responsiveness.** Emotionally responsive children are likely to respond to parents by demonstrating the ability to be warm, endearing, and affectionate. Emotional responsiveness takes on different characteristics based on the age of the child and their developmental stage. For example, a younger child may show emotional responsiveness by receiving or allowing physical affection when in distress whereas an older child may offer emotional support to another in distress (Sullivan, McCullough, & Stager, 1970). Differences among children of different developmental stages have been found with regard to emotional responsiveness. Zelko, Duncan, Barden, Garber, and Masters (1986) indicate these differences were most notable when parents were being asked about the young children’s likely response to morally relative issues like being honest or loyal. The parental reports reflect differing perceptions and expectations than the children concerning the same hypothetical scenarios indicating that most parents can see or understand developmental differences when children of different ages are considered for their age appropriate level of emotional responsiveness given some scenarios. Thus, a parent’s attunement to a child’s developmentally normal response may be reflected in that parent’s report of their child’s ability to respond appropriately in a given scenario.

**Broader relational context.** While the parent-child relationship has been one context for understanding emotional responsiveness in children, other contexts have also been considered. For example, sibling relationships have been studied for their effect on emotional
responsiveness and have been found to have an influence, particularly when younger children are influenced by older siblings (Sawyer, DeMulder, Blair, Auerbach-Major, & Levitas, 2002). Peer relationships have also been studied for their impact on the development of children’s emotional responsiveness. These relationships tend to reflect pro-social behaviors like emotional responsiveness and offer a perspective outside of direct parental or family influence. Costin and Jones (1992) state that “friendship was the central factor in facilitating emotional responsiveness and proposed prosocial interventions in young children. . . concern for the friend was more evident in the greater likelihood of a sympathetic response to the dilemma of a friend than of an acquaintance” (p.946). This finding supports the relational nature of emotional responsiveness and lends to the notion that it is best observed and measured in a relational context such as child emotional responsiveness to mother or child emotional responsiveness to father. As added support for this point, some studies have reported a change in children’s emotional state based on the feedback these children received from the other person in a relationship, including peer relationships (Hinde & Stevenson-Hinde, 1987; Iannotti, 1985; Costin & Jones, 1992). If relational cues are picked up and successful outcomes are realized, interpersonal competence may be realized by the child, which is among the primary criteria for successful childhood interpersonal development (Garmezy, 1975).

While emotional responsiveness may apply to many relationships, this study specifically focused on child emotional responsiveness to parents as measured by actual observation of child’s warmth, affection, ability to respond to warmth, and to show endearment. Easterbrooks and Biringen (2000) clarify that “child responsiveness. . . refers to the child’s age- and context-appropriate ability to explore on his/her own as well as to respond to the parent with genuine appropriate affect” (p.125) like the use of warmth and the ability to show endearment. The
purpose of this study was two-fold: to explore how family process, specifically family implicit rules, affects observed emotional responsiveness in preadolescent children and to examine whether child self regulation is a filter or mediating variable for the relationship between family implicit rules and emotional responsiveness to parents.

**Family process and emotional responsiveness.** Since the relational environment appears to be central to the development and observation of emotional responsiveness, interactional norms or unspoken rules in a family likely govern how family members related to each other. Emotional responsiveness in children is influenced by “the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to the child’s special needs and demands” (Baumrind, 1991, p. 62). This may indicate that implicit rules in the family group related to enjoyment, sharing and expressing feelings, and inclusion of friends are more likely to lead to attunement among family members which, in turn, could be likely to affect each person’s ability to be emotionally responsiveness. If these relationships are not governed by support, emotional attunement can be hampered which negatively affects emotional responsiveness (Feldner, 2004).

Easterbrooks & Biringen (2000) note that:

A parent cannot be viewed as emotionally available to the child when the behavior of a typically developing child indicates otherwise; similarly, the child cannot be viewed as emotionally available to the parent when the parent does not appear to be receptive to the child . . . optimal emotional availability does not mean, however, constant vigilance or unvarying responsiveness by either member of the dyad. In fact, in order to be optimally emotionally available, a dyad needs to allow for appropriate autonomy and individuation, particularly as the child develops. Thus, high sensitivity is not construed as
‘hovering’ or over-responsiveness. Similarly, optimal child responsiveness is not rejected in constant interaction at the expense of autonomy, particularly in low-stress contexts. Rather, the optimal degree of parental and child emotional availability refer to moderate and age appropriate qualities that are context-dependent (p.125).

It is likely that the implicit rules that develop out of redundant family interaction either encourage or hinder both parent and child emotional availability and responsiveness. According to Leen-Felder and colleagues (Leen-Feldner, Zvolensky, & Feldner, 2004), if the relationships are anxiety producing, emotional responsiveness will be negatively affected.

While generally observed and measured as a factor in a relational context, emotional responsiveness has also been observed in a parallel or mirroring type process as seen in one study where parents and children observed the same film with emotive themes. It appeared that parents and children were physically attuned to one another in their actions and even reflected similar physiological changes in heart and breathing rates (Eisenberg, Fabes, Carlo, & Troyer, 1992). Thus the relational context and the attunement of each person in the relationship may be factors which influence emotional responsiveness of both people in the relationship. Family norms or implicit rules that encourage fun, sharing of feelings, and inclusion of friends logically encourage family members to be more attuned.

One criticism of the existing research on emotional responsiveness is the reliance on self report questionnaires or self reported responses to hypothetical stories (Costin & Jones, 1992; Eisenberg, Fabes, Carlo, & Troyer, 1992). Only one other study was found in which emotional responsive behaviors in an interactional context were video taped and coded, but this study focused on preschool age children, mean age = 51 months (Bostwick, 1996). A strength of this
study is that child emotional responsiveness was measured by using observational coding for interactions between a preadolescent child and each of her/his parents.

Additionally, as another clear advantage to this study, much of the research on child emotional responsiveness has focused on children younger than 12 (e.g., Fabes, Eisenberg, & Eisenbud, 1993; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Dinero, Conger, Shaver, Widaman, & Larsen-Rife, 2008; Bostwick, 1996). There are no reported studies where the sample consisted of families and children of early adolescence.

**Family implicit rules as an aspect of family process.** Family process is viewed as a factor that can either facilitate or constrain personal and family functioning. Family theorists have conceptualized families as rule governed systems (Jackson, 1965; Broderick, 1990; Blevins, 1993; Constantine, 1986; Ford, 1983; Satir 1972) in which the rules develop out of redundant interactions or patterns in the behavioral exchanges of family members. Such rules are labeled implicit because family members usually do not explicitly talk about them openly. These rules are to be distinguished from overt or explicit family rules which are established in families through talk. Examples of explicit rules may be curfew times, consequences for not doing chores, and rules associated with parental discipline.

Family rules tend to be the way by which family tasks are accomplished (Hoopes & Harper, 1992); and may be the means of expressing the value systems underpinning family operations and regulation of expressions of emotion (Blevins, 1993). Some family rules are clearly understood from within and outside the family and can be overt in nature and clearly understood. However, some rules are less obvious and largely develop through repetitive family interactions (Jackson, 1965; Ford, 1983; Constantine, 1986; Nuechterlein, 1993). Family therapists have tended to be more interested in constraining family rules which impede
communication, fragment relationships, and stifle familial and personal growth (Blevins, 1993; Satir, 1988; Ford, 1983). Facilitative family process rules tend to be more flexible, promote openness, confirm each family member’s intrinsic self worth and dignity, encourage acceptance and love, serve the entire family, allow differences, and promote discovery of appropriate, functional, and acceptable behaviors (Goldenberg & Goldenberg, 1996; Blevins, 1993; Hoopes & Harper, 1992; Satir, 1988). Of particular note in this study are the facilitative family process rules related to family members having fun and enjoying each other, sharing and expressing, and the family being open and inviting to friends of family members.

Implicit family rules related to play among family members, sharing, and being open to friends of family members are likely to be related to the development of emotional responsiveness in family members, particularly children. From a conceptual, attachment theory perspective, such rules are postulated to create a family environment in which family members are more aware of each other, including an increased awareness of others’ emotions, and each other’s attitudes related to respect and valuing. These characteristics, in turn, create an emotional environment in which family members feel emotionally safe and are more likely to be attuned to each other in their exchanges. Such attachment attitudes and behaviors create an environment in which family members, especially children, develop greater emotional responsiveness. If these specific implicit rules are part of attachment bonds in families, then these system level rules are likely to be related to children’s self regulation since secure attachment has been found to be associated with self regulation (Hughes, 2007).

**Child Self Regulation: A Potential Mediating Variable**

Self regulation has been conceptualized at a broad level to include attentional, cognitive, or behavioral attempts to manage internal states or the external expression of emotion
Self regulation is also seen as a critical factor in one’s ability to moderate emotional states in a healthy or productive way, including how individuals select behaviors, coping strategies, and defensive strategies that regulate aversive affective states and maximize pleasurable ones (Blechman, Tinsley, Carella, & McEnroe, 1985). Developmental research and theory suggests that an essential component of children’s successful development is learning how to regulate emotional responses and related behaviors in socially appropriate ways, which is considered to be adaptive in helping a child attain his/her goals and manage negative emotion in a relational context (Cassidy, 1994; Trentacosta & Shaw, 2009).

Problematic behaviors may arise when self regulation is not fostered in children. Such behaviors may include acting out, sustained attention reduction, and reduced creativity, which have been associated with children being less able to generate ideas for problem solving (Butcher & Niec, 2005; Richard & Dodge, 1982). Butcher and Niec (2005) further conclude that “the ability to develop multiple solutions to problems is also essential for solving interpersonal difficulties”, which aids in “the ability to regulate affect, especially during conflictual situations, [and] aids children in modulating their affective level to use their cognitive skills to develop effective solutions to problems. Thus, where creative thinking is necessary, including interpersonal situations, classroom activities, and extracurricular activities, increased affect regulation ability could benefit children in a variety of situations” (p. 192).

Individuals with the ability to regulate themselves behaviorally, emotionally, and cognitively also have an increased capacity to control violence urges later in life (Davidson, Putnam, & Larson, 2000), have a more developed or refined sense of morality (Eisenberg, 2000), and have an increased capacity for emotional regulation, which can also affect one’s social well-being. Robinson, Emde, and Korfmacher (1997) report children who had higher self regulation
were also more likely to show increased levels of self efficacy. Emotional regulation can be a factor in clinical diagnosis as well. For example, emotional regulation has been considered a critical factor in the context of Borderline Personality Disorder (BPD) where regulatory problems abound (Coccaro, et al. 1989). Thus, children who have a greater capacity to regulate emotion may be more likely to avoid clinical issues.

**Developmental stage and self regulation.** Much of the existing literature regarding self regulation focuses on the early developmental years for children, usually ages two to six (Eisenberg, N., & Fabes, R. A. (Eds.), 1992; Eisenberg, Cumberland, & Spinrad, 1998), but not as often covering early adolescence or adolescence. In addition, and despite an abundance of research on environmental and parental emotion socialization in early childhood (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Brown, & Dunn, 1996), questions remain about specific socialization practices that foster or undermine children’s emotional competence in early adolescence and adolescence. Previous research has also seldom utilized observational measures in assessing emotional exchanges in parent-child interaction (Eisenberg et al., 1992, 1996, 1998). In this study, the important element of measuring child emotional responsiveness through observational measures is introduced.

**Family processes and self regulation.** Children’s self regulation may be influenced by several factors including family processes such as relationship with parents and quality of sibling relationship (Lunkenheimer, Shields, & Cortina, 2007; Padilla-Walker, Harper, & Jensen, 2010), and learned emotional responsiveness (Alessandri, Caprara, Eisenberg, & Steca, 2009). Roberts and Strayer (1996) found that emotional expressiveness and emotional insight were strong predictors of children’s ability to show empathy and exhibit prosocial behaviors with friends. Padilla-Walker, Harper, and Jensen (2010) also found that self regulation was an important
mediating variable of the relationship between parental closeness and depression, delinquency, and prosocial behaviors.

**Maternal and paternal Influence.** Some research tends to lean heavily on the mother’s influence in the development of the child’s self regulation. While contextually appropriate in some cases, this view lacks the consideration of the father’s influence. Some researchers have more recently begun to include both parents in the research reflecting the combined parental contribution and influence on the development of self regulation in children. These researchers have come to consider the contribution of both parents as valuable in understanding self regulation in children (Volling, McElwain, Notaro, & Herrera, 2002; Morris, Silk, Steinberg, Myers, & Robinson, 2007).

**Implicit rules and self regulation.** The authors postulated that specific implicit rules related to expressiveness, play, and inclusions of friends are likely to encourage self regulation among family members, especially children. In other words, these rules help create an environment in which children are better able to regulate themselves emotionally, cognitively, and behaviorally. Family implicit rules likely influence self regulation in this way (Lunkenheimer, et al., 2007), and have influence on learned emotional responsiveness (Alessandri, et al., 2009).

**Statement of Purpose and Conceptual Model**

The purpose of this study was to examine the relationship between specific family process rules including encouragement of play and fun among family members, sharing with each other, open acceptance of friends of family members, and a preadolescent child’s emotional responsiveness in actual behavior with parents. In this model it was hypothesized that child self regulation would be a mediating variable as children who are well regulated emotionally are
likely to have an increased ability to be emotionally responsive by showing warmth, affection, and endearment to mother and father. Figure 1 shows the hypothesized relationships among the variables. The hypotheses represented in that figure include:

- **Hypothesis 1**: Implicit family process rules will be positively related to child emotional responsiveness to father for boys and girls.
- **Hypothesis 2**: Implicit family process rules will be positively related to child emotional responsiveness to mother for boys and girls.
- **Hypothesis 3**: Implicit family process rules will be positively related to child self regulation.
- **Hypothesis 4**: Child self regulation will be positively related to child emotional expressiveness to father for boys and girls.
- **Hypothesis 5**: Child self regulation will be positively related to child emotional expressiveness to mother for boys and girls.
- **Hypothesis 6**: Child self regulation will be a significant mediating variable between family implicit process rules and child emotional responsiveness to mother and to father as determined by Sobel tests for boys and girls.

**Method**

**Participants**

The participants for this study were taken from Wave 1 of the *Flourishing Families Project* (FFP). The FFP is an ongoing, longitudinal study of inner family life involving families with a child between the ages of 10 and 14 at Wave 1. Participant families for the Flourishing Families Project (FFP) were selected from a large northwestern city and were interviewed early in 2007. Families were primarily recruited using a telephone survey database (Polk Directories/
InfoUSA). Families were identified using the Polk Directory were chosen based on the socio-economic and racial stratification of reports of local school districts. All families with a child between the ages of 10 and 14 living within target census tracts were considered eligible to participate in the study. Eligible families were subsequently contacted directly using multi-stage recruitment. In the initial contact, a letter of introduction was sent to potentially eligible families, and other contact came from interviewers who made home visits and phone calls to confirm eligibility and willingness to participate in the study. Once eligibility and consent were established, interviewers made an appointment to come to the family’s home to conduct an assessment interview.

In addition to the random selection protocol used with the survey database, families were recruited into the study through a family referral method wherein families were invited to identify two additional families in the recruitment area that matched study eligibility conclusion of their in-home interviews. This type of limited-referral approach permitted us to identify eligible families in the targeted area that were found in the Polk Directory. Broadening the approach and allowing for some limited referrals, made it possible to significantly increase the social-economic and ethnic diversity of the sample.

Through these recruitment protocols, a total of 692 potentially eligible families were identified within the survey database as living within the targeted census tracts. Of those, 372 were determined to have a child within the target age range. Of those, 64% agreed to participate ($n = 238$). Additionally, there were 372 families referred by participating families, 262 of whom agreed to participate (71%). The most frequent reasons cited by families for not wanting to participate in the study were lack of time and concerns about privacy. It is important to note that there were very little missing data. As interviewers collected each segment of the in-home
interview, questionnaires were screened for missing answers and double marking. For each question used in the statistical analyses here, there were fewer than four individual response items missing for each.

This study consisted of 337 two-parent families with a child between the ages of 11 and 14 (\(M\) age of child = 11.49; 51% male). Ninety-three percent of mothers and 90% of fathers reported being biological parents, 5% reported being adoptive parents, and 2% of mothers and 5% of fathers reported being step-parents. Eighty-three percent of mothers, 86% of fathers, and 80% of children were European American; 4% of mothers, 5% of fathers, and 3% of children were African American; 3% of mothers, 1% of fathers, and 5% of children were Asian American; 2% of mothers, 1% of fathers, and 2% of children were Hispanic; and 3% of mothers and fathers, and 11% of children indicated that they were “mixed/biracial” or of another ethnicity. Approximately twelve percent of families reported an income less than $25,000 per year, 16% made between $25,000 and $50,000 a year, and 72% made more than $50,000 per year. In terms of education, 60% of mothers and 70% of fathers reported having a bachelor’s degree or higher. Demographic characteristics of sample can be seen in table 1.

**Procedure**

Interviewers went to the homes of these families and administered questionnaires to each parent and the target child. In addition to completing questionnaires, family members participated in four video taped tasks: 15 minute mother-child task, 15 minute father child task, 25 minute couple task, and a 15 minute problem solving task. The two parent-child tasks are being used the present study. Discussion within these tasks was prompted by cards given to the participants who were asked to read the cards aloud and discuss the answers. These discussions, or tasks, served as the content for observational coding procedures. Discussion questions
included “What do I think have been some of my child’s biggest accomplishments during the past year? What sorts of things do I usually do with Mom/Dad? How do I know what’s going on in my child’s life, like in school, with friends, or other activities? What is something you have taught each other during the last month? What is something your child has taught you? How does Mom/Dad want me to act? What are her/his rules? How fair are her/his rules? What does Mom do when I do something she doesn’t like? Does she always do what she says she will do when this happens?”. A complete set of questions is contained in Appendix D.

**Indicators for Latent Variables**

The exogenous latent variable called expressiveness and shared decision making was created using individual items from the Family Implicit Rules Profile, FIRP (Harper, Stoll, & Larson, in press). The questionnaire was adapted to a shortened version for use in this study due to length concerns in the overall study questionnaire. Questions regarding facilitating family rules were included, while questions about constraining family rules were not. Both mothers and fathers responded to family rules questions. By using individual items as indicators, we allowed for optimum control of measurement error. These indicators were selected as a means to assess daily family life by examining how families create rules, maintain their potency, and how rules alter and change over the family developmental life cycle. They were also intended to show how rule governing behavior works together with other family processes to create family effectiveness in goal attainment. Subjects responded to a 5-point Likert scale as follows: 1=never 2=seldom 3=with some regularity 4=often 5=most of the time. Sample questions include, “Play; have fun together”, “Share feelings with other family members”, “make decisions together as a family” and “Allow other family members to help solve your problems”. The subscale reliability coefficients for these are as follows: .84 (kindness), .94 (expressiveness and
shared problem solving), .88 (monitoring), and .92 (false image and constraining feelings/thoughts). The reliability coefficients for this subscale in the Flourishing Families sample was .79 for mothers and .83 for fathers. Factor loadings for these items ranged from .74 to .93 (Harper, Stoll, & Larson, in press). Studies have shown validity for the FIRP, such as Stoll (2007, 1999), which found the FIRP has predictive validity with clinical and non-clinical samples, and Gillett et. al (2009), which found the FIRP had predictive validity between eating disordered and non-eating disordered populations.

**Child self regulation.** The latent mediating variable, Self Regulation, was created using two indicators, the child’s self report of self regulation and the mother’s report of her child’s self regulation. Father’s report was not measured in the first wave of this study. The child’s ability to regulate negative emotions and disruptive behavior, and regulating cognition to set and attain goals was assessed using a 13-item measure designed by Novak & Clayton (2001). Responses ranged from 1 “never true” to 4 “always true”. Sample items included: (a) “I have a hard time controlling my temper” and (b) “I get distracted by little things”. The items were reverse scored and summed so higher scores represent greater ability to regulate negative emotion and behavior, and to set and reach goals. Scores potentially ranged from 13 to 52. Previous Cronbach’s alpha coefficient in the original study was .95 for the total scale. Cronbach’s alpha coefficients for the sample in this study were .72 for child’s report and .83 for mother’s report. Items loaded well on the overall scale as shown with confirmatory factor analysis with factor loadings ranging from .73 to .89 (Martin et al., 1994). Confirmatory factor analysis also showed a good fit of the items to the scale with factor loadings ranging from .69 to .90 (Dawes, Dorn, et al., 1997).

**Emotional responsiveness.** The latent variables for children’s emotional responsiveness were created using scores given by trained coders to specific behaviors of the children toward
their mothers and toward their fathers using the Iowa Family Interaction Rating Scales (Melby, et. al., 1998).

The latent variables for emotional responsiveness to father and emotional responsiveness to mother were four behavior codes including: Warmth, Affection, Escalate Warmth, and Endearment. Indicators for the child’s responsiveness toward father were the same four behavior codes given to the child’s behavior during the task with mother. Potential scores for each behavioral code range from 1 to 9 with 1 indicating no presence of the behavior in the interaction task and 9 indicating that this behavior was highly characteristic of the child throughout the task.

Warmth assesses the focal’s tendency to escalate his/her own warm and/or supportive behaviors directed toward another interactor. Examples of statements that would be coded as warmth include: “We enjoy being together. It’s fun to be with you”, and “You did a good job on your math test, but you always do well because you are such a good student.” Interrater agreement for this code was .77.

Affection is any positive, affectionate physical contact, including hugs, caresses, touches, kisses, tickles, or patting or stroking another’s arm, back, etc. these observed behaviors in the dyadic interaction between parent and child are scored as physical affection. This scale is scored based on the inherent warmth and affection expressed by the physical behavior. Examples of behaviors coded for this scale include: hugs, kisses, touching arm, stroking head, back, hair, etc. Interrater agreement for this scale was .90

Escalate Warmth is the child’s tendency to escalate his/her own warm and/or supportive behaviors directed toward another interactor. Escalate Warmth/Support is coded if the focal follows one warm/supportive behavior with another such behavior or if the original behavior has intensified. All behaviors coded as Warmth/Support (e.g., praise, caress, affirm, approve,
empathize, admire, etc.), including Endearment and Physical Affection, are examples of statements or behaviors that would be coded for this scale. Examples include (a) “You’re beautiful, and (b) you’re smart, too”, and “You’re doing a lot better, A lot better”. The child would then be observed to see if they responded in a developmentally appropriate way. Inter rater agreement for this scale was .85.

Endearment involves expressions of personalized and unqualified approval of another interactor that convey extreme commitment, intimacy, caring, and global compliments regarding another’s personal characteristics and statements that attribute ongoing/global favorable or positive characteristics to another interactor. Examples of statements that would be coded include: (a) “Hello, beautiful”, (b) “I’m proud of how well you two do in school”, (c) “We’re proud of how well you handle things when we’re gone” (Melby et al., 1998). As with Escalate Warmth, the child would then be observed to see if they responded in a developmentally appropriate way. Interrater agreement was .85 for this scale.

Control Variables

Control variables in the study included gender of child to address the possibility that girls may have an increased natural ability to emotionally regulate (Bostwick, 1996), the age of child to address the possibility that older children have an increased ability to regulate emotion due to development and maturity, birth order of child since the second and fourth children tend to be more emotionally expressive (Hoopes & Harper, 1992), and size of family since larger families may be more emotionally taxing for parents and leave less direct interaction between parent(s) and individual children.
Training of Observational Coders

Training for observational coders was conducted over several weeks. Each coder was first asked to read the coding manual and then participated in a series of mini-tests designed to further familiarize coders with different codes in the Iowa Family Interaction Rating Scales (Melby, et al., 1998). They were then asked to code a parenting task and participate in discussion groups with trained coders. After completing several practice tasks and participate in discussion groups, they then coded a task that had been coded by certified coders at the Iowa State Coding Lab. They were required to achieve 80% agreement with the Iowa Coders (Melby & Conger, 2001). In addition, the coders rated tasks that had been coded by other certified coders in the BYU coding lab, and their performance in terms of inter rater reliability was tracked over a period of weeks. When a coder was consistently reaching 80% inter rater agreement, they were certified to code actual research tasks. Becoming a certified coder took an average of 90 hours per coder. Actual coding performance based on interrater reliability scores was carefully tracked on a weekly basis for each coder, and if a coder drifted from the 80% standard, they were asked to participate in coder group meetings where the group coded a task together.

When approaching a task, coders were first asked to watch the tape through to get a general feel for the interaction. They were then asked to flip a coin to choose which person, parent or child, would become the focal for the first round of coding. Based on frequency, intensity, and context, coders then assigned a rating to that person ranging from 1 (not at all characteristic) to 9 (totally characteristic) for 30 codes including the codes for warmth, reciprocate warmth, endearment, and affection used in this study.
Tasks were assigned to a primary coder, and for purposes of determining inter rater agreement, 30% of tasks were assigned to a secondary coder in such a way that neither the primary or secondary coder was aware that the task was being double coded.

**Analysis**

Multiple group analysis in Structural Equation Modeling (Kline, 2005) via AMOS 16 (Arbuckle, 1998) was used to compare both the measurement errors and the structural paths in the sample. First, means and standard deviations were calculated for all variables in the sample. Second, correlations between all latent variables were calculated. Then factor loadings of each indicator on the respective latent variable were examined, and any items that loaded below .50 were dropped. Two groups (male children vs. female children) were identified and used in multiple group comparison in AMOS to determine if there were significant difference in the strength of the paths between male children and female children. A fully constrained model was compared to a fully unconstrained model, and a Chi Square difference test was used to determine if the differences in the Chi Square values and degrees of freedom for the two models were statistically significant. This test showed that the differences were statistically significant, and the specific test values are reported below under results. In general, a model is considered to be a good fit if the Chi Square is not significant, and CFI is above .95, and the RMSEA is less than .05.

**Results**

The purpose of this study was to examine the association between specific family implicit rules related to sharing feelings, family members knowing friends, and playing/having fun
together and child emotional responsiveness to mother and to father with child self regulation as a mediating variable.

Descriptive statistics including correlations, means and standard deviations were first examined. As can be seen from Table 2, the mean score for the summed implicit family rules was 24.09 (S.D.=4.07) meaning that the families in this sample were on average likely to be expressive, know friends, and to be moderately playful. The mean self regulation of 36.42 (S.D.=5.80) means that the children in the sample moderately self regulated since the scores range from 13 to 52. The mean score for child emotional responsiveness to mother was 12.22 (S.D.=5.05) and for child emotional responsiveness to father was 13.43 (S.D.=5.47) which means the children were somewhat emotionally responsive to both parents since possible scores range from 4 to 36. The differences in emotional responsiveness to mother and to father were not significantly different.

In terms of correlation, there was a strong, significant, positive correlation (r=.47, p<.001) between observed emotional responsiveness to mother and implicit family rules, and there was a small, significant correlation (r=.12, p<.01) between observed emotional responsiveness to father and family implicit rules. Implicit Family Rules were significantly correlated with child self regulation (r =.28, p<.001), and child self regulation was significantly correlated with both emotional responsiveness to mother (r=22, p<.01) and with emotional responsiveness to father (r=.24, P<.01). Other correlations of interest were observed emotional responsiveness to mother and observed emotional responsiveness to father (r=.45, p<.001). The mean score for emotional responsiveness to father (13.43) was slightly higher than the mean score for emotional responsiveness to mother (12.22), but these differences were not statistically significant. 

After examining the above descriptive statistics, in the next step, confirmatory factor analysis was used to determine how well each indicator loaded on the respective latent variables. All measures loaded above .50 so none were dropped from the model.

As seen in Figure 2, family implicit rules were positively related to observed child emotional responsiveness to mother for sons ($\beta=.22$, $p<.001$) and for daughters ($\beta=.55$, $p<.001$). Family implicit rules were positively related to observed emotional responsiveness to fathers for sons ($\beta=.13$, $p<.05$) but not for daughters ($\beta=.09$). Family implicit rules were significantly related to child self regulation for both male children ($\beta=.31$, $p<.001$) and for female children ($\beta=.24$, $p<.001$). Child self regulation was related to emotional responsiveness to mother for both sons ($\beta=.23$, $p<.001$) and daughters ($\beta=.21$, $p<.001$). Child self regulation was also significantly related to emotional responsiveness for father for both sons ($\beta=.15$, $p<.01$) and daughters ($\beta=.27$, $p<.001$).

To determine whether the strength of the paths were different for sons than for daughters, multiple group analysis in AMOS 16.0 (Arbuckle, 2007) was used to analyze the Structural Equation Model shown in Figure 1. A fully unconstrained model (all paths were allowed to vary between male children and female children) was compared with a fully constrained model in which all paths were constrained to be equal between male and female children. Chi Square for girls was 213.39; for boys Chi Square was 159.74. The differences between the two the chi square values and the two p values were computed ($213.39-159.74=53.65$; $p$ difference=$184-164=20$). The chi square difference of 53.65 was significant for 20 degrees of freedom. Consequently, the models were then compared in a by constraining each path at a time to determine where the significant differences were. Paths that were significantly different by child gender were: (1) the relationship from family implicit rules to emotional responsiveness to mother
with the coefficient being stronger for daughters; (2) from family implicit rules to child self regulation with the coefficient being stronger for sons; and (3) the relationship from child self regulation to emotional responsiveness to father with the coefficient being stronger for daughters.

The goodness of fit statistics indicated the model was a good fit with the data ($X^2=159.72, df=166, p=.38, CFI=.998, RMSEA=.01$). Sobel tests (Preacher & Hayes, 2008) were conducted to determine if the indirect paths through child self regulation indicated significant mediation. The paths from family implicit rules through child self regulation to emotional responsiveness to mother and emotional responsiveness to father were both significant for sons (Sobel=2.53, $p<.05$ for emotional responsiveness to mother; Sobel=2.12, $p<.05$, for emotional responsiveness to father). and for daughters (Sobel=2.11, $p<.05$ for emotional responsiveness to mother; Sobel=2.15, $p<.05$ for emotional responsiveness to father). What this means is that child self regulation partially mediated the relationship between family implicit rules to emotional responsiveness to mother for both male children and female children. It appears then that child self regulation is one of the processes through which the effect of family implicit rules is filtered to, in turn, be related to children’s emotional responsiveness to mother. The same was true for daughters in that family implicit rules were filtered through child self regulation to children’s emotional responsiveness to fathers. In the case of daughters, the relationship between family implicit rules and emotional responsiveness was fully mediated since there was no significant relationship between family implicit rules and emotional responsiveness to fathers, but there was a significant path from implicit rules to child self regulation and from self regulation to emotional responsiveness to father.
Discussion

This study examined the relationship between family process and a child’s ability to be emotionally responsive to parents. Specifically, family implicit rules, a family process construct never before studied in relationship to child’s ability to be emotionally responsive to parents, was significantly related to both son’s and daughter’s emotional responsiveness to mothers. We hypothesized that implicit family process rules will be positively related to child emotional responsiveness to father for boys and girls and that implicit family process rules will be positively related to child emotional responsiveness to mother for boys and girls. We found that implicit rules were related to emotional responsiveness to father only for sons, but not for daughters. The coefficients were stronger for observed emotional response to mothers. This is supported by Padilla-Walker, Harper, & Jensen (2010) who found girls showed an increased ability for self regulation as compared to boys. This could also be due to what Kochanska and Aksan (2004) noted as a parent’s increased ability to show responsiveness to their children’s bids for connection and is supported by what Feshbach (1987) reported as a mother’s increased ability to offer emotional support to a child’s bid for security. This, in turn, may increase the likelihood of that child’s emotional response to the parent. In other words, it may be that mothers are more emotionally in-tune with the child’s emotional bids for connection, which in turn may evoke more emotional responsiveness from the child. This is supported by Easterbrooks and Biringen (2000) who highlight the dyadic nature of emotional responsiveness and indicate the need for each parent and the child to be actively participating in the relationship for increased responsiveness to occur.

This highlights the possibility that, if a parent is more or less engaging emotionally, it may have an effect on the child’s observed emotional responsiveness. Observed child emotional responsiveness to mothers was strong for sons and daughters, but only sons showed strong
observed emotional responsiveness to fathers. Kochanska and Aksan (2004) noted in their study that mothers were more responsive than fathers to a child’s early bids for connection, and this may be related to later relational patterns. However, this does not explain why daughters would respond differently to fathers compared to sons.

Researchers have suggested repetitive family processes and patterns set the stage for family rules (Jackson, 1965; Ford, 1983; Constantine, 1986; Nuechterlein, 1993). Perhaps mother’s and father’s presence and availability in the family interactional setting may contribute to the difference. It may also be possible that a father’s relational approach is more anxiety producing for daughters than for sons. This would be supported by what Bostwick (1996) found with pre-school age children. It appears anxiety can also have an effect. Leen-Feldner, Zvolensky, & Feldner (2004) noted anxiety as an important factor in the development of a child’s emotional responsiveness to parents and suggest emotional responsiveness will be negatively affected if anxiety is present. In other words, it may be possible that the presence of anxiety stifles the healthy development of emotion and may result in a reluctance or inhibited emotional ability in children. Additionally, Alessandri, et al. (2009) concluded that emotional responsiveness is largely learned, and the findings in this study may reflect a difference in how daughters and sons learn to respond to mothers and fathers. For example, since emotional responsiveness is generally defined as the ability to select or engage in an effective emotional coping strategy, including the effective expression of appropriate emotion, children who are using a coping strategy to engage in the parent-child relationship may be observed as being more or less emotionally responsive (Goodvin, Carlo, & Torquati, 2006; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Eisenberg, Fabes, Carlo, & Troyer, 1992). It also follows
that a child who responds well emotionally is using an effective coping strategy within the given parent-child relationship.

When considering multiple dimensions of empathy, including affective responsiveness, Derntl, et al. (2010) conducted research using a functional MRI aimed at understanding how males and females may be different in how they actually respond neurologically to activating tasks involving emotion. They found differences between male and female subjects, namely that males and females process emotion differently based on self-awareness and socio-emotional behavior. In other words, males and females literally used different neurological pathways to process and respond emotionally. Derntl et. al.’s findings may be related to the findings of this study that the relationship between family implicit rules and observed emotional responsiveness differed by gender of child and by gender of parent.

Goodvin, Carlo, and Torquati (2006) examined the role of children’s traits related to emotional responsiveness, and it is possible that some of the observed differences may be understood through a “trait lens”, meaning it could be that some children simply have a greater capacity for emotional responsiveness from birth or because of some innate ability to respond better than other children. Lovas (2005) found gender differences in emotional communication and affect regulation during early mother–child interactions that are consistent with later gender differences in relational behavior. In their study, both self report and observational coding were used to collect data. They reported that mother–daughter dyads displayed the highest emotional communication scores, followed next by mother–son, then father–daughter, and finally father–son dyads for all variables but hostility, which by 24 months was higher in same-sex than in opposite-sex dyads. This seems to indicate gender of the child and gender of the parent may have an effect on emotional responsiveness.
Emotional responsiveness also takes on different characteristics based on the age of the child and their developmental stage. Responsiveness may also be influenced by developmental changes in parents and in relationships. In one study (Kochanska & Aksan, 2004), mothers were more responsive than fathers; children were equally responsive to both parents and coherent in their responsiveness. This finding is related to Baumrind’s (1991) ideas that “the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to the child’s special needs and demands” (p. 62).

In this study where the children being considered are average age of 11 years, they may show more emotional responsiveness by receiving or allowing physical affection whereas an older child may offer more verbal emotional support as a result of emotional maturity (Sullivan, McCullough, & Stager, 1970). This age appropriate context may lend support to what Easterbrooks and Biringen (2000) clarify when they state: “child responsiveness. . . refers to the child’s age- and context- appropriate ability to explore on his/her own as well as to respond to the parent with genuine appropriate affect” (p.125).

We further hypothesized that implicit family process rules will be positively related to child self regulation; that child self regulation will be positively related to child emotional expressiveness to father for boys and girls; that child self regulation will be positively related to child emotional expressiveness to mother for boys and girls; and child self regulation will be a significant mediating variable between family implicit process rules and child emotional responsiveness to mother and to father as determined by Sobel tests for boys and girls. Child self regulation was positively related to particular Implicit Family Rules that had themes related to fun, openness and connection to friends in the child’s life. Questions such as “Play; have fun together”, “Share feelings with other family members”, “make decisions together as a family”
and “Allow other family members to help solve your problems” were related to children’s self-regulation in this study. These facilitative family process rules have been theorized to be more flexible, promote openness, and encourage acceptance and love (Hoopes & Harper, 1992; Goldenberg & Goldenberg, 1996; Blevins, 1993; Satir, 1988). While the design of this study did not allow for circular relationships among these two variables, it may also be that child self-regulation helps to form more facilitating implicit family rules.

Marriage and family therapists may benefit from these findings by striving to help individuals, couples, and families to foster and/or develop a familial environment that encourages playfulness, sharing, and openness in family process. Given these findings, family therapists could structure a therapy session to limit anxiety producing behaviors, particularly from fathers, and encourage the sharing of experiences by children. This might take the form of asking parents to encourage a child to share their feelings and experiences and reserve an immediate reaction rather than risk a negative response that could stifle the child’s sense of security and cause them to hesitate to share any further. Games and other exercises that are less structured and have more playful content could be used to facilitate this process as well. Further therapeutic consideration could be given to the relational nature of emotional responding. A couple may be seeking parental help might not realize the impact their openness and inclusion of the child’s feelings and interests may have. For example, a couple seeking help to deal with a difficult child could be encouraged to share their feelings about an issue and the parents could include that child in the family decision making process offering genuine regard for their contribution and perhaps giving open praise for the ideas given. In addition, marriage and family therapists could also encourage families to structure some time to play and have fun together as a therapy assignment. Since facilitative family process rules tend to be more flexible,
promote openness, confirm each family member’s intrinsic self worth and dignity, encourage
acceptance and love, serve the entire family, allow differences, and promote discovery of
appropriate, functional, and acceptable behaviors (Goldenberg & Goldenberg, 1996; Blevins,
1993; Hoopes & Harper, 1992; Satir, 1988), therapy activities and assignments born of these
themes should lend well to fostering children’s ability to regulate behavior and emotion. In turn,
based on findings from this study, children should become more emotionally responsive to
parents.

Parental awareness may also be fostered to increase the likelihood that “implicit” rules
become “explicit” and open up for consideration and adaptation, especially in the case of
constraining family process rules. Clinicians could use the Family Implicit Rules Profile
(Harper, Stoll, & Larson, in press) in the therapy process to introduce and measure the implicit
rules in a family. This would offer a baseline to structure therapeutic goals and planning and
begin the progression from implicit to explicit simply by bringing them out of implicit obscurity
through identification.

Clinicians would also do well to remain aware of possible family of origin themes that
may indicate a mother or father is simply repeating a family pattern outside of conscious
awareness. Genograms could be used to stimulate discussion about family or origin patterns and
rules, and/or the FIRP could be used with the client having their family of origin in mind while
responding.

Clinicians could also seek the feedback of children about family processes they would
like to see more or less of. For example, a child might report they “like it when dad just talks
with them”, a feature that has now been made explicit and could then be increased in the family
process. This conscious practice might have otherwise gone unmagnified due to a lack of explicit awareness by the father as to the value of this action to the child.

Limitations of this study include the fact that this study was conducted in only one metropolitan area of the United States, and while sample diversity was sought, racial minorities in the sample were primarily African American. This study was also cross-sectional so no conclusions about causality between the variables can be made. Future studies should consider investigating the relationship between implicit rules, self regulation, and observed parent child interaction using the longitudinal data that will be gathered by the Flourishing Families Project. Another area of potential limitation lies in the fact that this study did not consider how emotionally responsive parents were in the interactional tasks. The results of this study suggest a difference in how children response to mothers and fathers which may be accounted for as more understanding of each parent’s individual emotional regulation or ability to respond emotionally to children is considered. This study did not control for the fact that some children in these families were “only children” whereas others had siblings. This may have an effect on emotional regulation and emotional responsiveness since sibling relationships can affect emotional responsiveness, particularly when younger children are influenced by older siblings (Sawyer, DeMulder, Blair, Auerbach-Major, & Levitas, 2002).

The findings of this study raise several interesting research questions. There is a need for a study that examines specific interaction differences in mother-son, father-son, mother-daughter, and father-daughter dyads. Future research should also investigate how parents’ behavior in the interactional task influences children’s emotional responsiveness. Furthermore, research aimed at understanding the dyadic nature of responsiveness could help researchers and
clinicians how to enhance the relational nature of emotional connection between parents and
children.

Another area of potential future research could be aimed at understanding the potential circular relationship between emotional responsiveness and family implicit rules. Longitudinal studies would help answer which of these variables tend to “drive” the other.

**Conclusion**

This study examined the relationship of a family process variable, implicit rules, to children’s emotional responsiveness to parents. Very few studies have examined how family level variables affect children’s emotional responsiveness. Another strength of this study is that children’s emotional responsiveness was based on observation of behavior in a father-child and a separate mother-child discussion based task. Findings showed that specific rules about having fun together, sharing and expressing feelings, and family knowing friends were related to increased emotional responsiveness and child regulations was a significant mediator of this relationship.
References


Dawes, M. A., Dorn, L. D., Moss, H. B., Yao, J. K., Kirisci, L., Ammerman, R. T., & Tarter,


# Tables

**Table 1.** Demographic Characteristics of Sample (N=296 families)

<table>
<thead>
<tr>
<th></th>
<th>Fathers</th>
<th>Mothers</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>45.38(6.10)</td>
<td>43.49(5.32)</td>
<td>11.18(.95)</td>
<td>11.26(.97)</td>
</tr>
<tr>
<td><strong>Percentages</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Race</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>86.4%</td>
<td>82.8.0%</td>
<td>81.3%</td>
<td>79.5%</td>
</tr>
<tr>
<td>African Am</td>
<td>5.1%</td>
<td>4.1%</td>
<td>4.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.0%</td>
<td>3.0%</td>
<td>2.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Asian American</td>
<td>2.0%</td>
<td>4.4%</td>
<td>4.2%</td>
<td>4.1%</td>
</tr>
<tr>
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<td>2.0%</td>
<td>0.0%</td>
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<td>3.7%</td>
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<td>Parents’ Education</td>
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<td></td>
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<td>1.4%</td>
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<tr>
<td>High School Diploma</td>
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<td>4.4%</td>
<td>--</td>
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<tr>
<td>Some College</td>
<td>25.9%</td>
<td>23.7%</td>
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<td>--</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>38.6%</td>
<td>41.4%</td>
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<tr>
<td>Grad/Professional Degree</td>
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<td>29.1%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Household Income</td>
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<td></td>
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<tr>
<td>Under $15000</td>
<td>4.2%</td>
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<td>$15001-24999</td>
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</tr>
<tr>
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<td>6.5%</td>
<td>4.5%</td>
<td></td>
<td></td>
</tr>
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<td>$150,000+</td>
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<td>4.1%</td>
<td></td>
<td></td>
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<td>Missing</td>
<td>3.0%</td>
<td>1.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Size</td>
<td>4.37 (1.03) 3-9 range</td>
<td>4.42 (1.00) 3-9 range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>96.3%</td>
<td>96.9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabiting</td>
<td>3.7%</td>
<td>3.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

M = mean; (SD) means standard deviation
Table 2. Correlations, Means, and Standard Deviations for Latent Variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>1. Implicit Family Rules</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Child Self Regulation</td>
<td>.28***</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Observed Emotional Responsiveness/Mother</td>
<td>.47***</td>
<td>.22**</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>4. Observed Emotional Responsiveness/Father</td>
<td>.12*</td>
<td>.24**</td>
<td>.45***</td>
<td>1.0</td>
</tr>
<tr>
<td>M</td>
<td>24.09</td>
<td>36.42</td>
<td>12.22</td>
<td>13.43</td>
</tr>
<tr>
<td>SD</td>
<td>4.07</td>
<td>5.80</td>
<td>5.05</td>
<td>5.47</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001
Figures

Figure 1. SEM Model of Child Emotional Responsiveness With All Variables
Figure 2. SEM Results with Standardized Betas for Statistically Significant Paths in Model.

*\( p < .01 \), **\( p < .05 \), ***\( p < .001 \)

\( \chi^2 = 159.74, df = 166, p = .38 \)

\( CFI = .998, RMSEA = .01 \)

(Values for girls are placed under values for boys)
Appendix

Appendix A: Consent to be a research subject

Consent to be a Research Subject

Introduction
This study is being conducted by members of the Flourishing Families Project, with researchers from Brigham Young University. You were selected as a possible participant family for this study because your child is a 10-13 year-old in the Seattle area.

Procedures
Participation in this study involves an in-home interview that will last approximately 2 ½ hours. In this interview we will explain the study to you and give you a series of surveys for you and your child to complete. These surveys will ask you questions about your family, how you relate with each other, your family goals, and other aspects of your family life. The surveys will take about 1 ½ hours for parents and about 40 minutes for the child to complete. During this visit we will also have your family do some discussion activities. We will video tape these discussions (with the interviewer leaving the room) so we can better record your responses. Also, as part of your participation, we are asking that you sign a release form to provide the Flourishing Families Project with access to your child’s school record information (e.g., grades, WASL, truancy, and attendance). Local school districts will only release your child’s information with parental consent. Your child’s school record information will remain confidential and will only be used in conjunction with the purpose of the study outlined here.

Risks/Discomforts
There are minimal risks for participation in this study. However, you may feel emotional discomfort when answering questions about personal beliefs or family interaction patterns. When participating in the video-taped activities, it is possible that you may feel uncomfortable when talking in front of others. The researchers will not be in the room during your family discussions.

Benefits
There are no direct benefits to subjects. However, it is hoped that through your participation researchers will learn more about family life and be able to assist educators and professionals who serve families.

Confidentiality
All information provided will remain confidential and will only be reported as group data with no identifying information. All data, including questionnaires and tapes/transcriptions from the discussion activities, will be kept in a locked storage cabinet and only those directly involved
with the research will have access to them. After the research is completed, the questionnaires and tapes will be destroyed.

**Compensation**
Participants will receive Visa cash cards for completing the questionnaire. Your family will receive Visa cash cards totaling $200 dollars (a $150 card will be given for parent participation, and a $50 card will be given to your child). During the interview you may decline to answer questions; however, both parents and the child must complete at least 80% of the interview to receive the Visa cash card compensation.

**Participation**
Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate.

**Questions about the Research**
If you have questions regarding this study, you may contact Dr. Randal D. Day at 801-422-6415, day@byu.edu or Dr. James M. Harper at 801-422-3819, james_harper@byu.edu.

If you have questions you do not feel comfortable asking the researcher, you may contact Dr. Renea Beckstrand, IRB Chair, at (801) 422-3873, or at renea.beckstrand@byu.edu.

**CONSENT SIGNATURES**
I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature:_______________________________________       Date:_____________
*Parent*

Signature:_______________________________________       Date:_____________
*Parent*

**RESEARCHER STATEMENT**
I have discussed the above points with the child. It is my opinion that the participant understands the risks, benefits, and procedures involved with participation in this research study.

Signature:_______________________________________       Date:_____________
*Interviewer*
Consent to be a Research Subject

CONSENT SIGNATURES

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature: ___________________________ Date: ____________
Parent

Signature: ___________________________ Date: ____________
Parent

RESEARCHER STATEMENT

I have discussed the above points with the child. It is my opinion that the participant understands the risks, benefits, and procedures involved with participation in this research study.

Signature: ___________________________ Date: ____________
Interviewer
Appendix B: Iowa Family Interactional Rating Scales

IOWA FAMILY INTERACTION RATING SCALES

Dyadic Interaction Scales Used

Warmth/Support (WM) measures the degree to which the focal expresses liking, appreciation, praise, care, concern, or support for the other person

Physical Affection (AF) Any positive, affectionate physical contact, including hugs, caresses, touches, kisses, tickles, or patting or stroking another’s arm, back, etc

Escalate Warmth/Support (EW) The focal’s tendency to escalate his/her own warm and/or supportive behaviors directed toward another interactor

Endearment (ED) Expressions of personalized and unqualified approval of another interactor that convey extreme commitment, intimacy, caring, and global compliments regarding another’s personal characteristics and statements that attribute ongoing/global favorable or positive characteristics to another interactor.

The Iowa Family Interaction Rating Scales

(Underlined scales are considered for use in this study)

A. Individual Characteristic Scales

1. Physically Attractive (PA)
2. Humor/Laugh (HU)
3. Sadness (SD)
4. Anxiety (AX)
5. Whine/Complain (WC)
6. Externalized Negative (EX)
7. Positive Mood (PM)
8. Defiance (DF)
9. Compliance (CP)
10. Rater Response (RR)
B. Dyadic Interaction Scales

1. Hostility (HS)
2. Verbal Attack (VA)
3. Physical Attack (AT)
4. Contempt (CT)
5. Angry Coercion (AC)
6. Escalate Hostile (EH)
7. Reciprocate Hostile (RH)
8. Dominance (DO)
9. Lecture/Moralize (LM)
10. Interrogation (IT)
11. Denial (DE)
12. Warmth/Support (WM)
13. Endearment (ED)
14. Physical Affection (AF)
15. Escalate Warmth/Support (EW)
16. Reciprocate Warmth/Support (RW)
17. Assertiveness (AR)
18. Listener Responsiveness (LR)
19. Communication (CO)
20. Prosocial (PR)
21. Antisocial (AN)
22. Avoidant (AV)
C. Dyadic Relationship Scales

1. Silence/Pause (SP)

2. Relationship Quality (RQ)

**Warmth/Support (WM)**

Rate: All (Dyadic Interaction)

This scale measures the degree to which the focal expresses liking, appreciation, praise, care, concern, or support for the other person. Take into account three types of behavior: NONVERBAL COMMUNICATION, such as affectionate touching, kissing, and loving smiles; SUPPORTIVENESS, such as showing concern for the other’s welfare, offering encouragement, and praise; and CONTENT, such as statements of affirmation, empathy, liking, appreciation, care, and concern. In general, rate how much the focal demonstrates care and support for the other. In scoring *Warmth/Support*, look for combinations of behaviors and weigh affect and nonverbal behaviors more heavily than content of statements.

1 = Not at all characteristic:

The focal displays no discernible examples of warmth or support toward the other. The focal does not go out of his/her way to be warm/supportive (interested in and affirming) of the other at any time.

2 =

3 = Minimally characteristic:

The focal exhibits some evidence of low-intensity behaviors that demonstrate warm/supportive caring, concern, and encouragement toward the other, but these behaviors quickly disappear. Examples of low-intensity *Warmth/Support* are: encouraging comment or interested question, or an understanding look with a smile, etc., that are genuinely warm/supportive. Simply attending does not warrant a ‘2’ or ‘3’ unless accompanied by warmth such as an affectionate smile or empathic expression, or some other indication of *Warmth/Support*.

4 =

5 = Somewhat characteristic:

There are several times when the focal expresses a moderate degree of concern, warmth, support, encouragement, praise, or affection or attempts to draw out the other person in a warm/supportive manner. There is some clear evidence that the focal occasionally is trying, for example, to praise, affirm, empathize with, or in some other manner demonstrate *Warmth/Support* to the other.

6 =

7 = Moderately characteristic:

The focal fairly often shows warmth and support or demonstrates more intense warmth and support. The focal may express interest in and attend to the other’s comments in a warm/supportive manner. The focal shows positive nonverbal gestures, such as warm smiles, and/or occasional affectionate touching. The focal fairly often attempts, for example, to praise, affirm, empathize with, or in some other manner demonstrate *Warmth/Support* to the other.

8 =

9 = Mainly characteristic:

The focal is characterized as being highly warm and/or supportive. The focal frequently may show high warmth and support by offering a high degree of encouragement and praise, and/or the focal may display a high degree of affectionate touching, warm smiling, and/or positive
comments about the other. He/she may actively elicit information about the other’s concerns in a warm/supportive, interested manner. The focal displays genuine interest in and affirmation of the other.

Clarifications: **Warmth/Support**

1. **Warmth/Support** may be displayed through some combination of the following behaviors in such a manner that conveys genuine interest in and affirmation of the other person:
   a. Nonverbal communication:
      (1) physical affection - caresses, hugs, kisses, gentle touches, light tickling
      (2) physical gestures - warm smiles, winks, thumbs up sign, O.K. sign,
      (3) body posture - tilting head toward other, leaning closer toward other
      (4) eye contact - gazing affectionately into the other’s eyes, eye contact that connects and lingers with the other
      (5) facial expressions - displays of sympathy, understanding, encouragement, approval, etc.
   b. Supportiveness:
      (1) shows interest in the other’s welfare
      (2) shows interest in the other’s concerns
      (3) willingly changes own behavior for the other
      (4) offers encouraging comments and praise
      (5) empathetic
      (6) expresses warmth, concern, sympathy toward the other person
      (7) encourages other person
      (8) flatters, compliments other person
      (9) minimizes other person’s self-deprecatory statements
      (10) reassures the other
   c. Content:
      (1) affirmation
      (2) praise
      (3) encouragement
      (4) approval
      (5) validation
      (6) empathy
      (7) support
      (8) gratitude
      (9) appreciation

2. The focal who scores high in **Warmth/Support** is generally positive and affirming and indicates a high level of support and/or understanding of another person’s feelings or emotions. *Young children who score high on Warmth/Support are generally affectionate and warm toward parent.*

3. It is important to note that **Warmth/Support** can be expressed by a variety of behaviors, some of which are assessed by other scales, i.e., **Communication** and **Positive Mood**. Consider the general nature of the **Warmth/Support** scale when rating, and REMEMBER THAT IT IS OKAY THAT THERE IS SOME OVERLAP.

4. Include verbal expressions of approval of the other interactor’s appearance, behavior, or state, as well as verbal expressions of support, empathy, apology, and thanks that convey warmth to the other person versus merely **Prosocial** comments.

5. Code **Warmth/Support** when the focal is conveying warmth, affection, supportiveness, and liking for the other person. It may be coded when the focal is talking or acting in a soothing or
empathetic manner as well as when the subject is showing that he/she cares about or feels close to the other person. Teasing that is of an affectionate nature would be coded as **Warmth/Support**.

6. Words that describe **Warmth/Support** include: admiring, adoring, affectionate, affirmation, approving, caring, comforting, concerned, empathetic, endearing, endorsing, helpful, loving, supportive, tender, understanding, validation.

### PHYSICAL AFFECTION (AF)
Rate: All (Dyadic Interaction)
Any positive, affectionate physical contact, including hugs, caresses, touches, kisses, tickles, or patting or stroking another’s arm, back, etc. are scored as **Physical Affection**. This scale is scored based on the inherent warmth and affection expressed by the physical behavior. Pay particular attention to contextual cues when coding this scale.

- **1 = Not at all characteristic:** There is no evidence of affectionate physical behaviors.
- **2 =**
- **3 = Minimally characteristic:** The focal rarely shows evidence of affectionate physical behavior. Such behaviors are of low intensity and/or frequency.
- **4 =**
- **5 = Somewhat characteristic:** The focal shows some evidence of affectionate physical behaviors of low to moderate intensity and/or frequency. Even one instance of **Physical Affection** of moderate intensity may be scored a ‘5’.
- **6 =**
- **7 = Moderately characteristic:** The focal fairly often demonstrates evidence of affectionate physical behaviors of low to moderate intensity. Even one affectionate physical contact of relatively high intensity may be scored a ‘7’.
- **8 =**
- **9 = Mainly characteristic:** The focal frequently displays considerable evidence of affectionate physical behaviors. Such behavior is of quite high intensity and/or frequency. One instance of extremely intense **Physical Affection** may be scored a ‘9’.

### ESCALATE WARMTH/SUPPORT (EW)
Rate: All (Dyadic Interaction)
This scale assesses the focal’s tendency to escalate his/her own warm and/or supportive behaviors directed toward another interactor. **Escalate Warmth/Support** is coded if the focal follows one warm/supportive behavior with another such behavior or if the original behavior has intensified.
Include all behaviors coded as **Warmth/Support** (e.g., praise, caress, affirm, approve, empathize, admire, etc.), including **Endearment** and **Physical Affection**.

1 = **Not at all characteristic:**
The focal displays no signs of escalating his/her **Warmth/Support** behaviors toward another interactor.

2 =

3 = **Minimally characteristic:**
The focal infrequently (one or two times) escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal infrequently follows an initial behavior with other such behavior(s).

4 =

5 = **Somewhat characteristic:**
The focal occasionally escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal sometimes follows an initial behavior with other such behaviors.

6 =

7 = **Moderately characteristic:**
The focal fairly often escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal fairly often follows an initial behavior with other such behaviors.

8 =

9 = **Mainly characteristic:**
The focal frequently escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal frequently follows an initial behavior with other such behaviors.

Clarifications: **Escalate Warmth/Support**

1. For **Escalate Warmth/Support**, “intensity” is defined as the number of escalations occurring together, for example multiple warm/supportive behaviors in a string or a long burst of repetitive positive behaviors. Intensity for **Escalate Warmth/Support** is not defined based on increases in affect as it is for the general case (p. 5). For example, a focal with one string of seven warm/supportive escalations in a row would be coded the same as a focal with two strings, one with three positive escalations and the other with four escalations. Thus, increases in affect are of lower relevance than frequency in determining the final score for **Escalate Warmth/Support**.

2. **Escalate Warmth/Support** is the individual’s escalation of his/her own warm/supportive behaviors, whereas **Reciprocate Warmth/Support** assesses the extent to which warm/supportive behaviors are reciprocated in the relationship. Someone who is high on **Escalate Warmth/Support** may be thought of as being on a “positive roll.”

3. Assess **Escalate Warmth/Support** within speaker turns. If the focal makes one warm/supportive comment followed by a second such comment, or if the latter part of a warm/supportive comment becomes even more warm/supportive, score as **Escalate Warmth/Support**, even if the other interactor speaks concurrently.

4. Do not code **Escalate Warmth/Support** for **Positive Mood** statements that would not also be coded as **Warmth/Support**.

5. If a focal first briefly indicates approval or warmth and then goes on to elaborate on his/her immediately preceding comment, count as evidence of **Escalate Warmth/Support**.

6. Code as **Escalate Warmth/Support** behavior directed to a specific other interactor in the form of a “string of positive behaviors.” Do not count as an escalation warmth that moves from one interactor to another interactor, unless there are escalations within the comments made specifically to each individual.

7. Count as **Escalate Warmth/Support** sequential statements about the relationship that are warm and/or supportive in content or affect, whether regarding the past, present or future.
8. Simultaneous positive behaviors do not count as Escalate Warmth/Support, for example, a smile with a pat.

9. Do not score as Escalate Warmth/Support two adjectives that refer to the same trait or characteristic unless the second adjective adds a different dimension, or unless there is a marked increase in intensity with the addition of the second adjective. Two adjectives in a row must add a different dimension or increased intensity to be considered an escalation. For example: a. “You’re beautiful and you’re smart, too.” (Warmth/Support and Escalate Warmth/Support)

b. “You’re really a very gorgeous person.” (Warmth/Support)

c. “You’re doing a lot, lot better.” (Warmth/Support)

d. “You’re doing a lot better. A lot better.” (Warmth/Support and Escalate Warmth/Support)

10. Score a ‘2’ for minimal escalation with slight intensity of affect (i.e., a supportive comment followed by a warm smile). These are examples you would count, but rather “grudgingly”. In some instances, statements like, “You’re a pretty, beautiful person,” could count as a ‘2’, especially if there is a slight increase in intensity of affect.

Examples: Escalate Warmth/Support

1. “We enjoy being together. It’s fun to be with you.”

2. “What’s positive about our marriage is that we trust each other; we have a history we can fall back on when times are bad.”

3. “You’re beautiful, and you’re smart, too.”

4. “You’re doing a lot better. A lot better.”

5. “I really care about you. You are wonderful.”

6. “You did a good job on your math test, but you always do well because you are such a good student.”

7. “I love you” followed by a kiss.

8. “You did a great job – you’re so smart.”

Possible examples at a ‘2’ level:*

1. “You’re a pretty, beautiful person.”

2. “You are pretty and beautiful.”

*Note: If intensity of affect increases considerably, these ‘2’ level examples could be a ‘3’.

Non-examples: Escalate Warmth/Support

1. “You’re a beautiful, beautiful person.” (Warmth/Support)

2. “You’re doing a lot, lot better.” (Warmth/Support)


4. “You’re great. I’m pretty good, too.” (Warmth/Support followed by Positive Mood)

Clarifications: Physical Affection

1. Physical Affection is a specific form of Warmth/Support. If someone scores a ‘2’ on Physical Affection, they would also score at least a ‘2’ on Warmth/Support; however, the reverse is not necessarily true. In general, a high rating (‘7’, ‘8’, ‘9’) on Physical Affection will be associated with a high rating on Warmth/Support, but because Warmth/Support also contains behaviors other than those included in Physical Affection, it is not a perfect relationship.

2. Include positive physical contacts such as pats, hugs, mussing hair, or kisses as indicators of Physical Affection.

3. Include low-level positive physical contact, as well as more extreme behavior.

4. Both the intensity and frequency of Physical Affection should be considered in determining the appropriate score.
5. Positive physical contact would be scored under **Warmth/Support** and **Prosocial**, as well as under **Physical Affection**.
6. Neutral touches such as touches that are not clearly **Warmth/Support** or hostile, invasive, or irritating may be coded as **Dominance** or they may be uncodable.
7. Do not code as **Physical Affection** behavior in which a focal seeks affection or physical comfort from another interactor, for example burying head on other’s shoulder, rubbing other’s arm, etc.

**Examples:** **Physical Affection**
1. hugs
2. holding
3. stroking head, arm, back, etc.
4. touching arm
5. touching shoulders with other interactor
6. rubbing knees

**Non-examples:** **Physical Affection**
1. jabs
2. pokes
3. hard tickling
4. affection seeking
5. a touch to call attention to something
6. gently guiding child back to task

**ESCALATE WARMTH/SUPPORT (EW)**
*Rate: All (Dyadic Interaction)*
This scale assesses the focal’s tendency to escalate his/her own warm and/or supportive behaviors directed toward another interactor. **Escalate Warmth/Support** is coded if the focal follows one warm/supportive behavior with another such behavior or if the original behavior has intensified. Include all behaviors coded as **Warmth/Support** (e.g., praise, caress, affirm, approve, empathize, admire, etc.), including **Endearment** and **Physical Affection**.

1 = **Not at all characteristic:**
The focal displays no signs of escalating his/her **Warmth/Support** behaviors toward another interactor.

2 =
3 = **Minimally characteristic:**
The focal infrequently (one or two times) escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal infrequently follows an initial behavior with other such behavior(s).

4 =
5 = **Somewhat characteristic:**
The focal occasionally escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal sometimes follows an initial behavior with other such behaviors.

6 =
7 = **Moderately characteristic:**
The focal fairly often escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal fairly often follows an initial behavior with other such behaviors.

8 =
9 = **Mainly characteristic:**
The focal frequently escalates **Warmth/Support** behaviors. **Warmth/Support** behaviors are generated and the focal frequently follows an initial behavior with other such behaviors.

Clarifications: **Escalate Warmth/Support**

1. For **Escalate Warmth/Support**, “intensity” is defined as the number of escalations occurring together, for example multiple warm/supportive behaviors in a string or a long burst of repetitive positive behaviors. Intensity for **Escalate Warmth/Support** is not defined based on increases in affect as it is for the general case (p. 5). For example, a focal with one string of seven warm/supportive escalations in a row would be coded the same as a focal with two strings, one with three positive escalations and the other with four escalations. Thus, increases in affect are of lower relevance than frequency in determining the final score for **Escalate Warmth/Support**.

2. **Escalate Warmth/Support** is the individual’s escalation of his/her own warm/supportive behaviors, whereas **Reciprocate Warmth/Support** assesses the extent to which warm/supportive behaviors are reciprocated in the relationship. Someone who is high on **Escalate Warmth/Support** may be thought of as being on a “positive roll.”

3. Assess **Escalate Warmth/Support** within speaker turns. If the focal makes one warm/supportive comment followed by a second such comment, or if the latter part of a warm/supportive comment becomes even more warm/supportive, score as **Escalate Warmth/Support**, even if the other interactor speaks concurrently.

4. Do not code **Escalate Warmth/Support** for **Positive Mood** statements that would not also be coded as **Warmth/Support**.

5. If a focal first briefly indicates approval or warmth and then goes on to elaborate on his/her immediately preceding comment, count as evidence of **Escalate Warmth/Support**.

6. Code as **Escalate Warmth/Support** behavior directed to a specific other interactor in the form of a “string of positive behaviors.” Do not count as an escalation warmth that moves from one interactor to another interactor, unless there are escalations within the comments made specifically to each individual.

7. Count as **Escalate Warmth/Support** sequential statements about the relationship that are warm and/or supportive in content or affect, whether regarding the past, present or future.

8. Simultaneous positive behaviors do not count as **Escalate Warmth/Support**, for example, a smile with a pat.

9. Do not score as **Escalate Warmth/Support** two adjectives that refer to the same trait or characteristic unless the second adjective adds a different dimension, or unless there is a marked increase in intensity with the addition of the second adjective. Two adjectives in a row must add a different dimension or increased intensity to be considered an escalation. For example:
   a. “You’re beautiful and you’re smart, too.” (**Warmth/Support** and **Escalate Warmth/Support**)
   b. “You’re really a very gorgeous person.” (**Warmth/Support**)
   c. “You’re doing a lot, lot better.” (**Warmth/Support**)
   d. “You’re doing a lot better. A lot better.” (**Warmth/Support** and **Escalate Warmth/Support**)

10. Score a ‘2’ for minimal escalation with slight intensity of affect (i.e., a supportive comment followed by a warm smile). These are examples you would count, but rather “grudgingly”. In some instances, statements like, “You’re a pretty, beautiful person,” could count as a ‘2’, especially if there is a slight increase in intensity of affect.

Examples: **Escalate Warmth/Support**

1. “We enjoy being together. It’s fun to be with you.”
2. “What’s positive about our marriage is that we trust each other; we have a history we can fall back on when times are bad.”
3. “You’re beautiful, and you’re smart, too.”
4. “You’re doing a lot better. A lot better.”
5. “I really care about you. You are wonderful.”
6. “You did a good job on your math test, but you always do well because you are such a good student.”
7. “I love you” followed by a kiss.
8. “You did a great job – you’re so smart.”
Possible examples at a ‘2’ level:*
1. “You’re a pretty, beautiful person.”
2. “You are pretty and beautiful.”
*Note: If intensity of affect increases considerably, these ‘2’ level examples could be a ‘3’.
Non-examples: Escalate Warmth/Support
1. “You’re a beautiful, beautiful person.” (Warmth/Support)
2. “You’re doing a lot, lot better.” (Warmth/Support)
4. “You’re great. I’m pretty good, too.” (Warmth/Support followed by Positive Mood)

ENDEARMENT (ED)
Rate: All (Dyadic Interaction)
This scale measures expressions of personalized and unqualified approval of another interactor that convey extreme commitment, intimacy, caring, and global compliments regarding another’s personal characteristics and statements that attribute ongoing/global favorable or positive characteristics to another interactor. Endearments must be global in character, i.e., they must pertain to attributes that are not limited to just one setting or situation. They also must be ongoing rather than referring to qualities at only one point in time.

1 = Not at all characteristic:
The focal displays no signs of personalized and unqualified approval of the other interactor.

2 =

3 = Minimally characteristic:
The focal shows some evidence of personalized and unqualified approval of the other interactor. However, such behavior is of low frequency and/or intensity.

4 =

5 = Somewhat characteristic:
The focal occasionally expresses personalized and unqualified approval of the other interactor. Such behavior is of low to moderate frequency and/or intensity.

6 =

7 = Moderately characteristic:
The focal shows elevated evidence of frequent or intense expressions of personalized and unqualified approval of the other.

8 =

9 = Mainly characteristic:
The focal frequently expresses personalized and unqualified approval of the other interactor. Such behavior is of high intensity and/or frequency.

Clarifications: Endearment
1. Endearment is a specific form of Warmth/Support. If someone scores a ‘2’ on Endearment, they would also score at least a ‘2’ on Warmth/Support, however, the reverse is not true. In general, a high rating (‘7’, ‘8’, ‘9’) on Endearment will be associated with a high rating on
**Warmth/Support**, but, because **Warmth/Support** also contains other behaviors, it is not an automatic or perfect relationship. For example, one could score a ‘9’ on **Warmth/Support** and a ‘1’ on **Endearment**.

2. To count as evidence of **Endearment**, a statement must refer to a global characteristic of the other person that is applicable across people, situations, or time. For example, “You did well in math last term” is specific to a particular course and time period and is not coded as **Endearment**. “You are a good student” is coded as **Endearment** because it suggests that the target is generally capable across time and situations.

3. The behavior being applauded cannot only be directed toward one person. For example, “You always help me” is not an **Endearment** because it involves helpfulness to only one person, although it would be scored as **Warmth/Support**. In contrast, “you are always so helpful” would be coded as **Endearment** because it implies that the recipient of the behavior is helpful in many different settings, contexts, and with many different people.

4. **Endearment** may include positive name calling which is complimentary in context or pet names signifying affection. Pay attention to context in determining whether or not positive name calling or pet names (e.g., sweetie, honey) should be coded as **Endearment**; if this is the only evidence, score no higher than a ‘3’. Do not count if used merely as a name substitution.

5. Comments must relate to the present time. If they relate only to the past, they would be scored under **Warmth/Support**.

6. **Endearment** can be coded for comments made in the third person about someone who is present, (e.g., “He is a good student”). However, the rating would not be as high as when made directly to the person (e.g., “You are a good student”).

7. In general, do not count as **Endearment** comments which are qualified (e.g., “sometimes”, “pretty ”); however, when coding statements such as “You’re a pretty good student,” use judgment as to whether or not “pretty” is a qualifier.

8. Statements of **Endearment** must affirm the other person all the time (e.g., “You are a good helper”). A statement such as, “I’m real proud of you” is not **Endearment** because it does not refer to a specific trait or characteristic of the other person that is enduring. Count as **Endearment** any expression that indicates the focal is proud of something that is an ongoing personal characteristic of another interactor.

Examples: **Endearment**

1. “You’re wonderful.”
2. “You’re terrific.”
3. “You are really smart.”
4. “Gee, you’re beautiful.”
5. “You’re so handsome.”
6. “You’re one of the most thoughtful people I know.”
7. “You are very brave.”
8. “Hello, beautiful.”
9. “I’m proud of how well you two do in school.”
10. “We’re proud of how well you handle things when we’re gone.”
11. “You’re easy to raise.”
12. “Dad’s really fun.” (said in Dad’s presence to another person)
13. “You’re really a pretty sweet kid.”
14. “I think you’re kind of cute.”
15. “You are really good at puzzles.”
16. “You’re such a good helper.”
17. “You’re a big boy!”
Non-examples: **Endearment**
1. “That was a nice job.” (Warmth/Support)
2. “You look great in that shirt.” (Warmth/Support)
3. “That was a smart move on your part.” (Warmth/Support)
4. “You did that well.” (Warmth/Support)
5. “I’m really proud of you.” (Warmth/Support)
6. “I love you.” (Warmth/Support)
7. “You looked pretty yesterday.” (Warmth/Support)

8. “You did that just right.” (Warmth/Support)
9. “Oh you’re so silly”
10. “You’re such a goof!”
Appendix C: Codebook sections

Sections from *The Flourishing Family Codebook* on Family Implicit Rules Items

**Family Implicit Rules**

- **Conceptual Justification:** We also assess daily family life by examining how families create rules, maintain their potency, and how rules alter and change over the family developmental life cycle. In like manner, we also intend to show the role that rule governing behavior works together with other family processes to create family effectiveness in goal attainment. This element of our work is groundbreaking. Only recently have researchers begun to find ways of assessing the complex nature of rule structures within family life and how those rules impact general family functioning. We will examine the links between the 4 subscales on the FIRP and outcomes in both children and adults.

- **Historical Information:** The measure assesses statements regarding family implicit rules. The original article is currently in press (Harper, Stoll, & Larsen). Respondents answered how often these events occurred. Responses were based on a 5-point Likert scale ranging from 1 = never to 5 = most of the time.

- Items 1-6 make up the Kindness Subscale. Items 4, 5, and 6 were reverse scored so that higher scores indicate greater levels of kindness.
- Items 7-13 make up the Expressiveness and Shared Problem Solving Subscale. Higher scores indicate greater levels of expressiveness and shared problem solving.
- Items 14-18 make up the Monitoring Subscale. Item 18 was reverse coded so that higher scores indicate greater levels of monitoring.
- Items 19-30 make up the False Image and Constraining Feelings/Thoughts Subscale. Items 19-30 were reverse coded so that higher scores indicate greater levels of false image and constraining feelings/thoughts.
- Overall, items 4-6 and 18-30 were reverse coded.
<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Label</th>
<th>Item Freq. P1</th>
<th>Item Freq. P2</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1ImplicitF1_1</td>
<td>Stand up for other family members.</td>
<td>498</td>
<td>343</td>
</tr>
<tr>
<td>P1ImplicitF2_1</td>
<td>Be kind and sensitive to other family members.</td>
<td>499</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF3_1</td>
<td>Be gentle with others.</td>
<td>500</td>
<td>343</td>
</tr>
<tr>
<td>P1ImplicitF4_1</td>
<td>Do not blame others unfairly.</td>
<td>499</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF5_1</td>
<td>Do not criticize others.</td>
<td>500</td>
<td>343</td>
</tr>
<tr>
<td>P1ImplicitF6_1</td>
<td>Do not use physical force with other family members.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF7_1</td>
<td>Share your feelings and encourage others to share their feelings.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF8_1</td>
<td>Show physical affection to family members.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF9_1</td>
<td>Play; have fun together.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF10_1</td>
<td>Share happenings of your day with family members.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF11_1</td>
<td>Allow other family members to help solve your problems.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF12_1</td>
<td>Make decisions together as a family.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF13_1</td>
<td>Admit it when you are wrong</td>
<td>498</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF14_1</td>
<td>Let family members know when you will be home</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF15_1</td>
<td>Check in with family members when you get home</td>
<td>499</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF16_1</td>
<td>Let family members know where you are going and who you are with.</td>
<td>500</td>
<td>344</td>
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<tr>
<td>P1ImplicitF17_1</td>
<td>Make sure family members know your friends.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF18_1</td>
<td>Do not let other family members know how you spend your money.</td>
<td>498</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF19_1</td>
<td>Be careful to say the right thing when you open your mouth.</td>
<td>499</td>
<td>343</td>
</tr>
<tr>
<td>P1ImplicitF20_1</td>
<td>You are responsible for how other family members feel.</td>
<td>499</td>
<td>343</td>
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<tr>
<td>P1ImplicitF21_1</td>
<td>If you talk about your family to outsiders, you are being disloyal.</td>
<td>496</td>
<td>341</td>
</tr>
<tr>
<td>P1ImplicitF22_1</td>
<td>Lie, if necessary, to keep family secrets.</td>
<td>500</td>
<td>344</td>
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<tr>
<td>P1ImplicitF23_1</td>
<td>Do whatever you have to do so our family will look good to others.</td>
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<tr>
<td>P1ImplicitF24_1</td>
<td>Listen to your parent when they need to complain about your other parent.</td>
<td>467</td>
<td>322</td>
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<tr>
<td>P1ImplicitF25_1</td>
<td>Do not feel or talk about feelings.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF26_1</td>
<td>Do not get close to people.</td>
<td>499</td>
<td>342</td>
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<tr>
<td>P1ImplicitF27_1</td>
<td>Rather than be who you are, act good, right, strong, or perfect.</td>
<td>495</td>
<td>340</td>
</tr>
<tr>
<td>P1ImplicitF28_1</td>
<td>Do not trust others including family members.</td>
<td>499</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF29_1</td>
<td>Do not trust yourself, your feelings, or your conclusions.</td>
<td>500</td>
<td>344</td>
</tr>
<tr>
<td>P1ImplicitF30_1</td>
<td>Do not have fun, do not be silly or enjoy life</td>
<td>500</td>
<td>343</td>
</tr>
</tbody>
</table>

Overall Scale Based on means (not sums)
Maximum: P1 = 4.23 (P2 = 4.20)
Minimum: P1 = 2.77 (P2 = 2.60)
Mean: P1 = 3.6793 (P2 = 3.6180)
Standard Deviation: P1 = .23367 (P2 = .24442)

Kindness Subscale Based on means (not sums)
Maximum: P1 = 5.00 (P2 = 5.00)
Minimum: P1 = 2.50 (P2 = 2.17)
<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean P1</th>
<th>Mean P2</th>
<th>Standard Deviation P1</th>
<th>Standard Deviation P2</th>
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<tbody>
<tr>
<td>Expressiveness and Shared Problem Solving Scale</td>
<td>3.9854</td>
<td>3.6553</td>
<td>.59015</td>
<td>.65612</td>
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<tr>
<td>Monitoring Subscale</td>
<td>4.4517</td>
<td>4.3180</td>
<td>.56516</td>
<td>.57825</td>
</tr>
<tr>
<td>False Imagining and Constraining Feelings/Thoughts Scale</td>
<td>2.9643</td>
<td>3.0922</td>
<td>.41056</td>
<td>.37571</td>
</tr>
</tbody>
</table>
Appendix D: Discussion task items

Parent-Youth Discussion – Task 1a & 1b

(20 minute task)

Practice Card #1 (adult)

How has the last week been for each of us?
Has it been a pretty average week or did something unusual or different happen?
(Please discuss each other’s answers.)

Practice Card #2 (youth)

What do we think we will do together tomorrow?
Will we do what we usually do, or something different?
(Please talk together about your answers)

Card 1 (adult)

What do I think have been some of my child’s biggest accomplishments during the past year?
What do I think he or she is most proud of?
How do each of us feel about this?
(Please discuss each other’s answers.)

Card 2 (youth)

What sorts of things do I usually do with Mom/Dad?
What do I especially enjoy doing with her/him?
What would I like to do with just Mom/Dad if we had more time to spend together?
(Please discuss each other’s answers.)
Card 3 (adult)

How do I know what’s going on in my child’s life, like in school, with friends, or other activities?

(Please discuss each other’s answers.)

Card 4 (Youth)

When things go wrong in your life, how do you react? How do you come up with solutions to solve it?

When things go wrong in your family, how does the family respond?

When you have a personal problem, how does your family help you?

Card 5 (adult)

What do you want to teach your child? How do you do this?

What is something you have taught each other during the last month?

What is something your child has taught you?

Card 6 (youth)

How does Mom/Dad want me to act?

What are her/his rules?

How fair are her/his rules?

(Please discuss each other’s answers.)

Card 7 (youth)

What does Mom do when I do something she doesn’t like?

Does she always do what she says she will do when this happens?

(Please discuss each other’s answers.)

Card 8 (adult)

What was one of the last things that caused problems or disagreements between the two of us?
What did each of us do or say?
(Please discuss each other’s answers.)

Card 9 (youth)
What does Mom do or say when I have done a good job at something, like in school or around the house?
Give some examples.
(Please discuss each other’s answers.)

Card 10 (youth)
If Mom says I will be rewarded for doing something, does she always do what she says she will?
Give some examples.
(Please discuss each other’s answers.)

Card 11 (youth)
If friends tried to get me into trouble, what would I do?
What would Mom want me to do?
(Please discuss each other’s answers.)

Card 12 (adult)
What does my child do after school and on weekends?
Do I approve?
(Please discuss each other’s answers.)

Card 13 (adult)
In my opinion, what has been my child’s biggest disappointment or difficulty during the past year?

How do each of us feel about this?

(Please discuss each other’s answers.)

Card 14 (youth)

If I ever have children, in what ways will I raise them like my Mom has raised me?

In what ways will I raise my children differently?

(Please discuss each other’s answers.)

Card 15 (adult)

If each of us could change anything about our family, what would we like to change?

Why?

Do we agree or disagree about this?

(Please discuss each other’s answers.)

Card 16

If there is still time left, please discuss the earlier questions or anything else you would like to talk about until the interviewer returns.