

**Mothers' Self-focused Reflective Functioning Interacts with Childhood Experiences of  
Rejection to Predict Romantic Relationship Quality and Insensitive Parenting**

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\*\* In press, *Family Process*\*\*

### Abstract

Parents exposed to rejection in their childhood could experience bonding disturbances in their current relationships. Reflective Functioning (RF), the capacity to understand one's own and others' behavior through the lens of underlying mental states (cognitions, emotions), has been identified as a potential protective process. The aim of this longitudinal study was to examine whether RF moderates the effect of parents' experiences of rejection in childhood on later relationship functioning with partners and infants. Pregnant women with experiences of abuse and neglect were recruited and completed the Adult Attachment Interview, which was coded for RF and experiences of childhood rejection. During two follow-up assessments, when their infants were 5 months and 17 months old, the mothers in our sample who had partners reported on dyadic cohesion with these partners. Further, at 5 months postnatal, mothers completed interaction tasks with their infants, which were later assessed using observational measures (i.e., CARE-Index). Results of mothers with partners ( $N = 93$ ) indicated that RF moderated the relationship between dyadic cohesion with partners at 17 months only. Additionally, results with all mothers in the sample ( $N = 108$ ) indicated that RF moderated the relationship between retrospectively-reported experiences of rejection and controlling and unresponsive behaviors with infants. Adequate-to-high RF was associated with lower unresponsiveness and higher relationship satisfaction in the context of rejection, while being associated with higher levels of control. These findings have important clinical implications, as RF is amenable to change and can therefore be more prominently implemented within various interventions.

*Keywords:* reflective functioning, rejection, neglect, partner cohesion, insensitive parenting

### **Introduction**

Attachment theory holds that infants have an inborn need for proximity to their caregivers in order to ensure their survival (Bowlby, 1973). Attachment figures can respond sensitively to their children's bids for closeness, or they can provide a range of different insensitive responses, including outright rejecting or ignoring the infant's bids, behaving in an inconsistently responsive manner toward them, or becoming overwhelmed (anxious, angry, distressed; Ainsworth, Blehar, Waters, & Wall, 1978). Over time, children develop internal working models of the self and other based on the way the attachment figure responds to their requests for support; the child then carries these models into future relationships (Bowlby, 1988). Given the potential long-term impacts of experiences of insensitive care within formative relationships, the identification of protective processes is of particular importance to researchers and clinicians.

Adults who experienced insensitive parental care from their parents are at particular risk of repeating such patterns with romantic partners and their own children (Huth-Bocks, Krause, Ahlfs-Dunn, Gallagher, & Scott, 2013). Specifically, parents who have experienced a lack of parental responsiveness or overt rejection are considered to be at risk for being unresponsive to infant distress and feeling threatened by it, potentially because it activates their own unmet needs (Main, Kaplan & Cassidy, 1985). Parental rejection of children's needs, such as downplaying, denying, or ignoring the need for comfort, leads to children being forced to choose between devaluing that need or the attachment relationship (Main & Goldwyn, 1984). Typically, children end up preserving the availability of the caregiver and devaluing their own needs, which can fuel the intergenerational transmission of insensitive caregiving (i.e., wherein the child of a rejecting parent becomes a rejecting parent; Khaleque, 2015). The findings from the broader literature on this cycle suggest that prior relationship rejection experiences can make it extremely difficult for people to

feel close to others within romantic partnerships (Downey, Feldman, & Ayduk, 2000; McCarthy & Maughan, 2010). They may sensitize people to the risk of opening oneself up to others, a key ingredient in high quality, cohesive intimate relationships. Moreover, past experiences of rejection may put parents at particular risk of repeating unresponsive and controlling behaviors with their infants (Whitbeck et al., 1992).

### **Reflective Functioning as a Potential Protective Factor Against Insensitive Parental Care**

Mentalizing refers to the capacity to interpret the reactions of others in terms of underlying mental states (e.g., thoughts, feelings, desires), as well as to be cognizant of one's own reactions and their impact on others (Fonagy, Gergely, Jurist, & Target, 2002). Operationalized as reflective functioning (RF), mentalizing is thought to develop within the context of attachment relationships through processes such as affective mirroring (Fonagy & Target, 1998). However, as with “earned security” (e.g., Lichtenstein Phelps et al., 1998), perhaps individuals who do not have the benefit of developing RF through their primary attachment relationships can develop their RF through other attachments later in life, through self-reflection, or psychotherapy (e.g., Suchman et al., 2017).

RF is an important component of sensitive interpersonal behavior within attachment relationships—it facilitates sensitive responding and the modulation of insensitive parenting behaviors when the child provokes distress (Ensink, Normandin, Plamondon, Berthelot, & Fonagy, 2016). Indeed, RF is associated with parenting sensitivity with infants (Ensink, Normandin, et al., 2016) and children (Ensink, Leroux, Normandin, Biberdzic, & Fonagy, 2017), and with the quality of marital relationships (Jessee et al., 2018).

In addition to the main effects of RF on functioning, RF also can be a protective factor when a person has received insensitive parental care (Fonagy et al., 2002)—it may enable individuals to revisit these negative histories of care-receiving, understand them from the

perspective of mental states (including what they were thinking and feeling in those situations, what they needed from the care-provider but did not receive), and chart a different course in terms of their own behavior in attachment relationships. Indeed, RF may play a buffering role in the context of past experiences of discrete trauma. For example, RF interacts with sexual abuse history to predict better psychological functioning in children (Ensink, Bégin et al., 2016) and higher RF in mothers with histories of sexual abuse is associated with a lower risk of sexual abuse in their children (Borelli et al., 2019). Yet, the role of RF has not been examined in the context of experiences of parental care that are negative but not abusive.

RF consists of both self-focused and other-focused elements (Suchman et al., 2010), with each of these being important at different stages of psychological functioning. For instance, while some studies have found that higher other-focused (in this case, child-focused) RF is associated with lower insensitive behavior among low-risk samples (e.g., Borelli, Hong, Rasmussen, & Smiley, 2017), another found that self-focused RF was uniquely associated with sensitive parenting behavior among a higher risk sample (e.g., substance dependent mothers; Suchman et al., 2010). In interpreting this finding, researchers argued that being able to mentalize regarding one's own emotions, as with self-focused RF, may be the first step in promoting sensitive parenting when parents themselves are struggling to deal with their own psychological concerns. In other words, processing one's own difficult experiences through self-focused RF must occur before the parent can respond to others (e.g., the child's attachment bids).

### **The Birth of A Baby**

Each baby's arrival constitutes a unique developmental phase within adult development. Although this may be particularly true when adults have their first baby, such experiences may be relieved to a certain extent with the birth of each additional child. Adults rely upon their own

experiences in attachment relationships to inform the expectations, goals and reference points that they carry into the parenting role (Slade et al., 2009). Pregnant women develop representations of themselves as mothers, actively constructing these based on their relationship histories, including those with romantic partners, and their hopes and expectations for their future selves (Slade et al., 2009). In the case of adults with histories of insensitive care-receiving histories (e.g. parental rejection), this may involve reviewing negative experiences.

In addition to holding intrapersonal significance, the birth of a baby also marks a significant transition point within one's romantic partnership. Couples normatively experience a steep postpartum decline in relationship satisfaction (e.g., Doss et al., 2009), and this drop is stable across infancy (e.g., Favez et al., 2006). The reorganization in roles (Voydanoff & Donnelly, 1999), sleep deprivation (Condon, Boyce, & Corkindale, 2004), and the challenges of having a new baby all likely account for the drops in romantic satisfaction; the net result is significant and is especially salient for mothers (Belsky, Spanier, & Rovine, 1983). Parents with histories of rejection may be particularly at risk, for they experience a sharp decrease in marital satisfaction at six months postpartum when they also report low parenting efficacy (Parade, Leerkes, & Helms, 2013).

In sum, this developmental transition, with all of the change and reorganization it entails, introduces opportunities for growth and integration, and thus has become the focus of research efforts (see Ripley et al., 2016, for a review). As a result, this is an ideal phase in which to examine risk and protective factors in terms of the evolving family system.

### **Current Investigation**

Using a longitudinal design, we examined whether RF moderates associations between perceptions of parental rejection during childhood and current relationships with partners and

infants. We focus on self-focused RF given that it may have a unique role in helping individuals understand the impact of their prior experiences within their current attachment relationships.

We examine mothers' relationship satisfaction at two points (five months and 17 months postpartum). Based on the reasoning that early-life rejection experiences prevent people from experiencing closeness in relationships later in development (e.g., Rohner et al 2019), we focused on a "closeness" subscale of our relationship satisfaction measure.

We also examined mothers' parenting insensitivity to their infants at five months of age—a stage at which infants are highly engaged with their worlds—they begin to babble, grasp, and reach for objects. They also become increasingly interactive during play (e.g., AAP, 2004), lending itself to more reciprocal mother-infant interactions at this time (e.g., Landry, 1986), and yet this is early enough in development that would allow us to examine risk for later maladjustment. We tested whether the rejection x self-focused RF interaction predicted two indices of maternal insensitive behavior, *unresponsiveness* and *control*. Unresponsive behavior is akin to ignoring or rejecting the child's bids for attention (e.g., Hildyard & Wolfe, 2002), conceptualized here as a kind of repetition of the parental rejection. The canonical Still Face experiment (Tronick et al., 1978) offers a vivid portrayal of the degree to which the infant may feel rejected by an unresponsive parent, and indeed this "absence of the contingent, marked, mirroring response from the mother leaves an unmentalized alien core around the child's experience" (Berthelot et al., 2015, p.209).

Controlling parenting, an insensitive parental behavior, can be experienced as rejecting to children (e.g., Rubin et al., 1999). Both unresponsiveness and parental control may be methods of tuning out the child's distress, which may ultimately invalidate their emotions.

## Method

### Participants and Procedure

Between 1999 and 2002, pregnant women were recruited at the obstetrics clinic of a large hospital in Montréal, Canada. As the study aimed to include pregnant women who experienced insensitive parental care during their childhood (e.g., rejection), prospective participants ( $n = 809$ ) were first screened using the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979). A total of  $N=131$  who scored below the clinical cut-off for parental care were included in the original data collection pool and subsequently were contacted by the research team to participate in the study. Exclusion criteria included being under 18 years, having a psychotic disorder, acute drug addiction, and living too far outside the city.  $N=108$  completed the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985) during pregnancy; of these,  $N=88$  participants completed the mother-infant interactions at 5 months postnatal, which took place at the parent's homes.  $N=77$  had partners and completed the measures of dyadic cohesion at 5 months and  $N=79$  mothers who had partners completed the measures at 17 months postnatal. .

The women ranged in age from 18 to 41 years ( $M=28.58$ ,  $SD=5.73$ ). Most were primiparous mothers (45%), while 34% had one child (pregnant with the second), 16% had two (pregnant with the third), 3.8% had three, and 1% had five. The sample self-identified as predominantly French-Canadian (72%) (Hispanic[7%], African-American[4%], North African[4%], Afro-Caribbean[4%], other Caucasian[4%], Native Canadian/Indigenous[2%], Asian[1%], and biracial[1%]). The majority (86%) of participants were in a relationship with the father of the child (cohabitating[54%] or married[33%]), and the remaining were single. Most participants (74%) had post-secondary training; 26% did not complete high school. Most participants (62%) were employed, but 56% of the sample had an annual family income below 30,000\$, considered below the poverty index (i.e., 34,000\$ for a family with one child).



## Measures

**Adult attachment.** The AAI (George et al., 1985) is a semi-structured interview designed to assess adults' state of mind with respect to their attachment relationships with their parents during childhood. The AAI was used in this study to assess participants' inferred experiences of parental rejection, as well as RF about self.

**Parental rejection.** During the AAI, which was administered during pregnancy and lasted approximately one hour, the interviewers ask participants to provide memories illustrating core components of the relationship with each of their parents between the ages of five and 12, and probe about experiences of rejection, separations, loss, abuse, and being upset, ill, and hurt. Using the Main & Goldwyn coding procedure (1998), coders first use all available information to code participants' probable experiences with their parents or primary caregivers on 10 experiences scales using a 9-point rating scale, with higher scores reflecting higher occurrence of these experiences. The AAI scales are not objective measures of the participant's experiences, but are rather inferred from the narrative provided, which is a measure of the participant's internalization/interpretation of their experiences. However, coders are trained to apply a standardized scale to these narratives, then pass an objective filter over the participant's interpretation of their experiences. All coders must pass a test and achieve 80% interrater reliability. As such, one advantage of this measure is that unlike self-report measures of rejection, the AAI does not rely exclusively on the participant's personal interpretation of the parent's behavior as being rejecting. Additionally, scores on the maternal rejection scale of the AAI, for example, have been positively correlated with memories of maternal rejection and negatively correlated with memories of maternal warmth, as assessed using a validated self-report measure of parental rearing behavior (Haas et al., 1994).

The AAI was coded for parental rejection by a rater certified as reliable (80% or greater accuracy in the three- and four-way AAI classification systems) according to the standards of the Berkeley laboratory of Mary Main and Erik Hesse. The coder was naive to all other information gathered about study participants or the goal of the study. The coder provided scores for all attachment figures discussed by the participant; due to our interest in participants' most salient experiences of rejection, we used participants' highest rejection scores in the current analyses.

**Reflective functioning.** The AAI was also coded for RF using the Reflective Functioning Scoring Manual (Fonagy, Target, Steele, & Steele, 1998). RF is scored on a scale of -1 to 9, with every score representing a different level of increasing mental state explanation. Higher ratings indicate increasingly sophisticated and full mental state accounts of interactions and reactions, with ratings of 9 illustrating exceptional mental state thinking and insights.

RF is scored based on all AAI questions that explicitly pull for a consideration of mental states (e.g. "why did your parents behave as they did during your childhood?"). Using a decision algorithm outlined in the manual, an overall score is then derived based on individual scores, which represents the respondent's characteristic level of RF (i.e., most frequent level of RF used and frequency of responses within high and low RF categories). The RF coding system has good psychometric properties (Fonagy et al., 1998; Taubner et al., 2013). In the current study, self-RF was rated by two qualified judges. The ten narratives (10% of the total sample) that were considered to be the most complex were selected to be double-coded, with intraclass correlations of .79 suggesting good reliability even with the most challenging transcripts. Our sample's range of RF scores for individual questions were good (smallest range: [7 points] 1 to 8; largest range: [9 points] -1 to 8), and mean RF scores were 4.2 ( $SD=1.80$ , range -1 to 8).

**Dyadic adjustment.** The Dyadic Adjustment Scale (DAS; Spanier, 1976, 2001), a 32-item measure of partner relationship quality, yields a total score of dyadic adjustment. The current study focused on the Dyadic Cohesion scale, which assesses the degree of closeness between partners. The use of individual subscales is recommended by the author (Spanier, 1976), and a meta-analysis study of the DAS reported good psychometric properties, with a mean  $\alpha$  of .86 specifically for the Cohesion subscale (Graham, Liu & Jeziorski, 2006). Moreover, results of the DAS have been shown to be relatively stable over time (Carey et al., 1993). We were missing dyadic cohesion data from participants who were not in romantic relationships at 5 months postnatal ( $n = 16$ ) and 17 months postnatal ( $n = 10$ ).

**Maternal insensitivity.** The CARE-Index (Crittenden, 1981, 2006) is a measure of the quality of parent-infant interactions. It uses a videotaped procedure during which the mother is asked to play freely with her child for a period of three minutes, recorded at the 5-month postnatal visit in our study. The video is later coded using seven aspects of maternal interactive behaviors and, for the current study, was regrouped into two dimensions of parental insensitivity: controlling behaviors (i.e., manifestations of overt or covert hostility toward the infant) and unresponsive behaviors (i.e., verbal or non-verbal indications of maternal withdrawal). A score ranging from 0 to 14 is given for the dimensions, with higher scores reflecting higher unresponsiveness or control. The CARE-Index was coded by two trained, reliable independent raters, neither of whom coded the AAs. The instrument was initially developed for infants between 0 and 15 months old and is one of the most validated measures of mother-infant interaction (Farnfield et al., 2010).

### **Data Analytic Plan**

To address missing data from attrition and mothers who did not have partners, we used multiple imputation, completing 40 imputations. This approach avoids many of the pitfalls of other

forms of imputation by generating multiple estimates of missing data points and pooling the estimates derived from each imputation (Enders, 2006; Schafer & Graham, 2002). The imputation restored the sample to  $N=108$  mothers with complete data for all analyses. For DAS analyses, data were imputed for the  $N=93$  participants who were either partnered at baseline and/or had partial DAS data at either of the two timepoints. It is worth noting that the analyses using the imputed data follow the same pattern as the analyses using the raw data.

We included as covariates only those demographic variables significantly associated with dependent variables (mother age, number of children, income). To test the study hypotheses, we conducted hierarchical regressions using Hayes' (2013) PROCESS Macro for SPSS. PROCESS employs bootstrapping to test the association between  $x$  and  $y$  at the mean of RF (corresponding to an RF score of 4.5), -1 SD of the mean (low RF= 2.74), and +1 SD of the mean of the moderator (high RF=6.26). We entered covariates, Time 1 levels of the outcome variables (when relevant), and main effects in an initial step, followed by the interaction term in a second step.

## Results

Means, standard deviations, and correlations of demographic and outcome variables are presented in Table 1. Dyadic cohesion (i.e., relationship satisfaction) decreased significantly from 5 months postnatal to 17 months postnatal,  $t(92)=3.55, p=.001$ .

### Hypothesis Testing

**Parental rejection x self-focused RF and relationship satisfaction.** Controlling for mother's age ( $b=.07, p=.49$ ), number of children ( $b=0.43, p=.47$ ), and family income ( $b=.45, p=.28$ ), as well as the main effects of parental rejection ( $b=-.46, p=.43$ ) and self-focused RF ( $b=-.53, p=.43$ ),  $R^2=.05, p=.67$ , the rejection x RF interaction was not a significant predictor of 5-month dyadic cohesion,  $\Delta R^2=.01, p=.37$ .

Controlling for mother's age ( $b=0.24, p=.05$ ), number of children ( $b=1.88, p=.01$ ), and family income ( $b=1.14, p=.03$ ), as well as 5-month dyadic cohesion ( $b=0.54, p<.0001$ ), and the main effects of parental rejection ( $b=-1.70, p=.02$ ) and self-focused RF ( $b=-0.81, p=.37$ ),  $R^2=.30$ ,  $p<.0001$ , the rejection x RF interaction was a significant predictor of 17-month dyadic cohesion,  $\Delta R^2=.03, p=.04$ . Only when mothers' self-focused RF was at low ( $b=-0.95, p=.02$ ), but not at mean ( $b=-.42, p=.10$ ) or high levels ( $b=.12, p=.73$ ), was higher experiences of parental rejection associated with risk for lower dyadic cohesion at 17-months (see Figure 1A).

**Parental rejection x self-focused RF and unresponsiveness toward infant.** Controlling for family income ( $b=-0.63, p=.001$ ), mother's age ( $b=0.05, p=.25$ ), number of children ( $b=0.29, p=.28$ ), as well as the main effects of parental rejection ( $b=0.96, p=.0001$ ) and self-focused RF ( $b=1.14, p=.0002$ ),  $R^2=.22$ ,  $p<.0001$ , the rejection x RF interaction was a significant predictor of unresponsiveness toward infant at the five month postnatal period,  $\Delta R^2=.09, p=.0006$ . Only when mothers' self-focused RF was at low ( $b=0.59, p=.0007$ ), but not at mean ( $b=0.16, p=.17$ ) or high levels ( $b=-0.27, p=.12$ ), was higher experiences of parental rejection associated with risk for higher levels of unresponsiveness toward infants (see Figure 1B).

**Parental rejection x self-focused RF and control with infant.** Controlling for age ( $b=-0.14, p=.04$ ), number of children in the family ( $b=0.20, p=.61$ ), and the main effects of parental rejection ( $b=-0.90, p=.01$ ) and self-focused RF ( $b=-1.02, p=.03$ ),  $R^2=.11, p=.04$ , the rejection x RF interaction was a significant predictor of controlling behavior toward the infant at five months postnatal,  $\Delta R^2=.07, p=.06$ . When mothers' self-focused RF was at low ( $b=-0.36, p=.17$ ) or at mean levels ( $b=0.16, p=.37$ ), parental rejection was not associated with controlling behavior toward infants. However, at high levels of RF ( $b=0.68, p=.01$ ), greater rejection was associated with more controlling behavior (see Figure 1C).

### Discussion

RF moderated the association between childhood rejection experiences with all three outcomes investigated, but the nature of those moderation effects varied. Specifically, among mothers with high RF, higher rejection was not associated with lower couple cohesion (at 17 months only) or greater unresponsiveness in the same way as it was among mothers with low RF. However, among mothers with high RF, greater rejection was associated with more controlling behavior towards the infants at five months postnatal more strongly than it was among mothers low in RF and high in rejection.

#### Couple Cohesion

As hypothesized, RF buffered the association between retrospectively-reported history of childhood rejection and romantic closeness. Only when mothers' RF was at low, but not at mean or high levels, was higher parental rejection associated with lower couple cohesion when infants were 17-months old (but not at the 5-month postnatal period). Higher levels of RF may help couples adapt during the more distal postnatal period, facilitating cohesion and connectedness during a time when many couples struggle to maintain closeness following the initial infant stage (e.g., Doss et al., 2009).

Consistent with our findings, recent studies show that RF is linked to greater quality of marital and coparenting interactions (Jessee et al., 2018). Our results add to the sparse literature on RF's association with couple adjustment. Moreover, we contribute important new evidence indicating that RF is especially important for dyadic adjustment in the stressful context of parenting young children beyond the first year, and that mentalizing is indeed protective for parents with past experiences of rejection, helping them to experience cohesion with their partners. It should be noted that high levels of RF ( $RF \geq 6.26$ ) are not required to reach this goal, as only low

RF ( $RF \leq 2.74$ ) was found to be a risk factor in our study, thereby indicating that even rudimentary mentalizing skills can make significant impacts.

In addition to increasing connectedness within the romantic relationship, couple cohesion and other proxies (e.g., marital quality) have been shown to buffer the emergence of child internalizing and externalizing problems (e.g., Leidy et al., 2009). Indeed, some interventions aiming to enhance healthy child behavioral outcomes specifically focus on the marital relationship, which is a strong predictor of positive parenting and child outcomes in some randomized trials (Zemp et al., 2016). Therefore, RF's link to greater couple cohesion within our high-risk sample has significant protective implications, which have been discussed within the realm of stable and safe relationships protecting against intergenerational transmission of childhood maltreatment (Schofield et al., 2013).

### **Maternal Insensitivity**

As hypothesized, RF and rejection interacted to predict mothers' unresponsiveness and controlling behavior toward infants. The nature of these interactions differed by the parenting variable examined, however. With respect to unresponsiveness, only when mothers' self-focused RF was at low levels were higher experiences of maternal rejection associated with higher levels of unresponsiveness during play. Mothers who have experienced rejection in early attachment relationships, and who also exhibit difficulties in mentalizing, may lack the tools necessary to bond with their infants and are subsequently at greater risk of passively rejecting them in return.

In contrast, the pattern we observed with respect to maternal control was different—higher RF was actually a risk factor. Counterintuitively, mothers with high RF and greater experiences of rejection exhibited higher levels of control, whereas mothers with lower RF and histories of childhood rejection showed lower levels of control with their five month olds. Parental control,

which in the context of our coding system refers to behavior that indicates covert and overt hostility toward the infant, is associated with various negative child outcomes (e.g., Smith et al., 2004). Although this contradicted our original hypothesis, one post-hoc explanation is that these mothers, who are more reflective and have a history of rejection, may be more engaged (i.e., not unresponsive) but coping with perhaps stressful and triggering levels of engagement by being more controlling with their children, perhaps as a byproduct of their greater capacity for reflection. Therefore, rather than avoiding interactions altogether, which may have been the process they experienced in their childhoods with their rejecting mothers, they may be attempting to forcefully engage with and control their infants in order to compensate in their parenting style. These warrant further examination in order to hone in on the mechanisms of change in high-risk parenting populations.

### **Clinical Implications**

RF, a cognitive affective process closely associated with attachment, is known to be amenable to intervention, and falls in the domain of processes that are commonly the focus of intervention in psychodynamic, as well as cognitive behavioral modalities. Moreover, Bateman and Fonagy's mentalization-based therapy (MBT) has been effectively used with various populations, primarily individuals with borderline personality disorder/traits (e.g., Bateman & Fonagy, 2008). Mentalization-based individual therapies have shown great promise in the context of maternal functioning. For example, *Mothering from the Inside Out* enhances RF in the parenting role, subsequently leading to decreases in parenting stress (e.g., Suchman et al., 2017).

Only low levels of RF were linked to negative couple outcomes in the presence of childhood rejection history. The fact that even mean levels of RF acted as a protective barrier indicates that there may be a level of "good enough RF," which is in line with the concept of



“good enough parenting” in the research literature (Bettelheim, 1987), and has great implications for clinicians working with struggling parents.

Our findings also have implications regarding the buffering effect RF may have on future child outcomes and recommendations for the use of attachment-based interventions. Recent research has found that mothers’ early childhood adversity is linked to their own children’s externalizing behavior problems through pathways of maternal attachment avoidance (Cooke et al., 2019), and the authors contend that addressing insecure maternal attachment style for these mothers, which may be done through RF interventions, would help to mitigate the intergenerational transmission of risk. Results discussed herein suggest that RF-based interventions, which would only seek to achieve average levels of mentalization, could protect against the cycle of parental rejection, as well as enhance couple cohesion.

Regarding mechanisms at play, RF may help to increase a sense of agency in parents with difficult childhood experiences, particularly when emotions related to early adverse experiences are triggered, so they may remain responsive to their infants. Additionally, due to feelings of agency and motivation to not repeat patterns of past rejection, mothers may inadvertently exhibit more controlling behaviors toward their infants. Helping mothers to understand their emotions as a result of early rejection experiences, enhancing awareness of when such states are triggered, and then developing new solutions may be one method of intervening. Lastly, it should be noted that mothers high in RF are also allowing greater intimacy and cohesion within their romantic relationships, thereby enhancing co-parenting support.

Although our study focused exclusively on mothers, we wonder whether these findings would apply to fathers. While models of mentalizing and attachment pertain to parents of both genders (e.g., Slade, 2005), some studies fail to find expected associations with RF and attachment,

couple interaction quality, and parenting behavior effects for fathers (e.g., Borelli, Slade, Pettit, & Shai, 2020). This leads us to wonder whether mentalizing ought to be conceptualized and measured more broadly in fathers – for instance, by measuring embodied mentalizing (Shai & Belsky, 2011) in the ways in which fathers demonstrate an implicit understanding of their children’s mental states during play. Differences in the expression of mentalizing could be due to the way in which parents of different genders are socialized from an early age to express emotions (Barbee et al., 1993). If mentalizing were measured more broadly, we would expect to find similar associations for fathers as we observed for mothers.

### **Limitations**

This study has many strengths, including our longitudinal design, the focus on a difficult-to-recruit and high-risk population of mothers that have experienced past adverse parenting, the use of interaction-based observational measures, and interview measures to assess adult RF. However, the sample size was relatively small; we attempted to address missing data through the use of multiple imputation methods, but collecting data from a larger sample of mothers would result in greater statistical power to detect interaction effects. Second, although the sample was high-risk by definition (i.e., low scores on the parental care scale of the PBI), it was majority Caucasian, which reduces the generalizability of the findings to people from other ethnic and racial groups. The sample also consisted of first-time mothers as well as mothers with one or more children, which introduced variability into the experiences of the women in the study. We controlled for number of children in analyses but would have liked to tested this variable as an additional moderator yet were underpowered to do so. Further, while the study design was longitudinal, reports of parental rejection were collected at baseline; thus, it would be more accurate to state that we assessed RF as a protective factor against *recalled* rejection experiences as measured through narratives provided

during adulthood. While we acknowledge the biases inherent in retrospective reports (Hardt & Rutter, 2004), it should be noted that recent research has shown that there is higher agreement between prospective and retrospective measures of childhood maltreatment when using interviews, as was done in the current study, rather than questionnaires (Baldwin et al., 2019). In future work, it would also be preferable to include more than one AAI rejection coder, whereas in this study we only had one.

An additional limitation is the study's use of one 3-minute mother-child interaction to code insensitive parenting at five months postpartum. We were therefore careful to indicate that risk, rather than the pervasive presence, of unresponsiveness and/or controlling behaviors was present in our sample of low RF mothers. Future research in these domains should aim to utilize more data points with regard to parent-child interactions, as well as a larger and more heterogeneous sample, and should continue to use highly validated and standardized objective measures within a longitudinal design. With respect to the current study's focus on mothers whom all experienced poor parental care, subsequent RF investigations should include participants with a wider range of childhood parenting quality. Lastly, future directions could include the manipulation of RF in mothers with insensitive parenting to test whether increases in mentalization lead to better parenting behaviors and relationships satisfaction over time.

In conclusion, our findings provide initial evidence that self-focused RF moderates the association between mothers' recalled experiences of parental rejection during childhood and experiences in the roles of caregiver and partner. These findings add to the evidence base regarding the protective role of RF and extend our understanding of RF in the context of rejection specifically.

### References

- Ainsworth, M. D. S., Blehar, M. C, Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum
- American Academy of Pediatrics. 2004. *Caring for Your Baby and Young Child: Birth to Age 5* (Fourth edition). Edited by S. P. Shelov and R. E. Hannemann. New York: Bantam Books.
- Baldwin J. R., Reuben A., Newbury J. B., & Danese A. (2019). Agreement between prospective and retrospective measures of childhood maltreatment: A systematic review and meta-analysis. *JAMA Psychiatry*, 76, 584–593. doi:10.1001/jamapsychiatry.2019.0097
- Barbee, A. P., Cunningham, M. R., Winstead, B. A., Derlega, V. J., Gulley, M. R., Yankeelov, P. A., & Druen, P. B. (1993). Effects of gender role expectations on the social support process. *Journal of Social Issues*, 49(3), 175-190. doi: 10.1111/j.1540-4560.1993.tb01175.x
- Bateman, A., & Fonagy, P. (2008). 8-year follow-up of patients treated for borderline personality disorder: Mentalisation-based treatment versus treatment as usual. *The American Journal of Psychiatry*, 165, 631–638. <https://doi.org/10.1176/appi.ajp.2007.07040636>
- Belsky, J., Spanier, G. B., & Rovine, M. (1983). Stability and change in marriage across the transition to parenthood. *Journal of Marriage and the Family*, 45, 567. doi:10.2307/351661
- Berthelot, N., Ensink, K., Bernazzani, O., Normandin, L., Luyten, P., & Fonagy, P. (2015). Intergenerational transmission of attachment in abused and neglected mothers: The role of trauma-specific reflective functioning. *Infant Mental Health Journal*, 36, 200-212. doi:10.1002/imhj.21499.

- Bettelheim, B. (1987). *A good enough parent: A book on child-rearing* Alfred A. Knopf, New York, NY.
- Borelli, J. L., Cohen, C., Pettit, C., Normandin, L., Target, M., Fonagy, P., & Ensink, K. (2019). Maternal and child sexual abuse history: An intergenerational exploration of children's adjustment and maternal trauma-reflective functioning. *Frontiers in Psychology, 10*, 1062. <https://doi.org/10.3389/fpsyg.2019.01062>
- Borelli, J. L., Hong, K., Rasmussen, H. F., & Smiley, P. A. (2017). Reflective functioning, physiological reactivity, and overcontrol in mothers: Links with school-aged children's reflective functioning. *Developmental Psychology, 53*, 1680–1693.
- Bowlby, J. (1973). *Attachment and loss, Vol. 2: Separation*. New York: Basic Books
- Bowlby, J. (1988). *A secure base. Clinical applications of attachment theory*. London: Routledge.
- Carey, M. P., Spector, I. P., Lantinga, L. J., & Krauss, D. J. (1993). Reliability of the Dyadic Adjustment Scale. *Psychological Assessment, 5*, 238-240.
- Condon, J. T., Boyce, P., & Corkindale, C. J. (2004). The First-Time Fathers Study: A prospective study of the mental health and wellbeing of men during the transition to parenthood. *Australian and New Zealand Journal of Psychiatry, 38*, 56-64.  
[doi:10.1111/j.1440-1614.2004.01298.x](https://doi.org/10.1111/j.1440-1614.2004.01298.x)
- Cooke, J. E., Racine, N., Plamondon, A., Tough, S., & Madigan, S. (2019). Maternal adverse childhood experiences, attachment style, and mental health: Pathways of transmission to child behavior problems. *Child Abuse & Neglect, 93*, 27-37. [doi:10.1016/j.chiabu.2019.04.011](https://doi.org/10.1016/j.chiabu.2019.04.011)

- Crittenden, P.M. (1981). Abusing, neglecting, problematic, and adequate dyads: Differentiating by patterns of interaction. *Merrill-Palmer Quarterly of Behavior and Development*, 27, 201-218. doi: 10.2307/23083982
- Crittenden, P. M. (2006). A dynamic-maturational model of attachment. *Australian and New Zealand Journal of Family Therapy*, 27, 105-115.
- Doss, B. D., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2009). The effect of the transition to parenthood on relationship quality: An 8-year prospective study. *Journal of Personality and Social Psychology*, 96, 601-619. doi:10.1037/a0013969
- Downey, G., Feldman, S., & Ayduk, O. (2000). Rejection sensitivity and male violence in romantic relationships. *Personal Relationships*, 7, 45-61.  
doi:10.1111/j.14756811.2000.tb0-0003.x
- Enders, C. K. (2006). A primer on the use of modern missing-data methods in psychosomatic medicine research. *Psychosomatic Medicine*, 68, 427–436. doi:  
10.1097/01.psy.0000221275.75056.d8.
- Ensink, K., Bégin, M., Normandin, L., & Fonagy, P. (2016). Maternal and child reflective functioning in the context of child sexual abuse: Pathways to depression and externalising difficulties. *European Journal of Psychotraumatology*, 7, 30611.  
<https://doi.org/10.3402/ejpt.v7.30611>
- Ensink, K., Leroux, A., Normandin, L., Biberdzic, M., & Fonagy, P. (2017). Assessing reflective parenting in interaction with school-aged children. *Journal of Personality Assessment*, 99, 585-595. doi:10.1080/00223891.2016.1270289
- Ensink, K., Normandin, L., Plamondon, A., Berthelot, N., & Fonagy, P. (2016). Intergenerational pathways from reflective functioning to infant attachment through parenting. *Canadian*

- Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 48, 9-18. doi:10.1037/cbs0000030
- Farnfield, S., Hautamäki, A., Nørbech, P., & Sahhar, N. (2010). DMM assessments of attachment and adaptation: Procedures, validity and utility. *Clinical Child Psychology and Psychiatry*, 15, 313-328. doi:10.1177/1359104510364315
- Favez, N., Frascarolo, F., Carneiro, C., Montfort, V., Corboz-Warnery, A., & Fivaz-Depeursinge, E. (2006). The development of the family alliance from pregnancy to toddlerhood and children outcomes at 18 months. *Infant and Child Development*, 15, 59-73. doi:10.1002/icd.430
- Fonagy, P., Gergely, G., Jurist, E. L., & Target, M. (2002). *Affect regulation, mentalization, and the development of the self*. New York, NY: Other Press.
- Fonagy, P. & Target, M. (1998) Mentalization and the changing aims of child psychoanalysis, *Psychoanalytic Dialogues*, 8:1, 87-114.  
doi: 10.1080/10481889809539235
- Fonagy, P., Target, M., Steele, H., & Steele, M. (1998). Reflective Functioning Manual, Version 5.0, for Application to Adult Attachment Interviews. London: University College London.
- George, C., Kaplan, N., & Main, M. (1985). *The Adult Attachment Interview*. Unpublished manuscript, Department of Psychology, University of California at Los Angeles, Berkeley.
- Graham, J. M., Liu, Y. J., & Jeziorski, J. L. (2006). The Dyadic Adjustment Scale: A reliability generalization meta-analysis. *Journal of Marriage and Family*, 68, 701-717.  
<https://doi.org/10.1111/j.1741-3737.2006.00284.x>

- Haas, M. A., Bakermans-Kranenburg, M. J., & Ijzendoorn, M. H. (1994). The Adult Attachment Interview and Questionnaires for Attachment Style, Temperament, and Memories of Parental Behavior. *The Journal of Genetic Psychology, 155*, 471-486.  
doi:10.1080/00221325.1994.9914795
- Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry, 45*, 260-273. doi:http://dx.doi.org/10.1111/j.1469-7610.2004.00218.x
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional *process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: Developmental issues and outcomes. *Child Abuse & Neglect, 26*, 679-695. doi:10.1016/s0145-2134(02)00341-1
- Huth-Bocks, A. C., Krause, K., Ahlfs-Dunn, S., Gallagher, E., & Scott, S. (2013). Relational trauma and posttraumatic stress symptoms among pregnant women. *Psychodynamic Psychiatry, 41*, 277-302. doi:10.1521/pdps.2013.41.2.277
- Jessee, A., Mangelsdorf, S. C., Wong, M. S., Schoppe-Sullivan, S., Shigeto, A., & Brown, G. L. (2018). The role of reflective functioning in predicting marital and coparenting quality. *Journal of Child and Family Studies, 27*, 187-197. doi:http://dx.doi.org/10.1007/s10826-017-0874-6
- Khaleque, A. (2015). Perceived parental neglect, and children's psychological maladjustment, and negative personality dispositions: A meta-analysis of multicultural studies. *Journal of Child and Family Studies, 24*, 1419-1428. https://doi.org/10.1007/s108.26-014-9948-x.
- Landry, S.H. (1986). Preterm infants' responses in early joint attention interactions. *Infant Behavior and Development, 9*, 1-14.



- Leidy, M. S., Parke, R. D., Cladis, M., Coltrane, S., & Duffy, S. (2009). Positive marital quality, acculturative stress, and child outcomes among Mexican Americans. *Journal of Marriage and Family, 71*, 833-847. doi:<http://dx.doi.org/10.1111/j.1741-3737.2009.00638.x>
- Lichtenstein Phelps, J., Belsky, J., & Crnic, K. (1998). Earned security, daily stress, and parenting: A comparison of five alternative models. *Development and Psychopathology, 10*, 21-38.
- Main, M., & Goldwyn, R. (1984). Predicting rejection of her infant from mother's representation of her own experiences: Implications for the abused-abusing intergenerational cycle. *Child Abuse and Neglect: The International Journal, 8*, 203-17.
- Main, M., & Goldwyn, R. (1984-1998). *Adult Attachment Scoring and Classification Systems. Unpublished manuscript.* University of California, Berkeley.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing points of attachment theory and research. Monographs of the Society for Research in Child Development, 50*, 66-106.
- Mccarthy, G., & Maughan, B. (2010). Negative childhood experiences and adult love relationships: The role of internal working models of attachment. *Attachment & Human Development, 12*, 445-461. doi:[10.1080/14616734.2010.501968](http://dx.doi.org/10.1080/14616734.2010.501968)
- Parade, S. H., Leerkes, E. M., & Helms, H. M. (2013). Remembered parental rejection and postpartum declines in marital satisfaction: Moderated dyadic links. *Family Relations, 62*, 298-311. doi:<http://dx.doi.org/10.1111/fare.12004>
- Parker, G., Tupling, H., & Brown, L. B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology, 52*, 1-10. doi:[10.1111/j.2044-8341.1979.tb02487.x](http://dx.doi.org/10.1111/j.2044-8341.1979.tb02487.x)

- Ripley, J. S., Garthe, R. C., Perkins, A., Worthington, E. L., Davis, D. E., Hook, J. N., . . . Eaves, D. (2016). Perceived partner humility predicts subjective stress during transition to parenthood. *Couple and Family Psychology: Research and Practice, 5*, 157-167. doi:10.1037/cfp0000063
- Rohner, R. P., Filus, A., Melendez-Rhodes, T., Kuyumcu, B., Machado, F., Roszak, J., . . . Roy, K. (2019). Psychological maladjustment mediates the relation between remembrances of parental rejection in childhood and adults' fear of intimacy: A multicultural study. *Cross-Cultural Research, 53*, 508-542. doi:10.1177/1069397118822992
- Rubin, K. H., Nelson, L. J., Hastings, P., & Asendorpf, J. (1999). The transaction between parents' perceptions of their children's shyness and their parenting styles. *International Journal of Behavioral Development, 23*, 937-957. doi:10.1080/016502599383612
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*, 147-177.
- Schofield, T. J., Lee, R. D., & Merrick, M. T. (2013). Safe, stable, nurturing relationships as a moderator of intergenerational continuity of child maltreatment: A meta-analysis. *Journal of Adolescent Health, 53*, S32-S38. doi:http://dx.doi.org/10.1016/j.jadohealth.2013.05.004
- Shai, D., & Belsky, J. (2011). When words just won't do: Introducing parental embodied mentalizing. *Child Development Perspectives, 5*(3), 173-180. doi:10.1111/j.1750-8606.2011.00181.x
- Slade, A., Cohen, L. J., Sadler, L. S., & Miller, M. (2009). The psychology and psychopathology of pregnancy. In C. H. Zeanah, Jr. (Ed.), *Handbook of Infant Mental Health* (pp. 22-39). New York: Guilford Press.

Smith, C. L., Calkins, S. D., Keane, S. P., Anastopoulos, A. D., & Shelton, T. L. (2004).

Predicting stability and change in toddler behavior problems: Contributions of maternal behavior and child gender. *Developmental Psychology, 40*, 29-42. doi: 10.1037/0012-1649.40.1.29.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*, 15 – 28

Spanier G. B. (2001) *Dyadic Adjustment Scale (DAS) User's Manual*. Multi-Health Systems: North Tonawanda, NY, USA.

Suchman, N. E., DeCoste, C. L., McMahon, T. J., Dalton, R., Mayes, L. C., & Borelli, J. L.

(2017). Mothering from the inside out: Results of a second randomized clinical trial testing a mentalization-based intervention for mothers in addiction treatment.

*Development & Psychopathology, 29*, 617-636. doi:10.1017/S0954579417000220

Suchman, N. E., DeCoste, C., Leigh, D., & Borelli, J. L. (2010). Reflective functioning in mothers with drug use disorders: Implications for dyadic interactions with infants and toddlers. *Attachment and Human Development, 12*, 567-585.

doi:10.1080/14616734.2010.501988

Taubner, S., Hörz, S., Fischer-Kern, M., Doering, S., Buchheim, A., & Zimmermann, J. (2013).

Internal structure of the Reflective Functioning Scale. *Psychological Assessment, 25*, 127-135. <https://doi.org/10.1037/a0029138>

Tronick, E.Z., Als, H., Adamson, L., Wise, S., and Brazelton, T.B. (1978). The infant's response to entrapment between contradictory messages in face-to-face interaction. *Journal of the American Academy of Child and Adolescent Psychiatry, 17*, 1–13. doi:10.1016/S0002-7138(09)62273-1

- Voydanoff, P., & Donnelly, B. W. (1999). Multiple roles and psychological distress: The intersection of the paid worker, spouse, and parent roles with the role of the adult child. *Journal of Marriage and the Family*, *61*, 725. doi:10.2307/353573
- Whitbeck, L. B., Hoyt, D. R., Simons, R. L., Conger, R. D., Elder, G. H., Jr., Lorenz, F. O., & Huck, S. (1992). Intergenerational continuity of parental rejection and depressed affect. *Journal of Personality and Social Psychology*, *63*, 1036-1045.  
doi:http://dx.doi.org/10.1037/0022-3514.63.6.1036
- Zemp, M., Milek, A., Cummings, E. M., Cina, A., & Bodenmann, G. (2016). How couple- and parenting-focused programs affect child behavioral problems: A randomized controlled trial. *Journal of Child and Family Studies*, *25*, 798-810.  
doi:http://dx.doi.org/10.1007/s10826-015-0260-1

Table 1

*Baseline Demographic Variables and Correlations of Key Study Variables*

Variable	<i>M</i>	<i>SD</i>	2	3	4	5	6	7	8	9
1. Mother Age	28.50	5.09	0.39***	0.12	0.10	0.22*	0.21*	0.13	-0.19*	0.38
2. Number of Children	0.80	0.86	----	-0.27**	0.27**	-0.15	0.09	0.08	-0.05	0.22**
3. Income <sup>a</sup>	4.33	1.18		----	-0.19*	0.30***	0.16	-0.33**	0.03	0.28**
4. Rejection	5.67	2.48			----	-0.30**	0.00	-0.01	-0.28*	-0.14
5. RF-self	4.17	1.80				----	0.05	0.03	-0.02	0.36**
6. Satisfac <sup>b</sup>	15.97	4.35					----	0.02	-0.14	0.41***
7. Unresp <sup>b</sup>	3.03	2.31						----	0.40***	-0.03
8. Control <sup>b</sup>	4.05	3.17							----	-0.04
9. Dyadic Coh <sup>c</sup>	13.58	7.07								----

Note: \*= $p < .05$ ; \*\*= $p < .01$ ; \*\*\*= $p < .001$  Satisfac=satisfaction, Unresp=unresponsiveness

Values depicted for the imputed sample ( $N = 108$ ) but the values for the non-imputed raw sample ( $n=75$ ) are very similar

<sup>a</sup> Median family income was between 20,000 and 30,000 Canadian dollars

<sup>b</sup> 5 months

<sup>c</sup> 17 months

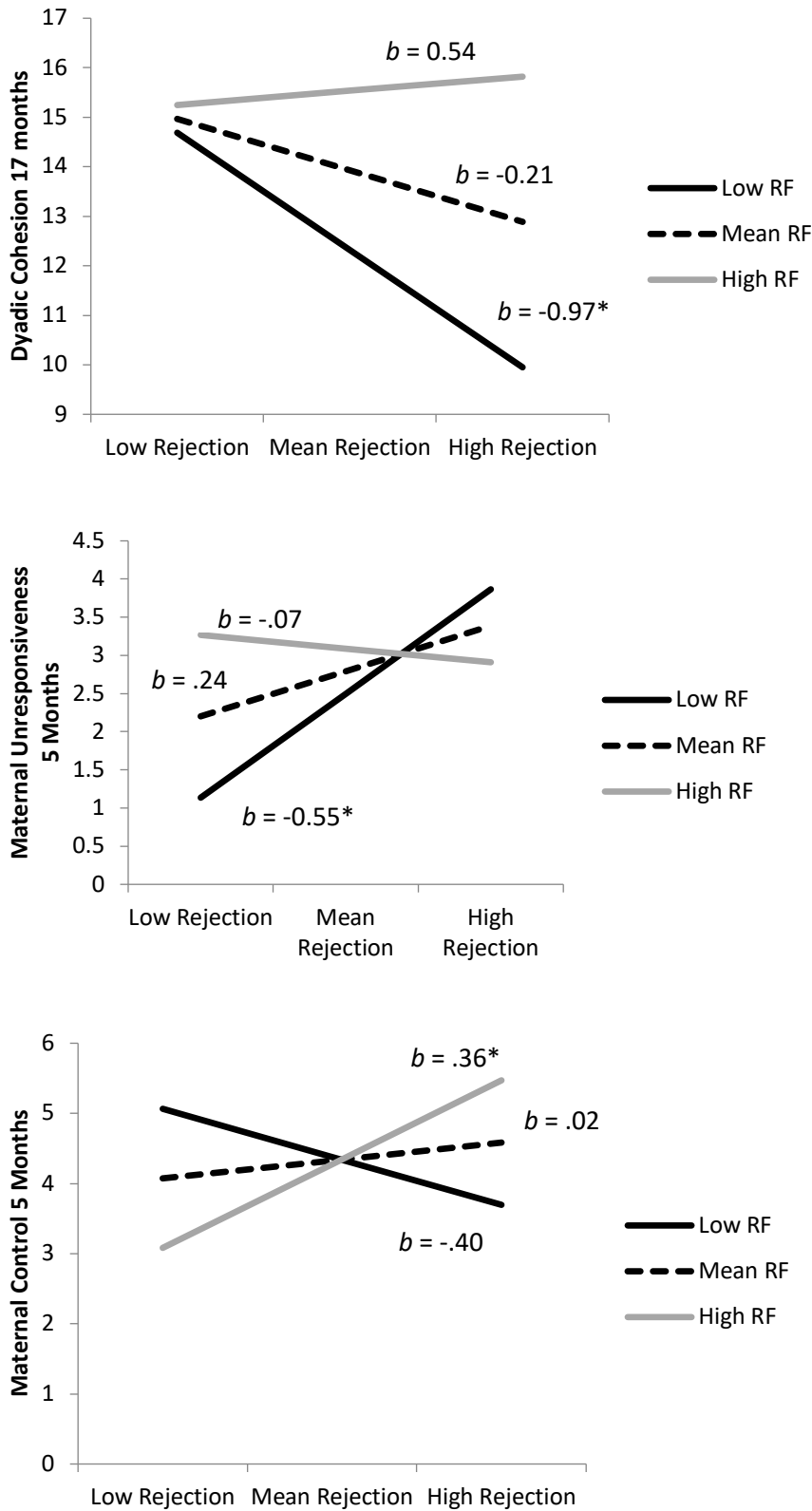


Figure 1. The interaction between rejection and RF predicts dyadic cohesion, maternal unresponsiveness (Panel B), and maternal control. Analyses control for maternal age, number of children, and household income. Note: \*= $p < .05$ ; \*\*= $p < .01$  \*\*