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Differentiation, self-other representations, and rupture-repair processes: Predicting child maltreatment-risk

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Abstract

This set of studies was designed to examine the relational underpinnings of child abuse potential in a sample of 51 urban families. In Study 1, lower maternal differentiation of self—most notably, greater emotional reactivity and greater emotional cutoff—along with self-attacking introjects, together distinguished mothers at higher risk (vs. lower risk) for child maltreatment (CM). In Study 2, patterns of interactive rupture and repair were examined in a subsample of $n = 15$ families and found to vary as a function of risk for CM. Specifically, SASB coding (Benjamin, 1996, 2003) of mother-children interactions during two moderately stressful lab tasks revealed higher rates of interactive mismatch and mother-initiated ruptures, and fewer successful repairs in families at higher-risk-for-CM, relative to families at lower-risk. Implications for counseling and directions for further translational research are discussed.

Keywords

Child maltreatment; parenting; differentiation; SASB; relationship rupture

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Child abuse affects almost 1 million children each year, and estimates indicate that roughly 80% of perpetrators are parents (U.S. Department of Health and Human Services, Administration on Children, Youth, & Families, 2006). The effects of CM constitute a serious public health problem in the United States, with both short and long-term adverse consequences for psychological, behavior, and social outcomes. CM is associated with alterations in fear-stress physiology and brain development (Shonkoff & Phillips, 2000; Gunnar & Donzella, 2002), and impairments in self and emotion regulation (Rogosch,

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Cicchetti, & Aber, 1995) and school-readiness, with significant long-term consequences into adolescence and adulthood (e.g., NIMH, 2000; Kolko, 2002; Mulvihill, 2005; Patterson, Reid, & Dishion, 1992).

CM represents a complex, multi-determined phenomenon resulting from a constellation of risk factors present in the individual child (e.g., prematurity, disability status, temperament), family (e.g., parent depression, substance abuse, cognitive level, impulse control), and environmental (e.g., access to social support, community violence, cultural attitudes about CM) contexts (e.g., Belsky, 1993; Cicchetti & Lynch, 1993; Myers, Berliner, Briere, Hendrix, Jenny, & Reid, 2002). However, CM is increasingly viewed as rooted in the day-to-day interactions between parents and children (Barnett, Manly, & Cicchetti, 1993; Belsky, 1993; Rogosch et al., 1995; Trickett & McBride-Chang, 1995). Along the continuum of parenting-at-risk, the potential for maltreatment exists to some extent in every parent-child relationship (e.g., Ammerman, 1990; Cicchetti & Rogosch, 1997). The broad goal of this study was to assist in clarifying relational risk and protective factors in families at risk for CM, in order to improve scientific predictions about children's developmental outcomes, and to inform the design of effective counseling interventions. First, we examined the role of maternal differentiation of self and quality of self-other representations in predicting risk for child abuse. Second, we employed the Structural Analysis of Social Behavior (SASB; Benjamin, 1996) coding system to study patterns of mother-child interactive synchrony and their associations with differentiation of self and CM risk.

Differentiation of Self, Self-Other Representations, and Risk for Child Maltreatment

Recent applications of family systems theory provide a useful framework for understanding the relational underpinnings of CM (e.g., Howe, Cicchetti, Toth, & Rogosch, 2000; Skowron & Platt, 2005; Skowron, Van Epps, & Cipriano, in press). For example, Smith (2001, 2002) proposed that deficits in parents' capacities to adaptively self-soothe or manage emotional reactivity during difficult family transactions underlie the maladaptive family processes characterizing family violence (i.e., aversive punishment & control, detouring marital conflict onto one or more children). Parents' use of aversive child management strategies, such as criticism and control, avoidance and cutoff, are harmful to developing children, and may result in physical and psychological injuries via abuse or neglect. However, viewed through the lens of family systems theory, parent reliance on these aversive strategies may reflect efforts to cope with emotional discomfort, calm themselves, and bind chronic anxiety in the system. In other words, child maltreatment is thought to serve a maladaptive stabilizing function in the family system and reflect basic deficits in a family system's level of differentiation of self (Smith, 2001, 2002). Indeed, research has shown that maltreating parents tend to show more emotional reactivity, less affection toward their children, more negativity, and greater anger dysregulation.. They tend to discourage autonomy and independence, rely more on emotional distancing and withdrawal to manage stress, engage in role reversals, and experience less enjoyment of parenting (e.g., Burgess & Conger, 1978; Egeland et al., 1980; Howe et al., 2000; Kavanagh, Youngblade, Reid, & Fagot, 1988; Lahey, Conger, Atekson, & Treiber, 1984; Macfie, Fitzpatrick, Rivas, & Cox, 2008; Macfie, McElwain, Houts, & Cox, 2005).

Successful differentiation of self both within one's family of origin and in one's nuclear family comprises a central developmental process of adulthood--essential to the formation of healthy marital and parenting processes (Bowen, 1978; Kerr & Bowen, 1988; Skowron & Schmitt, 2003). Differentiation of self is defined as the capacity of a system and its members to manage emotional reactivity, allow for both intimacy and autonomy in relationships, and engage in adaptive problem solving (i.e., Bowen, 1978; Kerr & Bowen, 1988). It involves the capacity to think clearly in the midst of strong emotions, and to modulate one's emotional reactions and self-soothe emotions such as anxiety, anger or fear. Early

manifestations of differentiation are thought to be reflected in children's developing capacities for self regulation of emotion and behavior (Skowron et al., in press). Research indicates that early in life, children rely on parents and other external sources in the early years to help them regulate affect and behavior (Kopp, 1982; Kopp, 1989; Thompson, 1994). Over time, children increasingly develop strategies to self-regulate their emotions and behavior (Thompson, 1991).

On an interpersonal level, differentiation of self refers to the ability to experience intimacy with others and preserve autonomy in family relationships. More differentiated parents are thought to be more flexible and adaptive under stress because they are more capable of modulating the emotional arousal experienced during stress. Parents with higher levels of differentiation of self are less emotionally reactive, better able to regulate emotion, think clearly under stress, maintain a clear self in relation, and are more capable of remaining connected with their children while also supporting their autonomy (Bowen, 1978; Skowron & Friedlander, 1998). Indeed, research has documented that differentiations of self problems—in particular, greater emotional reactivity and emotional cutoff—are highly correlated with greater attachment anxiety and avoidance, and lower effortful control of behavior (e.g., Skowron & Dendy, 2004; Wei, Vogel, Ku, Zahalik, 2005). Recently, Skowron and Platt (2005) reported significant relations between lower differentiation of self scores and risk for child abuse in a sample of emerging adults who were not yet parents. However, to our knowledge, the relations between differentiation of self and child abuse potential have not been examined in a sample of parents at risk for CM. Thus, the first goal of this study was to examine whether mothers who reported lower levels of differentiation of self would also be at greater risk for physical child abuse.

In addition to the role of maternal differentiation of self in determining risk for maltreatment, we examined whether quality of mothers' representations of intergenerational family relationships would predict CM risk. Family systems theory (Kerr & Bowen, 1988) and research (e.g., Hurst, Sawatzky, & Pare, 1996; Klever, 2005) suggest that continuities exist in the family emotional process observed across generations of a family. These "multigenerational trends in functioning reflect an orderly and predictable relationship process that connects the functioning of family members across generations" (Kerr & Bowen, 1988, p. 224). Beyond models of multigenerational CM transmission grounded in modeling and reinforcement (e.g., Belsky, 1993), Benjamin's (2003) interpersonal copy process theory documents how parents tend to act toward their children in ways that mirror their perceived experiences with early caregivers, via identification, recapitulation, and/or introjection.

Identification refers to the extent to which an individual engages in interpersonal behavior in the present that copies the behavior of important other persons, such as parents (e.g., I behave like him/her). *Recapitulation* refers to the extent to which the individual's present behavior copies their past behavior with important others (e.g., I behave as if he/she is still present). *Introjection* is observed in current ways of thinking about and treating oneself that mirror prior treatment from important others (i.e., I treat myself as I was treated by him/her). With respect to the copy process of identification, research has documented relations between witnessing or experiencing child abuse and later abuse of children and/or romantic partners by both men and women (e.g., Carr & Van Deusen, 2002; Heyman & Slep, 2002). Likewise, other studies provide some evidence of the introjective copy process, with recollections of early maltreatment showing associations with self-blame and self-harming behaviors (e.g., Higgins & McCabe, 2000; Noll et al., 2003). With respect to the focus on child maltreatment, we reasoned that maternal representations in the forms of introjection and identification would most influence the extent of risk for child abuse.¹ Thus, maternal introjects and caregiver representations characterized by hostility, control, or neglect were

expected to predict greater risk for child abuse, while affirming, loving, and autonomy-supporting introjects and caregiver representations were expected among mothers at lower risk.

In sum, the purpose of Study 1 was to examine relations between maternal differentiation of self, self-other intergenerational representations, and child abuse potential. We hypothesized that greater child abuse potential would be associated with mothers' reports of (a) lower differentiation of self, and (b) more negative self- and caregiver-representations, while mothers reporting higher levels of differentiation of self (i.e., lower emotional reactivity, greater ability to take "I" positions in relationships, lower emotional cutoff and fusion with others) and positive self- and caregiver-representations, would show lower risk for child abuse.

Rupture/Repair in Mother-Child Interactions & Risk for Child Maltreatment

Beyond our efforts to examine the role of maternal differentiation and self-other representations, the second purpose of this research was to examine patterns of interactive synchrony in families at high- and low-risk-for-child abuse, using the SASB observational coding system (Benjamin, 1996). Most available data informing us about the nature of maladaptive parenting that distinguishes CM and non-CM families comes from studies that conceptualize parenting in broad dimensions, such as warmth, positivity (Pianta, Egeland, & Erickson, 1989), and aversiveness (Lyons-Ruth, Connell, Zoll, & Stahl, 1987). Wilson and colleagues recently reviewed this work in a meta-analysis of 33 observational studies of parenting in families with documented child physical abuse and/or neglect (CM) versus families with no CM history (Wilson, Rack, Shi, & Norris, 2008). Focusing analyses on three broad dimensions of parent behaviors, their results confirmed that CM parents showed greater aversiveness, less positivity, and less involvement in their observed interactions with their children, relative to non-CM parents. Effect sizes associated with these group differences ranged from $d = .42$ to $.62$.

Further, meta-analyses testing the effectiveness of psychological interventions for CM have documented parent and child self-reported improvements in functioning, but these interventions do little to improve the quality of observed parent-child interactions or to reduce recidivism (e.g., MacLeod & Nelson, 2000; Skowron & Reinemann, 2005). These meta-analyses indicate that CM parents are less positive, more negative, and less involved with the children, and that interventions generally fail to improve the quality of parent—child interactions in CM families. Taken together, these findings point to the need for micro-analytic observational study of parenting processes associated with greater risk for CM, aimed at shedding light on both parent and child contributions to their interactive success. Such process-oriented research focused on both parent and child may better inform design of effective interventions to prevent CM (e.g., Tolan, Gorman-Smith, & Henry, 2006).

Few lines of research on parenting processes in high-risk families and/or those with aggressive youth have employed micro-analytic methods of family observation and coding focused on parent and child (see Cerezo, 1997, for a review). For example, using sequential analyses, Reid and colleagues (e.g., Reid, Taplin, & Loeber, 1981; Loeber, Dishion, & Patterson, 1984) observed that CM mothers engage in more negative interactions and greater reciprocal acceleration of coercive interactions with their children. These reciprocal, mutually-sustaining coercive exchanges in parent-child interactions were further shown to predict adolescent conduct problems. In another line of time-series studies, Wahler and his

¹We reasoned that recapitulation may play a central role in violence victimization, for example in cases of intimate partner violence (e.g., Ehrensaft, Cohen, Brown, Smailes, Chen, et al., 2003) and thus was not a focus in this study of CM.

colleagues documented support for a “predictability hypothesis,” namely, that in response to maternal inattentive and/or erratic behavior, children’s negative, aversive behaviors function to successfully pull for more predictable, albeit negative parenting responses (e.g., Wahler & Dumas, 1986; Wahler, Williams, & Cerezo, 1990).

Further, early maternal-child interactions characterized both by positive synchrony (i.e., mutually regulated, reciprocal, affiliative, and harmonious interchanges), and relatively brief relationship ruptures that are followed by successful repairs, together are thought to provide important benefits for children’s development (e.g., Gianino & Tronick, 1988). Specifically, Tronick (1989) theorized that a child’s experience of brief, manageable ruptures in maternal-child interactions, which are then successfully repaired, assist a child in developing the capacity to seek and maintain relational engagement in the midst of interactive stress, and over time, facilitate the confident pursuit of autonomy within the context of connection. In fact, research has shown that ruptures in the mother-child relationship are quite common in well-functioning families, with healthy non-clinical samples generally showing forms of positive synchrony less than 50% of the time (e.g., Cohen & Tronick, 1987, 1988; Jameson et al., 1997; Rocissano, Slade, & Lynch, 1987; see Harrist & Waugh, 2002, for a review). Study 2 was designed to build on this existing micro-analytic process research with normative and at-risk families by examining patterns of maternal-child rupture and repair in a subsample of families at highest and lowest risk for child abuse. We reasoned that families at higher risk for abuse would show more frequent and lengthier relationship ruptures and fewer successful repairs, when compared with families at lower risk.

In order to document patterns of interactive rupture and repair, families with highest and lowest abuse risk scores were identified using the Child Abuse Potential Inventory (Milner, 1986), and SASB coding of parent-child interactions was conducted. We reasoned that if patterns of relationship rupture and repair varied significantly across a smaller sample of families at highest and lowest risk for abuse, then intensive, follow-up work documenting patterns of interactive synchrony in a larger sample of maltreating and non-maltreating families would be warranted.

Thus in Study 2, we hypothesized that the group of mothers at high risk for abuse would experience more relationship ruptures, fewer repair attempts, and lower rates of successful repair with their children, as compared with mothers at lower risk. Beyond tests of these predictions, mother’s and children’s relative contributions to relationship ruptures and repairs were examined, to determine whether for example, there were differences in mother-initiated or child-initiated rates of rupture and repair in high risk vs. low risk families. We also examined whether dyads headed by mothers who reported greater differentiation of self would demonstrate greater interactive success (i.e., fewer ruptures and more successful repairs), relative to less differentiated mothers—independent of child abuse risk-status. Finally, we examined rates of mother-initiated versus child-initiated ruptures and repairs by maternal level of differentiation of self. To our knowledge, these studies represent the first to examine multigenerational family processes using both the SASB Intrex questionnaires and observational coding system in unison to map three-generational family processes.

Study 1

Method

Participants—Participants were 51 mothers and their children drawn from a broader study of risk and resilience in low-income, urban families (e.g., Skowron, 2005). Among participating mothers, 92.2% were biological mothers and 7.8% of were kinship mothers (i.e., maternal grandmother or aunt). Mean age of mothers was $M = 34.1$ years ($SD = 6.7$), and participating children ranged in age from 5 to 14 ($M = 8.8$, $SD = 2.2$) years. In terms of

marital status, 67.3% were single or dating, 12.2% were married, 18.3% were separated or divorced, and 2.0% were widowed. Mothers averaged 12.4 years of education ($SD = 2.0$; range 9 to 16 years). With respect to racial background, 76.5% of mothers self-identified as African American, 3.9% Caucasian, 2.0% Native American, 2.0% multi-racial, and 15.7% declined to provide information. Approximately two-thirds (63.4%) of mothers were employed outside the home. Participating families reported an average of 3.9 ($SD = 3.2$) children in the home. Median family income was \$17,400 after taxes, and approximately 1/2 of families were living below the federal poverty threshold of \$17,040 for a family of four. Over 1/2 (53.5%) of families had resided in their current residence one year or less; 13.9% (1+ to 2 yrs), 14.0% (2+ to 3 yrs), and with only 18.6% of families in their residence 3 or more years.

Measures

Child Abuse Potential Inventory: The Child Abuse Potential Inventory (CAPI; Milner, 1989, 1990) is self-report questionnaire that assesses physical child abuse potential. The 77-item CAPI Abuse scale assesses physical child abuse and consists of six factor scales named distress, rigidity, unhappiness, problems with family, problems with child and self, and problems from others. The CAPI also contains three validity scales (i.e., lie, random response, and inconsistency scales) used to detect response distortions, such as random responding or attempts to present oneself in socially desirable ways (i.e., faking-good). Internal consistency reliability for the CAPI Abuse scale has ranged from .92 to .96 (Milner, 1990), and was .93 in the current sample. Evidence for the validity of CAPI scores is based on documented relations between CAPI Abuse scores, indices of life stress, negative parenting styles, isolation, and prediction of later physical child abuse (Milner, 1990). Further, the CAPI validity scales show substantial correlations with similar response distortion scales, including the MMPI lie scale ($r = .49$), the Marlowe-Crowne Social Desirability scale ($r = .32$; Robertson & Milner, 1985), and the lie scale on Eysenck's Personality Inventory ($r = .51$; Pruitt, 1983, as cited in Milner, 1990). Likewise, valid CAPI Abuse scale scores have shown good discriminate validity with a clinical cutoff score of 215, correctly classifying 89.2% of confirmed child abusers and 96.3% of non-abusing controls (Milner, Gold, & Wimberley, 1986).

Differentiation of Self Inventory: The Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998) is a 43-item self-report instrument grounded in Bowen family systems theory (Bowen, 1978; Kerr & Bowen, 1988) that focuses on adults, their significant relationships, and their current relations with family of origin. The four subscales of the DSI were used in Study 1 to assess (a) Emotional Reactivity (emotional flooding, emotional lability, or hypersensitivity), difficulties taking an (b) "I" Position (clearly defined sense of self and ability to thoughtfully adhere to one's convictions under outside pressure), (c) Emotional Cutoff (discomfort with intimacy, feeling excessive vulnerability in relationships, defensive over-functioning and distancing in close relationships), and (d) Fusion with Others (emotional over-involvement and over-identification with parents and significant others). Higher scores reflect less emotional reactivity, emotional cutoff, fusion with others, and better ability to take an "I" position in relationships, in other words, greater differentiation of self. Only DSI Full Scale scores were employed below in Study 2.

Internal consistency reliabilities of the DSI subscales based on Cronbach's alpha are good: ER = .89, IP = .81, EC = .84, FO = .86, and Full Scale = .92 (Skowron & Friedlander, 1998); and in the present sample: ER = .81, IP = .82, EC = .79, and FO = .67. Theoretically-expected relationships have been well-documented between DSI scores, chronic anxiety, psychopathology (Peleg-Popko, 2002; Skowron & Friedlander, 1998), relationship distress (Skowron, 2000), stress, personal adjustment (Skowron, Wester, & Azen, 2004) coping

strategies (Murdock & Gore, 2004), and health and problem solving among diverse samples (Skowron, 2004; Tuason & Friedlander, 2000) and over time (Skowron, Shapiro, & Stanley, 2009).

Structural Analysis of Social Behavior: The SASB (Benjamin, 1974, 1996; see Figure 1) is a model for describing dyadic interpersonal behavior and intrapsychic representations that comprises three circumplex surfaces (corresponding to three different potential foci of communications), each defined by the orthogonal dimensions of affiliation and interdependence. Affiliation describes communications on a continuum ranging from loving to hostile. Interdependence describes communications on a continuum ranging from differentiated (i.e., autonomy-granting) to enmeshed (i.e., controlling). Figure 1 presents the eight behavioral blends of affiliation and interdependence on the three interpersonal surfaces of the simplified SASB model (Benjamin, 1996). Focus of an interpersonal communication is designated on one of the three surfaces. [Consistent with Benjamin's (1996) designations, the **bold**, underlined, and *italicized* labels employed here in the text and in Figure 1 to represent transitive, intransitive, and introject behaviors, respectively.] Communications **focused on other** describe **transitive** interpersonal behaviors initiated by one person toward another that are to, for, or about the other person. Communications focused on self in reaction to other describe one person's intransitive responses (or reactions) to another person. Communications *focused on self in relation to self* describe a person's *introject*.

SASB assessment methodology includes the Intrex Questionnaires (Benjamin, 1996) which were used to assess mothers' internalized representations, and an observational coding system (Benjamin & Cushing, 2000), used in Study 2 to operationalize relationship ruptures and repairs in maternal-child interactions. The term "internalized representation" is used to refer to recollections of relationships with important persons who are the referents of the three copy processes discussed earlier (Benjamin, 1996, 2003). Critchfield & Benjamin (2008) provided evidence from SASB data bases that these copy processes—identification, recapitulation, and introjection—can be seen in both normal and patient populations, even when correcting for base rates. SASB has been applied pan-theoretically to test a variety of questions about interpersonal functioning, psychopathology, and psychotherapy.

SASB Intrex questionnaires were employed to assess quality of mothers' (a) self-representations (i.e., introjects) and (b) representations of her early caregivers (i.e., **transitive** focus on other and intransitive reactions to other). The Intrex Questionnaires provide an opportunity for mothers to rate how they perceived being treated by their own caregivers in early childhood (i.e., transitive behaviors on Surface 1 assessed by 8 items on the short form), how they perceived their caregivers responding to them (intransitive behaviors on Surface 2 assessed by 8 items on the short form), and how they perceived treating themselves in particular states (introjected behaviors on Surface 3 assessed by 8 items on the short form). Mothers rated each item on a scale ranging from 0 (*never/not at all*) to 100 (*always/perfectly*). Ratings of mother's caregiver's transitive and intransitive behaviors on the Intrex represent the affiliative and interdependent characteristics of the rater's representational model of that other person (e.g., Benjamin & Friedrich, 1991; Gurtman, 2001; Pincus & Ruiz, 1997; Quintana & Meara, 1991). Test-retest reliabilities of the Intrex short form range from an average of .66 (Introject clusters) to an average of .92 (self with father in early childhood), and substantial convergence has been reported between the Intrex short and long forms (Benjamin, 1988; Pincus et al., 1998). Further, the SASB consistently discriminates clinical and non-clinical populations on dimensions of affiliation, hostility and submission (Florsheim, et al., 1996; Grigg, Friesen, & Sheppy, 1989).

In SASB terms, mothers at higher risk for child maltreatment were expected to display introject ratings and self-other representations characterized by Clusters 6, 7, 8 (i.e.,

Blaming & Criticizing, Sulking & Appeasing, Self-Blame; Attacking & Rejecting, Protesting & Recoiling, Self-Attack; Ignoring & Neglecting, Walling-off & Avoiding, Self-Neglect), and fewer behaviors located in Clusters 2, 3, 4 (i.e., **Affirming & Understanding, Disclosing & Expressing, Self-Affirm; Loving & Approaching, Joyfully Connecting, Self-Love; Nurturing & Protecting, Trusting & Relying Self-Protect**), relative to mothers at lower risk for maltreatment. The SASB observational coding system is further described below in Study 2.

Procedure—Families were solicited for participation from a large, Midwestern city community mental health clinic and two central city public schools. Flyers describing the research as a study of “the effect of different environments on children, their parents, and families,” were made available in the waiting room of the mental health clinic and were sent home to parents of children in grades 1 to 6 in the two public schools. Sixty-four families attended research interviews and were videotaped while completing the Wiltwick family tasks together. Mothers then completed the Differentiation of Self Inventory, SASB Intrex, Child Abuse Potential Inventory, and a demographic questionnaire in interview format. The order of assessments was counterbalanced. To enhance participation rates, families were given \$50 to complete the 2½-hour interview, and provided snacks, reimbursement for transportation costs (i.e., bus passes or cab fare), and child-care while mother completed the surveys. Two families were paid for their time, but were dropped from the analyses due to missing or unusable data, resulting in $N = 62$ families. Next, CAPI validity scales were employed to identify and screen for response distortion in mothers’ reports of child abuse potential (see Milner, 1986, 1989). Eleven ($n = 11$) mothers registered invalid profiles on the CAPI, all indicating a tendency to “fake good” in responding, and as such, these families were dropped from the major analyses, resulting in a final sample of $N = 51$ participating families. Of the final sample, 29.4% of families were drawn from the clinical setting and 70.6% were drawn from neighborhood schools.

Results

Preliminary Analyses—Families with valid mother CAPI profiles were divided into high risk and low risk-for-abuse groups on the basis of Milner’s (1989) clinical cutoff score of 215. Table 1 shows means and standard deviations on the major variables of interest (i.e., CAPI, DSI subscales, SASB Intrex weighted-Affiliation and weighted-Autonomy scores) associated with mothers’ self and caregiver representations (i.e., mothers’ own mother and father—referred to respectively as SASB Mother scores and SASB Father scores), grouped by high- vs. low-risk-for-abuse. Scores were also provided in Table 1 for the $n = 11$ mothers who posted invalid CAPI scores for purposes of comparison, then their data were dropped from all remaining analyses.

No differences were observed in the demographic characteristics of mothers with valid versus invalid CAPI scores (e.g., parent age, education, employment, household income, family size; t ’s ranged 0.56 to 1.86, all p ’s NS). However, interesting differences emerged between mothers with invalid (i.e., “faking good”) CAPI profiles, and both the high- and low-risk-for-abuse mothers on several study variables. Specifically, mothers who “faked good” on the CAPI also reported significantly more positive/affiliative SASB representations of their own mothers in early childhood, then did mothers with valid CAPI profiles, regardless of whether they posted high or low risk scores. Mothers with invalid CAPI scores also reported (a) less emotional reactivity and emotional cutoff on the DSI than did high-risk-for-abuse mothers, and (b) their DSI scores were indistinguishable from mothers at low-risk for abuse.

Intercorrelations among the major variables of interest are reported in Table 2. More differentiated mothers—in other words—those who reported lower emotional reactivity, greater ability to take an “I” position in relationships and less emotional cutoff also—also reported more self-affirming representations on the SASB Intrex. Mothers’ who were better able to take “I” positions in their relationships with others also reported more affiliative/affirming representations of their caregivers in childhood. Mother CAPI scores were also significantly associated with DSI subscale and SASB self-representation scores, in that mothers who reported lower emotional reactivity, less emotional cutoff, and more affiliative introject scores, also scored lower on the index of child abuse potential. However, contrary to our expectations, mothers’ SASB representations of caregivers were not associated with their child abuse potential scores (r 's = $-.01$ to $-.21$, all p 's NS). In other words, it was impossible to determine a mother’s risk for child abuse based on the quality of her early representations of caregivers. Therefore, variables reflecting mothers’ SASB representations of caregivers were dropped from further analyses.

Predicting Child Abuse Risk from Maternal Differentiation of Self and Self-Representations—Mothers with CAPI scores above the clinical cutoff were identified as belonging to the high-risk-for-abuse group ($n = 27$), and mothers with CAPI scores below the clinical cutoff comprised the low-risk-for-abuse group ($n = 24$). In order to test whether a mother’s membership in the high versus low risk for child abuse group could be predicted from her DSI scores and SASB Intrex self-representation ratings, we conducted a direct discriminant function analysis. Results indicated that mothers’ four DSI subscales scores and two SASB self representation scores (i.e., weighted Affiliation and weighted Autonomy scores) together predicted membership in the high or low child-abuse-potential group. A single discriminant function was calculated, $\chi^2(6) = 28.32, p < .0001$, Wilks lambda = $.54$, eigenvalue = $.85$, accounting for 100% of variance (see Table 3). Structure coefficients greater than $.40$ were interpreted (Tabachnick & Fidell, 1989), and indicated that mothers at higher risk of engaging in physical child abuse were more emotionally reactive, more likely to emotionally cutoff in relationships, and were more self-attacking. Conversely, mothers at lower risk for child abuse were significantly more differentiated (i.e., less emotionally reactive and less likely to emotionally cutoff in relationships), and they reported more self-affirming, self-loving introjects.

Further, 82.4% of mothers were correctly classified on the basis of mother DSI and SASB introject scores, compared to the 50% that would have been correctly classified based on chance alone. The stability of classification was checked through cross-validation. Using a jackknifed classification procedure (i.e., each mother is classified on the basis of predictor scores from all other mothers in the sample, with her own scores removed), 76.5% of mothers were correctly re-classified, suggesting a high degree of consistency in the classification scheme.

Study 2

Method

Participants & Procedure—Next, to test the set of hypotheses regarding associations between risk for child abuse and patterns of relationship rupture and repair in mother-child transactions, a subsample of $n = 15$ families was selected from the total sample for more intensive analysis using the SASB observational coding system. This subsample of families was selected because their scores on the CAPI registered greater than 1 *SD* above (highest risk) or below (lowest risk) the CAPI clinical cutoff for abuse risk. Care also was taken to match families in the high and low risk groups on: family size; mother’s age, education, and relationship status; and children’s ages. These efforts resulted in selection of $n = 10$ families at high risk for abuse (CAPI scores: $M = 321.00, SD = 57.13$) and $n = 5$

families at lowest risk for abuse (CAPI scores: $M = 58.40$, $SD = 33.13$) for further analyses. Independent samples t-tests confirmed no significant differences between the high and low risk groups on any of these demographics: t 's ranged from 0.05 to 1.83, p 's = .96 to .09.

Participating parents were biological mothers (93.3%) or kinship mothers (6.7%; i.e., maternal grandmother or aunt). Mothers averaged 34.5 years old ($SD = 4.2$), and participating children ranged in age from 6 to 13 ($M = 9.0$, $SD = 2.2$). In terms of race/ethnicity, 86.7% of mothers ($n = 13$) were African American, and two did not specify racial background. Mothers averaged 12.5 years of education ($SD = 2.0$; range 9 to 16 years), and over one-half (58.3%) were employed outside the home. Participating families reported an average of 3.5 children ($SD = 3.1$) in the home, and they ranged in age from 6 to 13 years.

Measures

SASB Observational Coding System (Benjamin, 1996; Benjamin & Cushing, 2000): We used SASB observational system to code mother-child interactions during the standardized series of Wiltwick family tasks, each 5' in length (i.e., moderately stressful tasks consisting of discussing likes and dislikes of one another, and discussing a recent family argument; Szapocznik et al., 1991), for frequency of relationship ruptures and repairs in mother-child interactions. The SASB has been used to meaningfully code brief segments of interaction (i.e., 3–10'; Ambady & Rosenthal, 1992), and successfully code interactions in parent-child relationships (e.g., Donenberg, 1995). The process of SASB coding a unit of behavior involves three steps (Humphrey & Benjamin, 1986): determining focus, degree to warmth/affiliation, and degree of interdependence. In the SASB model shown in Figure 1, Transitive and Intransitive behaviors in Clusters 2, 3, and 4, were identified to form a constellation of “positive” behaviors: (2: **Affirm/Understand**, **Disclose/Express**), (3: **Love/Approach**, **Joyfully Connect**), (4: **Nurture/Protect**, **Trust/Rely**). Conversely, relationships characterized by transactional patterns containing behaviors in Clusters 6, 7, and 8 (6: **Blame/Criticize**, **Sulk/Appease**), (7: **Attack/Reject**, **Protest/Recoil**), (8: **Ignore/Neglect**, **Wall-Off/Avoid**), form those categorized as “negative” behaviors. These negative behaviors are considered problematic because they violate the interpersonal conditions through which differentiation of self (i.e., healthy attachment and autonomy) is achieved (Benjamin, 1996).

Mothers and children's videotaped interactions during two family activities were transcribed, unitized and subjected to SASB observational coding by a team of two trained coders. All interactions between mother and her children were coded. Verbatim transcripts of video recorded tasks were prepared and unitized to delineate each coding unit. Coders were one male and one female advanced graduate student in counseling psychology (i.e., post-masters) and they received 60 hours of training from experienced SASB coders. Coders were trained using practice tapes to achieve sufficient reliability (weighted kappa $> .70$) prior to scoring the video recordings. For each task, SASB coding began with the first codable event (i.e., first utterance by mother or child) in the sequence of mother-child interactions, and end with the last codable behavior that occurred. Mother and child transactions were assigned SASB cluster and surface codes. Interrater reliability was calculated on 15% of tapes, with weighted kappa's ranging from .73 to .84. Coding disagreements were discussed until consensus was reached. While a number of other SASB-based predictive principles or investigator-defined patterns also could have been considered here, given the sample constraints we limited our focus to SASB operationalizations of relationship rupture and repair processes outlined below.

Operationalizing Rupture and Repair: In sum, our focus here was to document the rates of relationship rupture and repair in families at low vs. high risk for child abuse, and to identify the proportions of mother-initiated and child-initiated ruptures and repairs. SASB codes from proximal speaking turns were reviewed to identify all sequences of the two

higher-order variables of interest in this study: relationship rupture and repair. As shown in Figure 2, we defined a relationship rupture as a single SASB-coded negative behavior [i.e., (M- or C-) from SASB cluster 6, 7, or 8: criticize, sulk; attack, recoil; ignore or wall off) expressed by child or mother following a 3-step+ sequence of positive mother-child behaviors, [i.e., (M+, C+, M+) or (C+, M+, C+) from SASB clusters 2, 3, 4] (see Figure 1 & Figure 2). Examples of mother-initiated ruptures observed were: “*You were crying for no reason...*” and (in context of discussion about getting ready for school each morning) “*You all think this a joke, this ain’t no joke!*” Examples of child-initiated ruptures include: “*I don’t want to!*” or “*You always tell me what to do*” (in whining voices), or *ignoring* a direct request made by mother.

In contrast, a relationship repair was defined as a 3-step sequence of SASB-coded contiguous positive mother and child speaking turns that occurred subsequent to a relationship rupture [i.e., (M+, C+, M+) or (C+, M+, C+) following a M- or C-]. In other words, a relationship repair represented a return to positive interactive synchrony following a relationship rupture that had transpired. Dyadic ruptures and repairs could and did occur between a mother and any of her children. However, when a rupture occurred between mother and one child for example, then the repair needed to occur between mother and that child to be considered a repair.

Results

Patterns of Interactive Rupture and Repair in High vs. Low Risk Groups—Next, a series of non-parametric Wilcoxon signed rank tests were conducted to assess for differences between families at high-risk and low-risk-for abuse in their rates of relationship rupture and repair, proportion of ruptures successfully repaired, and proportion of mother-initiated versus child-initiated ruptures and repairs. As shown in Table 4, no differences were observed in the number of ruptures that occurred in the families at high-risk versus low-risk (i.e., $M = 4.8$ ruptures in high-risk vs. $M = 5.4$ ruptures in low-risk). However, significant differences were observed in the proportion of repairs by risk group, $Z = -2.78$, $p < .005$, with the low-risk-for-abuse families successfully repairing the majority (89.3%) of their ruptures, while the families in the high-risk group were observed to repair slightly less than half of relationship ruptures. Further, all families in the high-risk group experienced at least one or more ruptures that were not repaired.

Significant differences also emerged between families at high-risk and low-risk in terms of the rates at which mothers versus children initiated ruptures and repairs (see Table 4). Interestingly, children in families at low-risk-for-abuse were significantly more likely to initiate a rupture, compared with children from families at high-risk-for-abuse. In contrast, mothers with high-risk CAPI scores were responsible for initiating a significantly higher proportion of relationship ruptures, relative to their children, than were mothers with low-risk CAPI scores. With respect to relationship repairs, the reverse was true. Mothers in low-risk families initiated over 90% of repairs, while children in high-risk families initiated the majority repairs (71.9%). Thus in low-risk families, children were more likely to rupture and mothers were more likely to repair. Conversely, in high-risk families, mothers were more likely to rupture and children were more likely than their mothers to initiate repairs.

Finally, nonparametric correlations indicated that mothers who reported higher levels of differentiation of self were less likely to initiate a rupture with their children ($r = -.57$, $p < .05$), and significantly more likely to initiate relationship repairs ($r = .62$, $p < .05$), than were their less differentiated counterparts. More differentiated mothers also successfully repaired a higher proportion of their family’s relationship ruptures ($r = .54$, $p = .06$). However, the total number of ruptures or repair attempts observed in each family was unrelated to mother differentiation levels.

General Discussion

This study was designed to clarify relational underpinnings of child abuse potential in a sample of urban families. Results indicate that deficits in maternal relational competence and emotion regulation were associated with impairments in interactive coordination in mother-child relationships. Confirming prior research, we found that risk for child maltreatment was greater among mothers who were more emotionally reactive and more likely to cut off from others under stress (e.g., Skowron & Platt, 2005; see Belsky, 1993 for a review). Further, these high risk mothers' self-representations reflected that they treat themselves in more hostile, self-attacking ways. In contrast, mothers who were at low risk for CM reported greater differentiation of self—in other words, greater ability to self-regulate their emotions and behavior, greater capacity for warm connection and autonomy in relationships—and also more warm, affiliative self-representations. In sum, the majority of mothers were correctly classified and cross-classified to be at high- versus low-risk for CM on the basis of their DSI and SASB Intrex introject scores.

Perhaps the study's most significant contribution is reflected in analyses of the SASB-coded interactions observed between mothers and their children across the low and high CM risk groups, with differences observed in mother and child tendencies toward relationship ruptures and/or repairs, depending on maternal levels of differentiation of self and risk status for child abuse. When observed in a series of moderately stressful interactive tasks with their children, mothers at low-risk-for-abuse were less likely to initiate ruptures with their children, and more likely to take responsibility for initiating successful repairs. Further, children of these low-risk mothers were more likely to initiate relationship ruptures and less likely to initiate repairs.

Yet, among the dyads at high-risk-for-abuse, the reverse was true. Mothers at high risk for abuse initiated more ruptures than did their children, and their children initiated more repairs relative to mother, than did their low-risk counterparts. Further, mothers at high-risk for abuse were significantly less likely to successfully repair with their children once a rupture had occurred. These findings converge with other studies of parenting-at-risk that have observed patterns of role reversal in maltreating and other at-risk parent-child dyads, whereby children act in a caregiver role with their parents (e.g., Dean, Malik, Richards, & Stringer, 1986; Macfie et al., 2005, 2008). Others have observed that depressed mothers make infrequent efforts to repair following their toddlers' interactive ruptures (e.g., Jameson et al., 1997; Rocissano et al., 1987). Cicchetti and colleagues have suggested that because maltreated children often assume the role of caregiver in the parent-child dyad, they are often perceived as more competent in caring for others than in caring for themselves. Yet, such over functioning in childhood has been linked to deficits in developing autonomy and healthy self-other differentiation (e.g., Aber & Cicchetti, 1984; Cicchetti, Beeghly, Carlson, & Toth, 1990; Toth, Cicchetti, Macfie, & Emde, 1997).

Interestingly, we observed no differences in the rates of interactive rupture across families at low and high risk for abuse—consistent with previous research on interactive coordination in early childhood (e.g., Harrist & Waugh, 2002). In fact, studies of moment-to-moment dyadic coordination drawn from both normative and clinically-depressed samples similarly indicate that healthy interactions in mother-infant and mother-toddler dyads are characterized by frequent cycles of positive interactive synchrony, brief ruptures, and successful repairs back to positive synchrony (e.g., Cohen & Tronick, 1987, 1988; Field & Pawlby, 1980; Jameson et al., 1997; Rocissano et al., 1987).

Patterns of maternal-child relationship rupture and repair also were shown to vary as a function of maternal differentiation of self and quality of maternal introjects. Perhaps more differentiated mothers (i.e., in particular, those who were less emotionally reactive and less

cutoff) may take greater responsibility for initiating successful repairs, because of their greater capacity to remain calm in the face of interactive stress, and adjust their own goals to meet their child's need for assistance in returning to a state of interactive coordination. In contrast, the fact that less differentiated mothers were more inclined to rupture and less willing or able to repair suggests that these mothers may experience greater difficulty with remaining available and engaged with their children, and may cutoff in an effort to cope with and calm their emotional discomfort, leaving their children to manage alone. Future studies that incorporate cardiovascular monitoring during these rupture and repair events might find, for example, that less differentiated mothers observed in laboratory interactions with their children show significant declines in heart rate after they initiate a relationship rupture.

Contrary to our expectations, mothers' recollections of their attachment experiences in early childhood were not associated with their CM risk. In other words, it was virtually impossible to distinguish child abuse risk based on mother's reported perceptions of the quality of their own childhood attachments with caregivers. Thus, while mother's introjects predicted abuse risk, the quality of their internalized representations of caregivers was unrelated to their parenting risk. This notion that individuals are capable of sensitive parenting regardless of the quality of their recalled experiences with early caregivers is consistent with a body of literature documenting relational competence in a variety of domains among adults classified either securely attached (i.e., recount positive experiences with early caregivers in coherent ways) and those who are considered "earned-secures" (i.e., recount negative experiences with early caregivers but again, with narrative coherence; e.g., Paley, Cox, Burchinal, & Payne, 1999; Pearson, Cohn, Cowan, & Cowan, 1994; Phelps, Belsky, & Crnic, 1998).

Similarly, parents who were at high risk for CM were equally likely to report *negative* recollections of early caregiving experiences as they were to report *positive* recollections of the quality of those early attachments. Given the sample was comprised primarily of families of color (i.e., over 75% African American), we also wondered whether experience of racism might serve as a mechanism through which parents of color with positive representations of early caregivers may be at some risk for child abuse. Is it possible, for example, that some parents of color may develop negative, attacking introjects and experience greater risk for child abuse not as a result of negative experiences with their parents in childhood, but rather through the accumulation of experiences as targets of racism? These ideas are speculative and require follow-up investigation with careful assessment of perceived and actual discrimination (e.g., Sue et al., 2007; Sue, Capodilupo, & Holder, 2008). We believe the SASB coding system—with its ability to document mixed messages or double-bind communications, would prove quite useful for operationalizing the phenomenon of racial micro-aggressions. Further research which examines relations between racism and child abuse risk would provide useful guidance for tailoring existing child abuse prevention and treatment programs for families of color.

Limitations—Several limitations should be considered with these studies, most notably the modest sample size and broad age range of participating children in Study 2. As such, these findings should be considered preliminary and will require further replication with larger samples of families from different socioeconomic backgrounds and racial/ethnic groups to clarify the extent of their generalizability. Given that the current research was conducted with low-income, urban families of color, of particular interest is whether a similar pattern of findings would be observed in a sample of low-income, rural Caucasian families, or across the continuum of SES. Likewise, the current work employed the Child Abuse Potential Inventory to characterize child abuse potential. Subsequent research is needed to determine whether the current findings extend to families involved with Child Protective

Services for documented cases of child abuse and neglect. Use of sequential, time-series methods with larger samples will enable researchers to model variations in rupture—repair processes by maltreatment severity and subtype (i.e., physical abuse vs. neglect vs. none), and better understand the extent to which parents vs. children “drive” efforts at successful repair.

This study focused on examining rupture—repair processes in the context of family-wide interactions. Further work is needed in order to clarify key similarities and differences in rupture repair processes that unfold among parents and children at different developmental levels. For example, we suspect that parent—child relationship ruptures may be most likely to occur when one’s experience of (a) autonomy or (b) connection is compromised, regardless of whether a child is in the preschooler, middle childhood, or adolescent years. However, we theorize that the process of unfolding repairs may vary widely as a function of a child’s age or development level. Disagreement about a child’s efforts to assert autonomy may be just as likely to cause a rupture between a mother and her 5- or 15-year old. However, ruptures between a mother and preschooler may be characterized by subsequent interchanges in which the child engages in more intense affective displays and more non-verbal (negative) communication. Alternately, a mother-adolescent rupture may unfold with less intense affect, silent protest, more verbal communication, and perhaps periods of silent reflection.

Future Directions—The current findings suggest several important directions for future research designed to map the mediating and/or moderating effects of parenting processes around interactive rupture and repair on the established link between CM and children’s developmental outcomes. Work is needed to ascertain whether interpersonal copy processes of identification, recapitulation, and/or introjection (Benjamin, 2003) operate in families at high risk for abuse, and account for continuities and gaps in the multigenerational transmission of child abuse. The natural progression of this work will focus on clarifying the developmental impact of parent-child relationship rupture and repair processes on children’s outcomes across the risk spectrum. More specifically, the development of more effective counseling interventions for CM will benefit from efforts to develop more precise descriptions of the dysfunctional interchanges that unfold in the moment-to-moment interactions between maltreating parents and their young children, how they diverge from non-maltreating dyads, and the ways in which they map onto the continuum of CM severity and subtype. Work is currently underway in our family systems lab to examine these important unanswered questions.

Further, studies are needed that examine children’s constitutional contributions to the unfolding patterns of maternal-child interactive coordination in the context of CM. Knowledge gained from increasingly sophisticated focus on how individual differences in children’s biology and temperament interact with parenting processes in abusing vs. neglecting families for example, will help us clarify salient mechanisms underlying the heterogeneity observed in CM children’s health outcomes (e.g., Ammerman & Hersen, 2000; Cicchetti & Rogosch, 1997; Manly, Kim, Rogosch, & Cicchetti, 2001). Further, research on families with documented cases of child abuse and neglect is needed to examine within and between group variations in parenting processes by CM subtype and severity. The current findings indicate that children from families at high risk for CM were more likely to experience interactive failures characterized by more mother-initiated ruptures and few successful relationship repairs. Subsequent research is needed to document the prevalence and patterns of chronic interactive failure in CM families and their effects on children’s developing self regulation in the early years, and implications for mental health and school readiness outcomes. Studies are also needed that examine parents’ own

capacities for regulatory control, their effects on relationship rupture and repair failures in the parenting context, and consequences for children's self regulatory outcomes.

In conclusion, this work joins a small handful of published research studies on CM that have employed microanalytic methods of observational coding to yield information about the nature of interactive processes that characterize CM. Given high risk mothers' propensity to initiate ruptures and limited success repairing them, therapists may help parents learn how to initiate relationship repairs by first learning how to better calm self, modulate overwhelming emotional reactivity, soften their harsh, punitive introjects, and resist the tendency to emotionally cutoff under stress. However, given the cross-sectional nature of these findings, it may be that mothers who undergo skills training focused on how to repair ruptures with one's children would in turn show reductions in the tendency to cutoff and greater ability to better self-soothe under stress. We encourage therapists to guard against enacting negative parallel process with mothers at risk of CM—whereby the counselor or caseworker inadvertently mirrors a mother's harsh, negative, self-attacking introjects by taking a critical, dismissive, or neglecting stance toward her and her own well-being, relative to her child's. As a supplement to parent education programs, supportive counseling with at-risk mothers may provide important corrective experiences that serve to soften harsh introjects through identification with their counselor's supportive and nurturing stance, enhance their self regulation skills, and over time, develop better capacity to parent in less abusive or neglecting ways.

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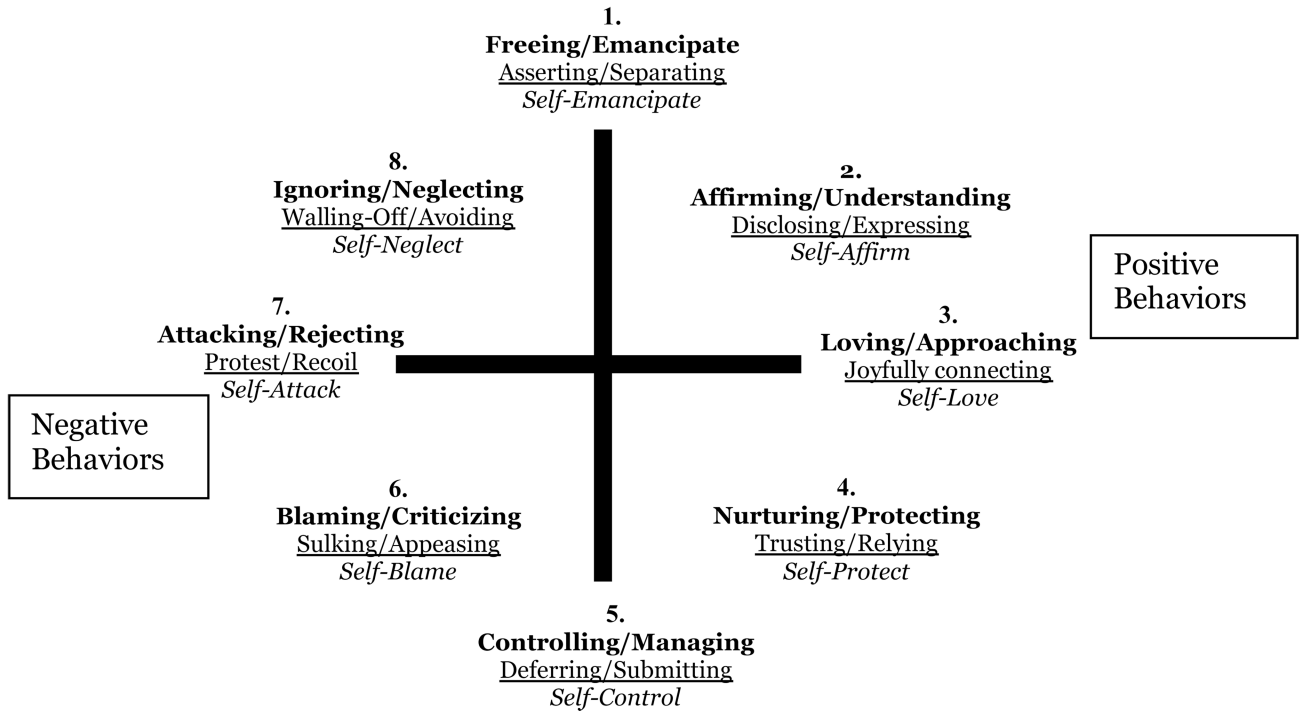


Figure 1. The Structural Analysis of Social Behavior (SASB) simplified cluster model. **Bold**, underlined, and *italicized* labels represent transitive, intransitive, and introject behaviors, respectively. From *Interpersonal diagnosis and treatment of personality disorders* (2nd ed., p. 55) by L.S. Benjamin, 1996, New York: The Guilford Press. Copyright 1996 by The Guilford Press. Reprinted with permission.

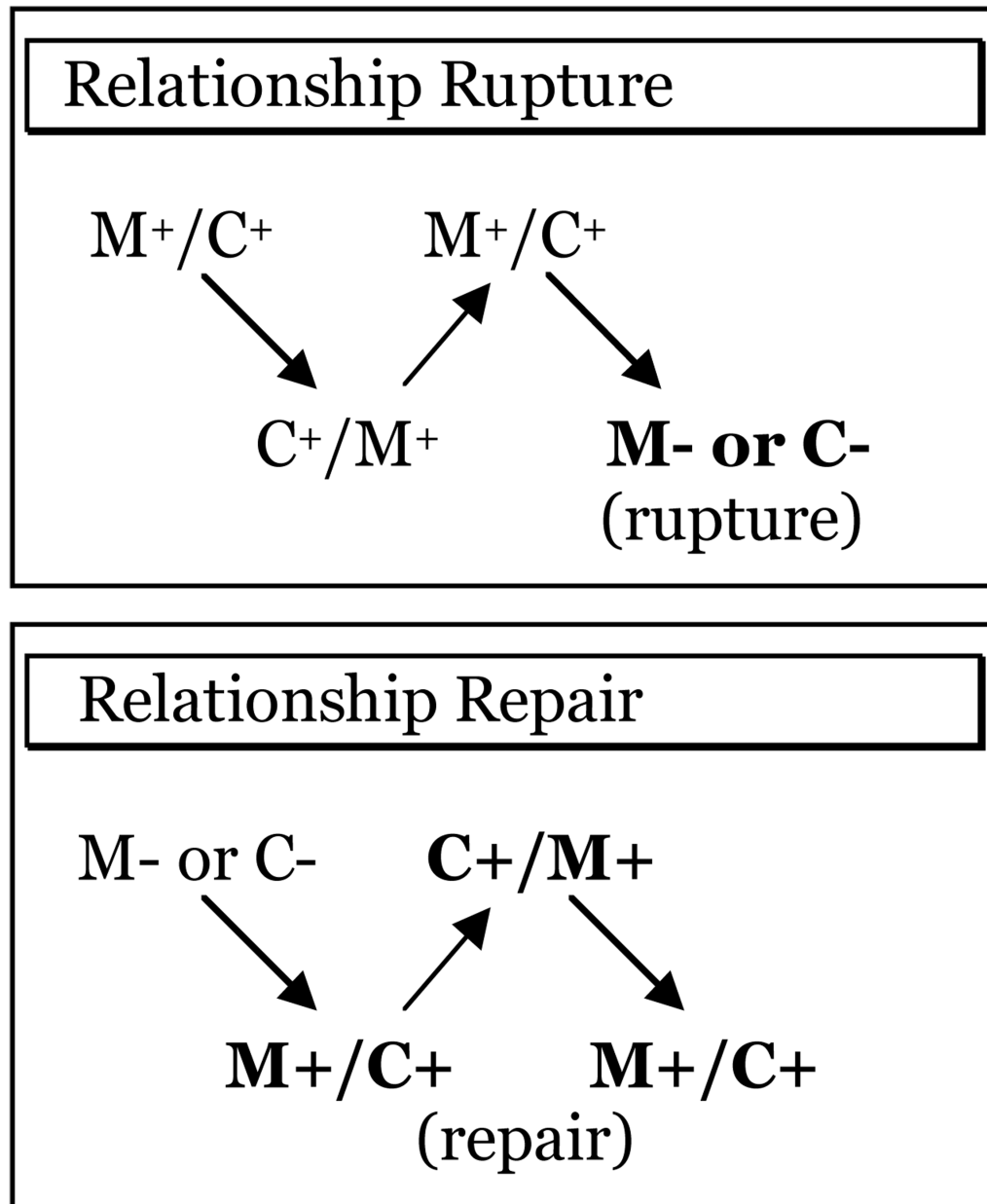


Figure 2.
Operational Definitions of Relationship Rupture and Repair

Table 1

Descriptive Statistics for CAPI-Abuse, Differentiation of Self, and SASB Intrex Self & Caregiver Representation scores (N = 62)

Variables	Low Risk for Abuse (n = 24)		High Risk for Abuse (n = 27)		Invalid CAPI scores (n = 11)	
	M	SD	M	SD	M	SD
CAPI Abuse	105.5	(52.2)	292.5	(72.1)	87.6	(46.5)
DSI						
Emotional Reactivity	3.84^{c1}	(1.07)	2.59^{c1,c2}	(.85)	3.96^{c2}	(1.02)
"I" Position	4.38	(.95)	4.23	(.99)	4.37	(1.01)
Emotional Cutoff	4.60^c	(.80)	3.47^{b,c}	(.89)	4.60^b	(.97)
Fusion with Others	3.16	(1.03)	2.81	(.81)	2.79	(1.96)
SASB Intrex self & caregiver representations						
SASB Introject-Wt. Affiliation	138.70^b	(53.75)	88.67^{a,b}	(62.73)	139.80^a	(70.74)
Mom Introject - Wt. Autonomy	-26.01^a	(32.78)	-51.81^a	(45.23)	-30.38	(57.63)
SASB Mother-Wt. Affiliation	45.87^a	(98.92)	55.85^d	(88.74)	121.41^{a,d}	(52.79)
SASB Mother-Wt. Autonomy	38.82	(60.24)	30.40	(67.27)	-6.19	(71.96)
SASB Father-Wt. Affiliation	65.98	(102.03)	72.93	(73.51)	101.13	(35.37)
SASB Father-Wt. Autonomy	27.40	(52.52)	36.93	(66.70)	24.62	(63.06)

Note. CAPI-Abuse scores < 215 reflect low risk for child abuse. CAPI Abuse scores > = 215 indicate high risk for abuse.

^a p < .05;

^b p < .01,

^{c1,2} p < .0001,

^d p = .06.

Table 2

Intercorrelations among Valid CAPI-Abuse, Differentiation of Self Inventory Subscales, and SASB Intrex Scores (N = 51)

Measure	1	2	3	4	5	6	7	8	9	10	11
1. DSI Emotional Reactivity	---										
2. DSI I-Position	.03	---									
3. DSI Emotional Cutoff	.72**	.06	---								
4. DSI Fusion with Others	.39**	-.27	.26	---							
5. SASB Introject-Wt. Affiliation	.34**	.48**	.35*	.00	---						
6. SASB Introject-Wt. Autonomy	.21	-.25	.13	.23	-.08	---					
7. SASB Mother-Wt. Affiliation	.22	.35*	.19	-.23	.28	-.16	---				
8. SASB Mother-Wt. Autonomy	.20	-.21	.19	.17	.02	.25	-.08	---			
9. SASB Father-Wt. Affiliation	.10	.35*	.04	-.31	.31	-.20	.48**	-.16	---		
10. SASB Father-Wt. Autonomy	.08	-.05	.23	.12	.09	.21	-.13	.33	-.17	---	
11. CAPI Abuse Score	-.68**	-.24	-.63**	-.20	-.58**	-.17	-.12	-.08	-.01	-.21	---

Note. Higher scores on the DSI measures indicate greater differentiation, specifically, less Emotional Reactivity, greater ability to take an I-Position in relationships, less Emotional Cutoff, and less Fusion with Others. Higher CAPI Abuse scores represent greater child abuse potential. Higher SASB Intrex Weighted Affiliation and Autonomy scores indicate more affiliative and autonomy-granting or -taking positions, respectively.

* p < .05;

** p < .01.

Table 3
Discriminant Function Analysis Predicting Abuse Risk by Mother Differentiation of Self and SASB Scores (N = 51)

Predictor variable	Discriminant Coefficients	Structure Coefficients	Pooled within group correlations among the predictors							
			ER	IP	EC	FO	AFF	AUT		
Mother's Differentiation of Self Inventory										
Emotional Reactivity	.40	.72	--	.02	.58	.35	.19	--	-.02	
I Position	-.03	.09	--		.02	-.29	.49		-.29	
Emotional Cutoff	.47	.73			--	.18	.17		-.06	
Fusion with Others	-.08	.21				--	-.09		.19	
Mother's SASB Intrex—Introjects										
Wt. Affiliation (AFF)	.36	.47					--		-.24	
Wt. Autonomy (AUT)	.47	.36							--	
Eigenvalue = .85 (Canonical $r = .68$)										

Table 4
 Mother- vs. Child-initiated Rupture & Repair in Low vs. High Risk for Abuse Families (n = 15)

Variables	CAPI-Low Risk		CAPI-High Risk		Wilcoxon signed-rank statistic (W)
	M	SD	M	SD	
Total # Ruptures	5.4	(2.3)	4.8	(3.0)	NS
Ruptures:					
Child-initiated	68.6%*		30.5%*		W = 49.0 z = -2.48
Mother-initiated	31.4%*		69.5%*		W = 19.0
Repairs:					
Child-initiated	7.3%*		71.9%*		W = 18.5 z = -2.49
Mother-initiated	92.7%*		28.1%*		W = 39.5
Total # Repairs	4.6	(1.5)	2.7	(2.4)	NS
Proportion Ruptures Repaired	89.3%***		46.2%***		W = 47.0 z = -2.78

Note. NS = non-significant; W = Wilcoxon signed rank statistic

* p < .01,

*** p < .005.