



Attachment and Family Processes in Children's Psychological Adjustment in Middle Childhood

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This study examined the links between parent-child attachment, whole family interaction patterns, and child emotional adjustment and adaptability in a sample of 86 community families with children between the ages of 8 and 11 years. Family interactions were observed and coded with the System for Coding Interactions and Family Functioning. Both parents and each target child completed the appropriate form of the Behavior Assessment System for Children-2nd Edition (BASC-2). Target children also completed the Children's Coping Strategies Questionnaire. Hierarchical multiple regressions indicated that Secure mother-child attachment was a robust predictor of children's emotional symptoms, but father-child attachment strategies were not significant independent predictors. Positive Affect in family interactions significantly increased the amount of variance accounted for in children's emotional symptoms. In addition, Family Cohesion and Positive Affect moderated the relationship between father-child attachment and children's emotional symptoms. When data from all BASC-2 informants (mother, father, child) were considered simultaneously and multidimensional constructs were modeled, mother-child security directly predicted children's adjustment and adaptive skills, but the influence of father-child security was fully mediated through positive family functioning. Results of the current study support the utility of considering dyadic attachment and family interaction patterns conjointly when conceptualizing and fostering positive emotional and behavioral outcomes in children.

Keywords: Family System; Family Interactions; Child Attachment; Child Adjustment; Middle Childhood

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The importance of the family system and particularly parent-child attachment in the determination of children's developmental trajectories is well established (Sturge-Apple, Davies, & Cummings, 2010). Various system-wide processes in the family intermingle and shape a child's emotional and behavioral adjustment. Most developmental research has focused on either the marital or parent-child dyads (Johnson, 2001), which oversimplifies the complex patterns of interaction and influence that occur within the family system. Despite theoretical similarities between family systems and attachment

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traditions, few studies have investigated the association between children's attachment representations and family group interactions (Dubois-Comtois & Moss, 2008) and even fewer studies have considered these factors conjointly in relation to children's adjustment. In addition, attachment in middle childhood is an under-researched area, largely due to limited elaboration on children's attachment processes beyond early childhood (Waters & Cummings, 2000), and consequent lack of instruments available to adequately assess attachment within this age cohort (Kerns, Tomich, & Kim, 2006). In an effort to address these gaps in the literature, the current study examined the role of family interaction patterns in the associations between parent-child attachment and psychological adjustment among 8- to 11-year-old children.

THE FAMILY SYSTEM

Family systems theory entails a view of relationship patterns at individual, dyadic, and systemic levels and an understanding of the interconnectedness among the various levels. Minuchin (1974) proposed that all families have an underlying structure that organizes and directs the ways in which family members interact. The family system is comprised of smaller subsystems that are delineated by the boundaries and rules connected to them. The three primary subsystems are the marital, parental, and sibling subsystems, which affect and are reciprocally affected by one another. Adaptive families are well organized in a hierarchical system promoting close interaction among family members, whereas disengaged, enmeshed, and chaotic families have problematic structure and organization (e.g., too rigid or too vague) that make meaningful interaction among members more difficult. These different patterns of relating also influence how families respond to developmental and situational events that push families into crisis.

The constellation of interactions within the family system plays a substantial role in children's socialization and biopsychosocial outcomes. The vast majority of research findings identify developmental trajectories that are in accordance with family systems theory. For example, Richmond and Stocker (2006) found that in highly cohesive families, parents reported that their adolescent children demonstrated lower levels of externalizing problems. By comparison, Sturge-Apple et al. (2010) found that kindergarten children from enmeshed and disengaged families demonstrated higher levels of internalizing and externalizing symptoms than did children from cohesive families.

Lindahl (1998) examined the relationship between family processes and children's behavior problems among families with children between 7 and 11 years of age. Results indicated that families of children with symptoms of Oppositional Defiant Disorder (ODD) or ODD comorbid with Attention-Deficit Hyperactivity Disorder had lower levels of cohesion and higher levels of conflict as compared to families of children with no symptoms. These results suggest the possibility that disruptive behavior problems are either maintained or exacerbated by dysfunctional family interaction patterns. Further, higher levels of conflict were often directly related to childrearing disagreements, suggesting a bidirectional influence.

CHILDREN'S ATTACHMENT TO PARENTS

Interactions within the parent-child dyad, as a microcosm of the larger family system, play an important role in child development. Attachment theory (Bowlby, 1969, 1973, 1980) describes the role of parent-child relationships in the development of internal working models, which underlie expectations for interaction and reciprocity in social relationships. Research has repeatedly demonstrated that consistency and sensitivity on

the part of caregivers lead to the development of secure attachment organization (van IJzendoorn, 1995). Secure children tend to experience less fear in new situations, be more cooperative interpersonally, and demonstrate greater resiliency (Thompson, 1999). Conversely, inconsistency and insensitivity in responding to the child's needs contribute to the development of insecure attachment (Vondra, Shaw, & Kevenides, 1995). Children who experience rejection from parents typically develop avoidant attachment characterized by a strategy of excessive self-reliance (Main & Solomon, 1986), which can lead to emotional insulation and a lack of empathy (Thompson, 1999). On the other hand, children who experience inconsistent and/or intrusive parenting often develop ambivalent/preoccupied attachment, characterized by heightened negative emotion and clinginess (Cassidy, 1994).

Generally, securely attached children experience better outcomes in the realms of social-emotional competence and mental health relative to those who are insecurely attached (Ranson & Urichuk, 2008). Schmidt, Demulder, and Denham (2002) found that more secure kindergarteners, as measured by the Attachment Q-sort (Waters & Deane, 1985), were less aggressive and more socially competent. Similarly, in their longitudinal study following children from 15 months to 8–9 years of age, Bohlin, Hagekull, and Rydell (2000) found that secure infants were more positive, popular, and socially active, as well as less socially anxious at school age relative to children who were insecurely attached as infants. By comparison, insecure attachment among children is linked with depression, anxiety, and other psychological symptoms (Ranson & Urichuk, 2008). For example, Shamir-Essakow, Ungerer, and Rapee (2005) found that insecure attachment, as measured by the preschool version of the Strange Situation procedure, was associated with higher levels of anxiety among 3- and 4-year-old children. Other researchers reported that attachment disorganization in infancy and disorganized-controlling attachment style at age 6 were predictive of depressive symptoms and higher levels of internalizing behaviors at age 8 (Bureau, Easterbrooks, & Lyons-Ruth, 2009; Moss et al., 2006).

Although attachment theory traditionally has focused on infancy and adulthood, middle childhood is the time when representations of secure-base experience are consolidated (Waters & Cummings, 2000), and attachment becomes "more sophisticated, more abstract, and less dependent on proximity and contact" (Marvin & Britner, 1999, p. 62). Unfortunately, interest in and acknowledgment of the importance of attachment in middle childhood has outpaced the field's development of instruments to quantify this construct. However, several new measures have appeared in the last decade and a small body of literature on attachment in middle childhood has emerged.

Kerns, Aspelmeier, Gentzler, and Grabill (2001) developed the Security Scale as a self-report assessment of attachment in middle childhood. Researchers utilizing this instrument have reported that attachment security among children in this age group was related to closer parental monitoring and greater cooperation by the child, as well as more positive mood, fewer anxiety symptoms, better coping and emotion regulation skills relative to insecure children (Brumariu & Kerns, 2008; Kerns, Abraham, Schlegelmilch, & Morgan, 2007; Kerns et al., 2001). Similarly, Granot and Mayseless (2001) found that securely attached 4th- and 5th-grade children demonstrated better adjustment in a number of domains including social, emotional, behavioral, and academic, whereas avoidant or disorganized children showed the poorest adjustment. Finally, using a measure of avoidant and preoccupied coping strategies for middle childhood (Finnegan, Hodges, & Perry, 1996), Yunger, Corby, and Perry (2005) reported that both insecure attachment coping strategies were associated with child maladjustment beyond what could be explained by perceived parenting. These results highlight the continued importance and implications of the parent-child attachment relationship during middle childhood.

FAMILY SYSTEMS, ATTACHMENT, AND CHILD ADJUSTMENT

Recently theorists have explored similarities among concepts from attachment and family systems theories, positing that the attachment literature provides strong support for many key tenets of family systems theory (Kozłowska & Hanney, 2002). Emphasis on mutuality, caregiving, communication, and the idea of bidirectional influence are among the shared concepts in family systems and attachment traditions (Allison, 2006). Research has documented systemic hypotheses regarding “spill-over” effects from one family subsystem to another, particularly as transmitted from the marital dyad to the parent–child dyad and individual child functioning. For example, Davies and Cummings (1994) proposed that children’s emotional security derives not only from parent–child attachment relationships but also from other contextual factors, such as inter-parental interactions within the marital dyad. Specifically, marital discord detrimentally affects children’s confidence in parent availability, protection, and support, thus undermining emotional security and contributing to a less optimal developmental trajectory (for review see Cummings & Davies, 2010). In a similar vein, Wood, Klebba, and Miller (2000) found that insecure father–child relatedness was associated with children’s perception of inter-parental relationship quality and triangulation of the child in marital conflict.

Relative to other areas of developmental psychology, less research has investigated system-wide family dynamics, so it is unclear exactly how family interaction patterns might contribute to development. However, several studies with children and adults have provided empirical evidence linking attachment strategies to family patterns. For example, Dubois-Comtois and Moss (2008) found that higher quality interactions in mother–child dyads as well as the whole family system were related to secure attachment representations, and family interactions influenced children’s attachment beyond the effects of the dyadic relationship. In adult samples, findings are theoretically consistent with family systems concepts. In one study with young adults, secure attachment style was negatively related to family conflict avoidance, avoidant attachment style was positively associated with family disengagement and family conflict avoidance, and anxious/ambivalent attachment style was linked to cross-generational family triads (Leveridge, Stoltenberg, & Beesley, 2005). In addition, some evidence suggests that attachment and family variables independently contribute to emotional symptoms in clinical and nonclinical adult samples (Rekart, Mineka, Zinbarg, & Griffith, 2007; Riggs et al., 2007). Generally speaking, these results highlight the importance of considering attachment style, family patterns, and psychological adjustment conjointly.

THE CURRENT STUDY

Although previous research has separately documented the roles of the family environment and the attachment relationship in child adjustment, little research has been undertaken to evaluate these constructs conjointly and research examining the interplay of these constructs in middle childhood is largely absent. Some researchers have posited that marital relationship quality and family climate impacts children’s emotional security (e.g., Davies & Cummings, 1994; Wood et al., 2006). However, it could also be argued that the parent–child attachment relationship lays the foundation for future interpersonal experiences, serving as the prototype for all subsequent relationships (Bowlby, 1973; Roisman, Collins, Sroufe, & Egeland, 2005), and thus directly influences family interactions. We adopt the latter position, but also conceptualize the attachment dyad as nested within the family, which is consistent with systemic complexity acknowledging multidirectional influences among the various family subsystems.

With ample literature supporting robust associations between parent-child attachment and child outcomes, we investigated whether the inclusion of system-wide family patterns would provide additional explanatory power beyond attachment and also represent an instrumental context for dyadic attachment functioning. Our data analytic approach was two-pronged. First, given previous research suggesting different roles of mothers versus fathers in their children's lives (Booth-LaForce et al., 2006; Lewis & Lamb, 2003) that may interact differently with certain family processes, we conducted separate hierarchical regressions testing the contributions of either attachment to mother or attachment to father in conjunction with family system patterns. We expected that (1) children's symptoms would be directly associated with parent-child attachment, (2) family interactions would significantly increase the amount of variance explained in children's symptoms beyond parent-child attachment alone, and (3) family functioning would moderate the effect of parent-child attachment on child symptoms, with high levels of family cohesion and positive affect acting as protective factors. Second, to provide a more systemic and less pathological view of child behavior in this nonclinical community sample, we conducted a path analysis including the child's attachment to both parents, hypothesizing that (1) positive family functioning would have a direct effect on child adjustment and adaptability, (2) secure mother-child and father-child attachments would predict favorable child outcomes directly, and (3) positive family functioning would also mediate the relationships between secure mother-child and father-child attachments and adaptive child outcomes.

METHOD

Participants

This study was part of a larger research project examining family attachment networks in middle childhood. Participants included 86 two-parent (intact = 75; step-parent = 11) families with at least one child between 8 and 11 years of age ($M = 9.86$). The sample was demographically similar to middle-class families in the North-Central Texas region (U.S. Census Bureau, 2010). Parents were predominantly Caucasian (76.7%) and in their mid-30s (mother $M = 36.51$, father $M = 38.48$), and over half (57%) reported a bachelor's or graduate degree, with another 30% reporting some college credit or a 2-year/technical degree. Seven families had one child (8%), while the remainder had 2-5 children ($M = 2.56$).

Measures

The Background Information Questionnaire (Riggs, 2003) gathered demographic data (e.g., age, ethnicity, educational achievement, family income, relationship status) and other family background information (e.g., family history of psychopathology, parental divorce).

The Children's Coping Strategies Questionnaire (CCSQ; Younger, Corby, & Perry, 2005) assesses attachment strategies utilized by the child in relation to either mother or father. Children are asked to imagine an attachment-related event (e.g., separation, reunion, stress) with parents and indicate which of four responses they would be most likely to make. The most recent version of the CCSQ is comprised of 20 items from the original 36-item Preoccupied and Avoidant Coping Scales (Finnegan et al., 1996), 10 items from the original 15-item Security Scale (Kerns et al., 2001), and 30 items added to assess three types of disorganized coping strategies (Cusimano, 2005). The items are presented in the Harter (1982) "Some kids...other kids..." format, which asks children to pick the group of kids they are more similar to and indicate whether the description is *really like me* or *sorta*

like me. Item scores are summed so that higher scores on the Security subscale correspond to greater parent-child attachment security, while higher scores on the preoccupied, avoidant, and disorganized scales correspond with greater parent-child attachment insecurity. The current study used the Preoccupied, Avoidant, and Secure scales, each of which demonstrated acceptable internal consistency for children's ratings of relationships with mothers (*avoidant* = .85, *preoccupied* = .73, *secure* = .85) and fathers (*avoidant* = .89, *preoccupied* = .80, *secure* = .87).

The Behavior Assessment System for Children-2nd Edition (BASC-2; Reynolds & Kamphaus, 2004) is a multimethod, multidimensional system used to evaluate the adaptive and problematic behavior of children and young adults aged 2 through 25 years. Target children completed the Self-Report of Personality (SRP) regarding their own behavior and feelings in both True/False, and *Never to Almost Always* formats. For the regressions, the dependent variable was the SRP Emotional Symptoms Index (ESI), which demonstrated internal consistency reliability at .85. The ESI was constructed using factor analysis and is comprised of six scales with the highest loadings on the first unrotated factor: Social Stress, Anxiety, Depression, Sense of Inadequacy, and the reverse-scored adjustment scales of Self-esteem and Self-reliance. The ESI is a global indicator of children's emotional functioning, primarily along internalizing dimensions.

Each parent also completed the BASC-2 Parent Rating Scales (PRS) in relation to the target child. The PRS employs a four-point (*Never to Almost Always*) response format to assess child behaviors from the parent's perspective. For the path analysis examining children's adaptive behavior, an outcome variable was constructed by standardizing and then averaging the SRP Personal Adjustment score and both parents' PRS Adaptive Skills scores. The resulting "Adjustment & Adaptive Skills" (AAS) composite variable reflects the child's abilities to express emotions appropriately, cope with stress, and behave in prosocial ways with parents and peers alike.

The System for Coding Interactions and Family Functioning (SCIFF; Lindahl & Malik, 2000) is an observational coding system used to assess global family functioning, as well as conflict, disagreement, and problem solving capabilities during family interaction tasks. Families were videotaped for 20 minutes discussing 3-5 topics (e.g., a recent family argument, plans for a family activity, a recent family loss), chosen for their ability to elicit positive or negative affect in a manner that reflects natural interaction patterns among family members. Rooted in structural family theory and social learning theory, the SCIFF yields family-level codes (e.g., mother-father-child), dyadic codes (e.g., marital), and individual (e.g., parent or child) codes. Four graduate researchers were trained for reliability and subsequently coded all videotaped interactions, with approximately 30% of the sample double-coded. On the basis of attachment and systems theories, we chose to examine three family-level variables rated on a 5-point Likert type scale (1 = *very low* and 5 = *very high*). *Negativity/Conflict* assesses the overall negative tone or level of tension in the family, and includes expressions of frustration, anger, irritation, and hostility. *Positive Affect* reflects the overall positive emotional tone in the family and includes the presence of laughter, smiles, and enthusiasm. *Cohesiveness* represents the sense of unity, togetherness, and closeness within a family, and is related to the extent to which family members are affectionate, respectful, and warm with each other. For the path analysis, *Negativity/Conflict* scores were reverse-scored before the three scales were standardized and averaged to create a "Family Functioning" variable where higher scores are indicative of less negativity, more positive affect, and higher cohesion. Using Pearson's correlations, interrater reliability was adequate to good for all three scales: *Negativity/Conflict* ($r = .82$), *Positive Affect* ($r = .87$), and *Cohesiveness* ($r = .79$) scales.

Procedures

This study was reviewed and approved by the university's Institutional Review Board. Families were recruited from schools, university campuses, churches, community groups, businesses, and nonprofit organizations in the North Texas area. Data collection took place in a campus lab, consisting of a family interaction room furnished like a typical living room with the addition of two ceiling-mounted cameras and several smaller rooms with comfortable chairs for interviews and desks to facilitate the completion of questionnaires. Families first participated in a 20-minute videotaped family interaction task requiring them to discuss 3–5 topics. Afterward, parents were separately interviewed and administered paper and pencil questionnaires. The target child, identified as the youngest of any child aged 8–11 years in the family, remained in the family interaction room to complete questionnaires with the guidance of a graduate research assistant. Families were compensated with \$30 and a family fun pack (e.g., tickets for recreational events, restaurant coupons). Data were double entered into SPSS, and then compared and examined for missing data. No data were missing for the variables used in this study.

RESULTS

Preliminary correlations showed that the ESI was significantly associated with all predictors except Preoccupied attachment to mother and father and family Negativity/Conflict (see Table 1); these three variables were dropped from the hierarchical regression analyses in the interest of maximizing power. With respect to demographic variables, preliminary *t*-tests showed that target children's sex and age were not significantly related to predictor or criterion variables. The children of more educated parents, however, reported fewer emotional symptoms than the children of less educated parents (mothers $t = 2.91$, $p = .005$; fathers $t = 2.90$, $p = .005$). In addition, children from step-parent families reported more symptoms than those from intact families ($t = 2.77$, $p = .007$). Based on these findings, parent education and family type were entered in the first step to control for potentially confounding effects in regression analyses. No demographic variables had significant correlations with the AAS outcome variable; thus, no covariates were included in the path analysis.

Hierarchical Regressions

Four hierarchical regressions with ESI as the criterion variable were conducted separately for children's attachment to mothers and fathers, with each regression including one of the two remaining family interaction patterns (i.e., Cohesiveness or Positive Affect). Independent variables and moderators were centered. After covariates were entered, the two attachment strategies (i.e., Secure, Avoidant) for one parent were entered in the second step, one family interaction variable was entered in the third step, and two interaction terms (attachment \times family variable) were entered in the final step of each model.

The first set of analyses tested the effect of family Cohesiveness (See Table 2). Model 1a with mother-child attachment was significant, $F(7, 77) = 10.54$, $p = .000$, accounting for 44% of the variance in ESI scores. After controlling for mother education and family type, mother-child attachment significantly contributed to ESI scores ($sr^2 = .12$), with greater attachment security to mother significantly predicting lower ESI scores. Mother-child avoidant attachment was not a significant predictor of children's emotional symptoms. Contrary to hypotheses, neither SCIFF Cohesiveness nor the interactions significantly accounted for unique variance in ESI scores.

Model 1b with father-child attachment was also significant, $F(7, 77) = 7.05$, $p = .000$, accounting for 33% of the variance in ESI scores. While the combination of Secure

TABLE 1
Correlation Matrix for All Variables (N = 86)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mother CCSQ									
(1) Secure	—	-.630**	.150	.163	.201	-.125	.228*	-.632**	.634***
(2) Avoidant		—	-.308**	-.241*	-.295**	.302**	n/a	.370**	n/a
(3) Preoccupied			—	-.038	.013	-.057	n/a	.081	n/a
Father CCSQ									
(1) Secure	—	-.610**	.192	.270*	.295**	-.331**	.35***	-.399**	.479***
(2) Avoidant		—	-.415**	-.266*	-.274*	.323**	n/a	.364**	n/a
(3) Preoccupied			—	.024	.067	-.167	n/a	.040	n/a
SCIFF									
(4) Cohesiveness				—	.648**	-.466**	n/a	-.249*	n/a
(5) Positive Affect					—	-.416**	n/a	-.339**	n/a
(6) Negative/Conflict						—	n/a	.188	n/a
(7) Positive							—	n/a	.445***
Family Functioning									
BASC-2									
(8) ESI								—	n/a
(9) AAS									—

Note. * $p < .05$; ** $p < .01$; *** $p < .001$.

CCSQ = Children's Coping Strategies Questionnaire; SCIFF = System for Coding Interactions and Family Functioning; BASC = Behavior Assessment System for Children-2nd Edition; ESI = Emotional Symptoms Index; AAS = Adjustment & Adaptive Skills; n/a = not applicable.

TABLE 2
Hierarchical Multiple Regressions for Attachment and Family Functioning Predicting Children's Emotional Symptoms

Step/Predictors	R ²	Final β	ΔF	F
Family Cohesiveness Model 1a: Mother				
1. Mother Education	.135	-.160	7.56**	7.56**
Family Type		.153		
2. CCSQ Secure	.438	-.528***	23.15***	17.39***
CCSQ Avoidant		-.076		
3. SCIFF Cohesion	.443	-.101	1.60	14.34***
4. CCSQ Secure \times SCIFF Cohesion	.443	.143	1.03	10.54***
CCSQ Avoidant \times SCIFF Cohesion		.002		
Family Cohesiveness Model 1b: Father				
1. Father Education	.135	-.188 [†]	7.56**	7.56**
Family Type		.151		
2. CCSQ Secure	.227	-.161	5.89**	7.18***
CCSQ Avoidant		.042		
3. SCIFF Cohesion	.224	-.095	0.676	5.85***
4. CCSQ Secure \times SCIFF Cohesion	.317	.386**	6.38**	6.56***
CCSQ Avoidant \times SCIFF Cohesion		.045		
Family Positive Affect Model 2a: Mother				
1. Mother Education	.135	-.185*	7.56**	7.56**
Family Type		.133		
2. CCSQ Secure	.438	-.500***	23.15***	17.39***
CCSQ Avoidant		-.057		
3. SCIFF Positive Affect	.476	-.204*	6.73*	16.26***
4. CCSQ Secure \times SCIFF Positive Affect	.474	.182	0.845	11.81***
CCSQ Avoidant \times SCIFF Positive Affect		.103		
Family Positive Affect Model 2b: Father				
1. Father Education	.156	-.263**	7.56**	7.56**
Family Type		.153		
2. CCSQ Secure	.264	-.005	5.89**	7.18***
CCSQ Avoidant		.132		
3. SCIFF Positive Affect	.309	-.234*	5.16*	7.07***
4. CCSQ Secure \times SCIFF Positive Affect	.412	.552**	6.73**	7.71***
CCSQ Avoidant \times SCIFF Positive Affect		.294		

Note. [†] $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

CCSQ = Children's Coping Strategies Questionnaire; SCIFF = System for Coding Interactions and Family Functioning.

($sr^2 = .03$) and Avoidant ($sr^2 = .02$) types of father-child attachment contributed to small but significant amounts of unique and shared variance in ESI in the second step ($\Delta R^2 = .104$), Cohesiveness in the next step did not. Step 4 with the two interaction terms significantly increased the amount of variance accounted for in children's emotional symptoms ($\Delta R^2 = .106$, $\Delta F = 6.73$, $p = .002$), indicating a significant moderator effect. As shown in Figure 1, high family Cohesiveness mitigated the negative effect of low levels of secure (i.e., insecure) father-child attachment on children's psychological symptoms. However, when children reported highly secure attachment to fathers, ESI scores did not enter the at-risk range, no matter what the level of Cohesiveness.

The next set of regressions tested the effect of Positive Affect in the family. Model 2a with mother-child attachment was significant, $F(7, 77) = 11.81$, $p = .000$, accounting for 47% of the variance in ESI scores. After controlling for covariates, secure attachment to mother emerged as a highly significant negative predictor and the addition of Positive

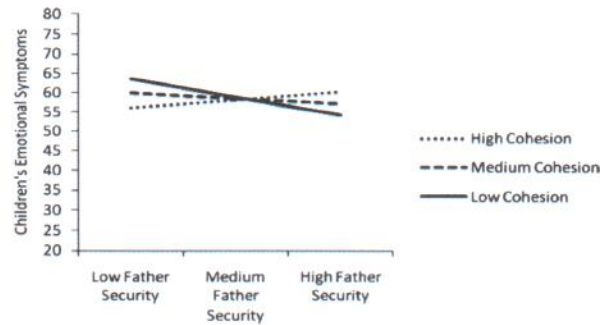


FIGURE 1. Moderator Effects of Family Cohesiveness on the Relationship Between Father-Child Attachment Security and Children's Report of Emotional Symptoms.

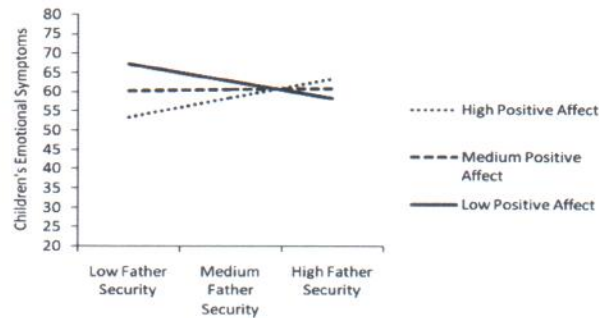


FIGURE 2. Moderator Effects of Family Positive Affect on the Relationship Between Father-Child Attachment Security and Children's Report of Emotional Symptoms.

Affect significantly increased the amount of variance explained, but the inclusion of interaction terms did not. Model 2b with father-child attachment was significant, $F(7, 77) = 7.71, p = .000$, accounting for 36% of the variance in ESI scores. Both father-child attachment and Positive Affect significantly increased the amount of variance explained. The last step with interaction terms also significantly increased the amount of explained variance over and above either attachment or family variables alone. Although the interaction with Avoidant attachment was nonsignificant, high Positive Affect reduced the negative effect of low father-child attachment security on emotional symptoms, whereas low Positive Affect increased risk for emotional symptoms (see Figure 2). Similar to the findings for Cohesiveness, when secure attachment to fathers was high, Positive Affect had a minimal effect on ESI scores.

Path Analysis

A path analysis was run in Mplus Version 7 software (Muthén & Muthén, 1998–2008) to test for the direct effects of each parent's attachment security on child adjustment, as well as the role of positive family functioning as a mediator of mother-child and father-child attachment security on child adjustment. Parent-child attachment security variables were correlated with each other account for their interdependence. While the saturated model yielded uninterpretable fit indices as expected, path coefficients indicated that attachment security to mothers and fathers have different relationships with child adjustment. Specifically, mother-child attachment has significant direct effects on child adjustment while the effect of father-child attachment on child adjustment is fully mediated by positive family functioning (see Figure 3). The model was modified by removing

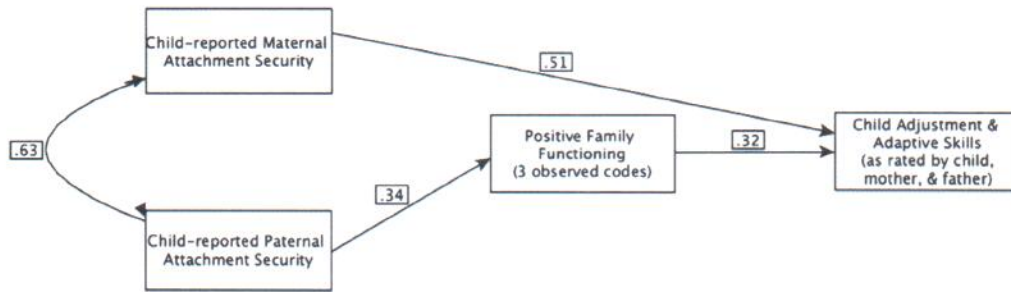


FIGURE 3. Family Functioning as a Mediator of Parental Attachment Security and Adjustment & Adaptive Skills (Trimmed Model With Only Significant Paths Shown).

the two nonsignificant paths. The more parsimonious model had excellent fit, CFI = 1.00, RSMEA = .96 ($p < .05$).

DISCUSSION

Our integration of family systems and attachment theories is consistent with the direction in which the field is progressing (DuBois, 2008), and represents an important step in a more holistic approach to the study and treatment of children and families. Present findings provide valuable new information regarding the direct and collective contributions of family systems and attachment processes in middle childhood. Results of the current study provided mixed support for the theoretically based hypotheses regarding the roles of dyadic and system-wide family processes in children's adaptive outcomes. Generally, our findings are consistent with previous research suggesting that attachment security and positive family functioning are associated with better child outcomes (McHale & Johnson, 1995; Ranson & Urichuk, 2008). However, results also suggest that attachment relationships with mothers and fathers are differentially related to both family functioning and children's psychological adjustment.

All full regression models with mother-child attachment as a predictor were significant, accounting for over 40% of the variance in children's reports of emotional symptoms. In particular, Secure attachment to mother was a highly significant negative predictor of children's emotional symptoms across models, highlighting the importance of the quality of mother-child attachment relationships. Additionally, Positive Affect was a significant negative predictor of children's emotional symptoms for both mother-child and father-child attachment models. These findings are consistent with previous research suggesting that attachment security and family harmony contribute to positive child outcomes (McHale & Johnson, 1995; Ranson & Urichuk, 2008).

The full regression models including father-child attachment were also significant, accounting for 23–36% of variance in children's reports of emotional symptoms. Interestingly, although the step with attachment to father significantly increased the amount of variance explained in each model, neither secure nor avoidant attachment were significant independent predictors. However, in the father-child attachment regression models, Secure attachment interacted with family Cohesiveness and Positive Affect, yielding moderator effects. Specifically, family environments characterized by closeness, contentment, and affection acted as a protective factor against low attachment security to fathers, relating to fewer reports of children's emotional symptoms. Therefore, in the absence of a secure attachment to father, a cohesive family environment with a positive emotional tone appears critically important in children's emotional trajectories. These results are consistent with previous research suggesting that family cohesion, warmth, and happiness are

linked to lower levels of externalizing behaviors in school children (Johnson, 2003; McHale & Johnson, 1995; McHale, Kuersten, & Lauretti, 1996).

Avoidant attachment and family Cohesiveness did not independently provide a significant level of predictive value in mother or father regression models. CCSQ Avoidant attachment measures the child's tendency to deny a need for the parent and fail to seek him/her when distressed. The lack of an association between attachment avoidance and child outcomes may be a function of this sample's age group, in which increasing self-sufficiency is developmentally appropriate. Previous research has highlighted the difficulty in assessing parent-child attachment in middle childhood because reduced proximity to parents necessitates more independent coping and self-regulation as children age, making secure-base behaviors difficult to quantify (Kerns et al., 2006). Although family Cohesiveness was not an independent predictor, its importance was demonstrated by its moderating role with father-child attachment. In addition, the strong contribution of mother-child attachment may have obscured the effects of family Cohesiveness because both attachment and cohesion tap into the underlying construct of family member responsiveness. Given previous evidence regarding the impact of family conflict on child outcomes (e.g., Cox, Brooks-Gunn, & Paley, 1999; Sturge-Apple, Davies & Cummings, 2010), it is unclear why Negativity/Conflict was not significantly correlated with children's symptoms in this study. The nonclinical, middle-class composition of this community sample or the brief glimpse into these family dynamics provided by the observational measure in a laboratory setting may be contributing factors, so it is possible that a more intensive, longitudinal study with home-based assessments of high-risk families would produce different results.

In comparing results related to child attachment to mother versus father in both regression and path analyses, it is notable that mother-child attachment security was a highly significant direct predictor across models but father-child attachment security did not directly contribute to child outcomes. While children's attachment security to mothers and fathers were highly related, accounting for just over half of the variance in one another, the two constructs operated very differently when predicting child outcomes. In particular for the path analysis, child report of attachment security with mothers was not a significant predictor of observed family interactions, but did strongly predict children's personal adjustment and adaptive skills. For father-child attachment, the associations were the opposite such that father-child security significantly predicted observed family positivity, cohesion, and absence of conflict, but did not directly predict child adaptive outcomes. Instead, the effect of father-child security on child outcomes was fully mediated through its impact on family functioning.

One interpretation of these findings is that mothers and fathers play very different roles in the lives of their children. As suggested by previous research documenting greater involvement between mothers and children in general (Booth-LaForce et al., 2006), and a lower level of caretaking behaviors by fathers relative to mothers (Lewis & Lamb, 2003), mothers may have a strong and direct impact on their children's adjustment because they are typically in the role of hands-on caregiver, teacher, and role model. Other research has suggested that fathers take on a more instrumental "playmate" role with children that may differentially impact children's development compared to the emotional caregiving role associated with mothers (Van der Mark, Bakermans-Kranenburg, & van Ijzendoorn, 2002). It is also possible that the traditional attachment construct measured in this study does not fully capture key elements in the father-child attachment relationship, so fathers may contribute in unique ways that were not assessed in this study.

However, current results do suggest that quality of attachment to fathers is important to consider in the context of other family variables. Specifically, regression findings revealed that children reporting the highest levels of emotional symptoms had both low attachment security to fathers and family environments that lacked Cohesiveness and

Positive Affect. In conjunction with the indirect effect seen in the path analysis, current results suggest that perhaps fathers still 'set the tone' or 'take the lead' in family group activities that are similar to the family interactions of our research protocol where the entire family was present and given specific tasks. In turn, how well the family functions together is an important driver of the development of a child's adaptive skills. Thus, a secure attachment with their father affects children's emotional experiences and adaptive skills indirectly through the father's impact on family interactions, but does not strongly affect children in middle childhood directly through the dyadic attachment relationship.

While high family Cohesiveness and Positive Affect buffered the negative effects of insecure attachment to father as expected, it is unclear why greater attachment security with father might be related to more emotional symptoms when high Cohesiveness and high Positive Affect were present. Possibly the presence of Cohesiveness, Positive Affect, and attachment security to fathers creates an environment in which children feel safe expressing negative emotion and thus are more willing to report these experiences. Secure parents likely recognize negative affect, label it for their children, and provide a forum in which to discuss it. This is consistent with Katz et al.'s (1999) theory of "emotion-coaching", which is characterized by the parents' awareness of emotion in themselves and their children, and willingness to coach children through their negative emotions. Future research should further examine these hypotheses to draw more definitive conclusions.

Strengths, Limitations, and Future Research Directions

Current results should be interpreted in light of the study's strengths and limitations. In particular, the assessment of child attachment to both mother and father offers a better understanding of their unique contributions to child adjustment. The inclusion of multiple informants and an observational measure, which afforded an opportunity to capture an actual "snapshot" of family processes in vivo, reduced concerns about biased reporting and common method variance. However, several limitations should be noted. This self-selected sample was primarily comprised of middle-class, Caucasian families, so any findings are limited to that population. Relatedly, although we controlled for family type, the comparatively small number of step-families in this study made direct statistical comparisons untenable. Future research comparing different family structures (e.g., intact, step-families, adoptive families, etc.) may provide a more in-depth understanding of differences between these family structures. Additionally, the cross-sectional design limits causal conclusions. Longitudinal research with at-risk families that demonstrate higher levels of conflict, disengagement, and negativity would considerably illuminate the interplay of these family processes with insecure attachment and children's emotional symptoms. Finally, a larger sample size would allow for the construction and evaluation of a structural equation model in which measures from various informants could serve as indicators for each latent variable.

Summary and Implications

Current results support the integration of attachment and family systems theories to provide a framework for understanding the interactive worldviews of family members and enable clinicians to effectively target interaction patterns and perceptions within parent-child and family relationships. Overall, the importance of parent-child attachment relationships was highlighted, with securely attached children having the most adaptive outcomes. This suggests that clinical interventions aimed at promoting or repairing parent-child attachment (e.g., Tripartite psychotherapy; Berlin, 2002) remain an important point of intervention. Therapeutic observations of parent-child interaction patterns

can inform sensitive intervention through mediation or redirection of destructive interactions.

Minuchin's (1974) Structural Family Therapy offers another approach for modifying family interaction patterns through clarification of roles, rules, and boundaries by which family members relate. Based on results indicating that Positive Affect is a key predictor of children's psychological symptoms, clinicians might encourage emotional expression (e.g., shared laughter, smiles, and hugs) and assist families in identifying and limiting any hostile or hurtful interactions. Given links between parenting styles and the development of certain attachment behaviors in children (Ainsworth, Blehar, Waters, & Wall, 1978), as well as the possibility of intergenerational transmission of attachment patterns (van IJzendoorn, 1995), a focus on attachment processes at each subsystem level within the family may be warranted. For example, in the current study, the effect of insecure attachment to father was buffered by family cohesiveness, so clinicians might focus simultaneously on disengagement in the parent-child relationship, as well as in the family as a whole. In addition, clinicians can encourage the family to work together to resolve problems and to create a supportive environment where all members' feelings and opinions are heard and considered. Targeting dyadic attachment and family system levels conjointly in this way may bring about greater individual, dyadic, and system-wide change, thereby fostering a sense of security in the family attachment network.

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