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Developmental Patterns in Security of Attachment to Mother and Father in Late Childhood and Early Adolescence: Associations with Peer Relations

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This study examined developmental differences in two dimensions of attachment security (parental availability and child dependency on parents) in late childhood ($N = 274$) and early adolescence ($N = 267$) and their association with peer relations. Children's perceptions of mother's availability and boys' perceptions of father's availability did not differ as a function of age. Dependency on parents, however, decreased with age. Findings highlight the importance of distinguishing between parental availability and reliance on parental help when measuring attachment developmentally. Children's reports of positive friendship qualities and lack of conflict in their best friendships were related to attachment to both mother and father, whereas the presence of a reciprocated friendship and popularity were not. Father availability was a particularly important predictor of lower conflict with best friends. Findings indicate that the quality of parent-child attachment generalizes primarily to the quality of children's close peer relations.

INTRODUCTION

The importance of peer relations for the development of children's social skills, sense of security, and conceptions and feelings about the self has been clearly demonstrated (Rubin, Bukowski, & Parker, 1998). Children who are well-liked by peers are less likely to develop later adjustment problems (Coie, Dodge, & Kupersmidt, 1990). On the other hand, social difficulties with peers in middle childhood may contribute to risk for later academic problems and psychological disorders (Parker & Asher, 1987; Parker, Rubin, Price, & Desrosier, 1995). These findings have stimulated interest in the origins of individual differences in children's peer relations, with a focus on the influence of emotional security in families. In particular, security of attachment in the family has been identified as having important implications for later close relationships (Elicker, Egeland, & Sroufe, 1992; Kerns, Klepac, & Cole, 1996). Although attachment security is relatively well-understood in infancy and early childhood (Ainsworth, Blehar, Waters, & Wall, 1978; Main, Kaplan, & Cassidy, 1985), research in middle childhood and adolescence has lagged behind (Armsden & Greenberg, 1987; Kerns et al., 1996; Rudolph, Hammen, & Burge, 1995). The present study examined developmental changes in components of parent-child attachment security from middle childhood to early adolescence and associations of attachment quality with children's friendships and acceptance by the peer group.

Attachment in Older Children

Bowlby's (1969) attachment theory is an important framework for conceptualizing the parent-child rela-

tionship. The basic premise of this theory is that the quality of attachment relationships stems from interactions between infants and their caregivers, especially the degree to which they can rely on attachment figures as sources of security and support. Caregivers who are sensitive and consistently responsive to their infant's needs are likely to foster secure attachment in their children. Thus, secure children are thought to develop a working model of themselves as lovable or worthy and of others as responsive to their needs. On the other hand, inconsistent or insensitive caregivers are likely to foster insecure attachment in their children (Ainsworth et al., 1978). Thus, insecure children are likely to develop a working model of themselves as unworthy or incompetent and of others as rejecting or unresponsive to their needs. Bowlby (1979) conceptualized attachment as a lifespan construct, with children maintaining attachment bonds to their parents across childhood and into adulthood. It is only within the last decade, however, that researchers have begun to explore parent-child attachment in elementary school children (e.g., Kerns et al., 1996), high school students (e.g., Armsden & Greenberg, 1997), and college students (e.g., Bartholemew & Horowitz, 1991; Kerns & Stevens, 1997; McCormick & Kennedy, 1994).

Recently, new theories regarding developmental changes in attachment in older children and adolescents have been formulated. During early adolescence, autonomy from parents has been viewed as an important developmental task, while at the same time, the establishment of intimate friendships becomes salient

(Havinghurst, 1953). Earlier models of family functioning emphasized detachment as the developmental course of parent-child relationships in adolescence (Blos, 1967). Newer models, however, based on Bowlby's lifespan view, emphasize the importance of attachment or connectedness to parental figures during the adolescent years, despite decreases in shared activities and interactions (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996; Steinberg, 1990). Kerns et al. (1996) have suggested that in middle childhood and adolescence, children continue to rely on attachment figures as a secure base from which to explore and as a source of comfort in times of stress (i.e., children may seek out the attachment figure when they are sad or ill). Although the maintenance of physical proximity is clearly less essential in older children due to increased physical and mental capacities (e.g., more sophisticated coping mechanisms), maintaining the availability of the attachment figure (e.g., belief that the attachment figure is open to communication and responsive if help is needed) is hypothesized to remain the set goal of the attachment system (Bowlby, 1973). Thus, although the frequency and intensity of attachment behavior is acknowledged to decline with age, the quality of the attachment bond is postulated to remain stable, particularly from early adolescence onward (Bowlby, 1973).

There is relatively little data on developmental differences in attachment behavior from late childhood to early adolescence. In contrast to current theory, self-reported attachment security to both parents has been shown to decrease with pubertal maturity (Papini, Roggman, & Anderson, 1991). Nonetheless, it is hypothesized that certain components of the attachment relationship may remain stable with age, while others may change. For example, it is likely that as children develop better coping strategies and become more capable, their self-perceptions as needy and as wanting parental help may change, while their perceptions of others as providers of help in times of stress should remain stable. Thus, in the present study, developmental differences in two related components of the attachment relationship are considered: (1) the availability of the attachment figure in times of stress, and (2) the dependency of the child on the attachment figure (e.g., the degree to which the child seeks proximity and relies on the attachment figure at such times).

Research with infants and young children has indicated that attachment security does not vary as a function of gender (Ainsworth, 1973). Nonetheless, given the changing nature of the father-child relationship in early adolescence (Hunter & Youniss, 1982; Paterson, Field, & Pryor, 1994), gender differences in

attachment-related behaviors are expected. For example, although mothers tend to remain emotionally involved with both their sons and their daughters during adolescence, fathers' relations with their adolescent daughters tend to be emotionally flat and distant (Youniss & Smollar, 1985). In a study examining changes in parent-child relationships from early to late adolescence, it was shown that sons and daughters remained stable in their quality of affect towards their mothers, although daughters were more likely than sons to use their mothers for support and proximity (Paterson et al., 1994). On the other hand, over time, both sons and daughters rated the quality of affect towards their fathers as lower and used their fathers less for support and proximity. Thus, it is important to explore sex differences in the construct of attachment as a function of age.

Peer Relations

Peer relations can be conceptualized in terms of both friendship and popularity. Friendship is the experience of having a close, dyadic relation, whereas popularity is the experience of being liked or accepted more widely by the members of one's peer group (Bukowski & Hoza, 1989). Though friendship and popularity are conceptually and empirically related, and both are associated with children's well-being, recent literature suggests that they contribute uniquely to children's social adjustment and development (Bukowski, Hoza, & Boivin, 1993; Parker & Asher, 1993). Further, although the importance of participating in a reciprocated friendship has been demonstrated (Parker & Asher, 1987), research suggests that it may also be useful to examine the quality of children's friendships (i.e., closeness and security) as an indicator of social adjustment and subsequent well-being (Bukowski, Hoza, & Boivin, 1994). Therefore, in the present study, participation in a reciprocated friendship, friendship quality, and popularity were examined in relation to attachment security.

Associations between Security of Attachment and Peer Relations

The attachment-peer relations link can be conceptualized with respect to cognitive, behavioral, and affective dimensions. From a cognitive standpoint, internal working models are thought to foster expectations about how others are likely to behave, as well as how children themselves should behave. Secure children are thought to have a positive view of themselves and an expectation of others, such as their peers, as responsive to their needs. Thus, secure chil-

dren are likely to elicit positive responses from peers by behaving in a synchronous and cooperative manner (Cohn, Patterson, & Christopoulos, 1991). Insecure children are likely to have a negative view of themselves, and a view of others as unresponsive to their needs. Consequently, insecure children are likely to expect further rejections, and may behave in ways which elicit them (Goldberg, 1991).

From a behavioral standpoint, Kerns et al. (1996) suggest that parents continue to serve as a secure base from which children can explore their social environments, enabling them to develop their social skills and increasing their exposure to peer models. Also, secure children learn to interact in a cooperative and synchronous manner within the parent-child relationship, which in turn, generalizes to relations with peers (Putallaz & Heflin, 1990; Youngblade & Belsky, 1992). At an affective level, Kobak and Sceery (1988) highlight that, through the parent-child attachment relationship, secure children develop an ability to regulate negative affect constructively, enabling them to display positive emotions that benefit interactions with peers. On the other hand, insecure children may learn to display affect in an inappropriate manner, which may be less conducive to positive peer relations. Therefore, it is likely that the attachment relationship plays an important role in mediating children's relations with peers, through expectations of peer behavior, social skills development and exposure to peer models, and the ability to display appropriate affect in peer interactions.

Studies examining children longitudinally from infancy to middle childhood (i.e., ages 9 and 10) have demonstrated that children classified as securely attached in infancy are more likely to be rated as popular with peers, to be involved in reciprocal friendships, and to have a higher number of friends than insecure children (Elicker et al., 1992; Grossmann & Grossmann, 1991; Lewis & Feiring, 1989). Also, insecure children report more problems with peers, such as being excluded from group activities or being ridiculed (Grossmann & Grossmann, 1991). Nonetheless, these studies examined security of attachment in infancy as a predictor of social competence in childhood, rather than the concurrent relation between attachment and social functioning. Although the attachment relationship is thought to remain stable over time, perceptions (i.e., working models) of the self and of the self in relation to others can be modified as children mature, due to increased cognitive sophistication, including more adaptive coping mechanisms (Bretherton, 1991). For example, it is expected that although perceptions of parental figures as available or unavailable should remain stable, changes

may occur in the child's evolving sense of self in terms of need for parental help and support. Therefore, it would be important to examine different components of the parent-child attachment relationship in older children and their association with peer relations.

Some prior research suggests that the extent to which emotional autonomy from parents is healthy varies based on supportiveness of families (Fuhrman & Holmbeck, 1995; Lamborn & Steinberg, 1993; Ryan & Lynch, 1989). For example, Fuhrman and Holmbeck (1995) found that high emotional autonomy was beneficial in less supportive, insecure family environments and detrimental in secure and supportive family environments. These findings suggest that the relation of dependence on family to peer relations may vary as a function of parental availability. Thus, in the present study, the interaction of parental availability and child dependency on parents in predicting peer relations was explored.

In addition, although attachment to mother has been implicated in the development of children's social competence (e.g., Elicker et al., 1992; Kerns et al., 1996; LaFreniere & Sroufe, 1985), fewer studies have examined the influence of attachment to father. Literature suggests that in the construction of the working model, one parent (the primary attachment figure) is more influential than the other (Main et al., 1985; van IJzendoorn, 1995). Since mothers tend to be the preferred attachment figure in Western cultures, one would expect that attachments to mother may be more strongly linked to the development of closeness and intimacy in social relations than attachments to father. Nonetheless, although some studies have found attachment to mother to be more predictive of children's peer relations (Main et al., 1985; Suess, Grossmann, & Sroufe, 1992), other studies have found that fathers play a more important role (Kerns & Barth, 1995; Youngblade, Park, & Belsky, 1993). Also, attachment to father and mother taken together have been shown to be more predictive of children's social competence than mother attachment alone (Suess et al., 1992). The present study was designed to assess the differential associations of attachment to mother and to father with children's peer relations.

Goals of the Present Study

One goal of the present study was to examine developmental changes in attachment security over the transition from middle childhood to early adolescence. We expected that as part of the challenge of autonomy development, reliance or dependence on parents, particularly girls' dependency on their fathers, would decrease from childhood to early adolescence,

although availability of the primary attachment figure would remain stable. Gender and parent (i.e., mother versus father) differences in attachment security were also explored as a function of age.

A second goal of the study was to examine the associations of the two components of attachment security to mother and to father (i.e., parental availability and child dependency on parental help) with children's friendships (i.e., presence of a reciprocated friendship and friendship quality) and popularity. It was expected that children who report themselves to be securely attached to their parents would be involved in closer reciprocated friendships, would be more accepted by peers, and would view their friendships as providing them with greater security and companionship and less conflict.

METHOD

Participants

Participants included 274 elementary school students (ages 9–11) and 267 high school students (ages 12–14) recruited from three elementary and two high schools. All were public English-language schools in suburban Montreal. The sample was relatively evenly divided by sex: 258 boys and 283 girls. Participants were from two-parent families (including 17 step-families), and only one child from each family participated. According to the Hollingshead four-factor index of social status (Hollingshead, 1975), the majority of the sample consisted of medium business owners, minor professionals, and technical workers (*mean* SES = 42), ranging from lower- to upper-middle class. The current sample was 88% White, 9% Black, and 2% Asian.

Measures

Attachment security. Child attachment security was assessed separately for each parent using the Kerns Security Scale (KSS), a 15-item, forced-choice, self-report measure, with higher scores indicating more secure attachment (Kerns et al., 1996). As noted by Kerns et al. (1996), items on the security scale tap the degree to which children believe a particular attachment figure is responsive and available (e.g., some kids worry that their mom/dad may not be there when they need her/him, but other kids are sure their mom/dad will be there when they need her/him), children's tendency to rely on the attachment figure in times of stress (e.g., some kids find it easy to count on their mom/dad for help, but other kids think it is hard to count on their mom/dad), and children's re-

ported ease and interest in communicating with the attachment figure (e.g., some kids like telling their mom/dad what they are thinking or feeling, but other kids do not like telling their mom/dad what they are thinking or feeling). Evidence for the reliability and validity of this measure has been provided by Kerns et al. (1996). In studies examining children ranging in age from 10 to 12, the KSS showed high internal consistency, Cronbach's $\alpha = .93$, and a high test-retest correlation over a short time interval, $r(30) = .75$. In addition, children's reported security to mother was related to, but not redundant with, other perceived qualities of the mother-child relationship (Kerns et al., 1996). Finally, in a sample of fifth graders, Kerns et al. (1996) found a significant link between children's reports of perceived attachment to their mothers and number of reciprocated friendships, acceptance by peers, and absence of loneliness.

To explore developmental changes in the dimensions of attachment-related behavior from late childhood to early adolescence, in the present study, items on the KSS were divided on an a priori basis into two subscales, separately for each parent. The first subscale, dependency, reflected whether adolescents themselves sought or valued parental help (nine items). The second subscale, availability, reflected whether they perceived parents as available (six items; see Appendix for subscale items). Higher scores reflected greater dependency on parental help and greater availability of parental figures. Both scales showed acceptable internal consistencies, with Cronbach's α coefficients of .85 and .74, respectively, for mother and .87 and .77, respectively, for father. The scales were only moderately correlated, $r(541) = .51$, $p < .001$, for mother, $r(533) = .64$, $p < .001$, for father, providing evidence that they represent somewhat distinct dimensions of attachment. All items were more highly correlated with the scale to which they were assigned than to the other scale.

Reciprocated friendships. Children were provided with a grade list and asked to write down the names of their same-sex "best" friends or children who they liked to "hang around" with most at school, in order of preference. Participants were permitted to list up to eight friends, although they were allowed to nominate as many or as few as they wanted. Nominations were considered to indicate a reciprocated friendship if two children listed each other within their top three choices (Bukowski & Hoza, 1989). In the present sample, 80% of children had a reciprocated nomination, 17.3% did not, and 2.7% could not be classified because they nominated only friends who were non-participants in the study.

Popularity. Using the same friendship data, the

sum of positive nominations each child received was calculated. Standardized within grade and sex, this sum was used as a measure of popularity.

Friendship quality. Friendship quality was assessed using the Friendship Qualities Scale, a 23-item measure showing high reliability and validity (Bukowski et al., 1994). The scale is comprised of five attributes of friendship quality, including companionship (e.g., "My friend and I spend all our free time together"), help (e.g., "My friend would help me if I needed it"), closeness (e.g., "If my friend had to move away, I would miss him"), security (e.g., "If I have a problem at school or at home, I can talk to my friend about it"), and conflict (e.g., "I can get into fights with my friend"). Participants wrote the name of their best friend at the top of the questionnaire and were asked to think specifically of this friend while completing the measure. They were required to rate on a standard five-point Likert scale how much each statement was true about their relationship. Given the high correlation of the help, closeness and security subscales, $r(546) = .67-.70$, $p < .001$, items were combined to form an index of positive friendship qualities. Cronbach's α coefficients for the companionship, positive friendship quality, and conflict attributes were, .52, .89, and .71 respectively.

Procedures

After receiving permission from the local school board and school principals, research assistants visited each classroom to describe the project to the students, answer any questions, and provide them with consent forms to be read and signed by their parents. Separate consents were sought for friendship nominations (session 1) and additional child (session 2) and parent measures. Participation by students was voluntary. During the first 20-minute classroom session, friendship nominations were made by 95% of students. During the second classroom session, the KSS for mother and for father (in counterbalanced order) and the Bukowski Friendship Qualities Scale were administered, along with additional measures

not relevant to this study. Participation rate in this phase was 70%, most likely due to the additional requirement of parental participation.

RESULTS

Attachment Security

Given our specific hypotheses about developmental differences in dependency, but not availability, the results for these two subscales of the KSS, though moderately correlated, are presented separately. No effects of order of testing were found for attachment security to mother versus father.

Availability. To examine age and sex effects in perceived availability, a 2 (age group) \times 2 (sex of child) \times 2 (sex of parent) between-within analysis of variance was conducted, with sex of parent serving as the within-participants factor. An age \times sex \times parent interaction was found, $F(1, 526) = 15.88$, $p < .001$. Post-hoc two-way analyses of variance indicated an age by parent effect for both boys, $F(1, 250) = 3.81$, $p < .05$, and girls, $F(1, 276) = 13.40$, $p < .001$. An examination of simple effects revealed that for boys, availability of mother and father did not differ across age. However, younger boys perceived their father as less available than their mother, $t(128) = 3.62$, $p < .001$, whereas older boys did not, $t(122) = .98$, *ns*. For girls as well there were no differences in reported availability of mother as a function of age. However, older girls perceived their father as less available than younger girls, $F(1, 276) = 8.46$, $p < .01$. Further, although younger girls did not perceive differences in availability of their mother and father, older girls perceived their father as less available than their mother, $t(138) = 5.21$, $p < .001$. Thus, for both boys and girls, there were no age differences in perceived availability of mother, whereas older girls (but not boys) perceived their father as less available than younger girls. Also, younger boys and older girls perceived their father as less available than their mother. See Table 1 for means.

Table 1 Means and Standard Deviations for the Availability Subscale, as a Function of Age, Sex of Child, and Sex of Parent

	Elementary School						High School					
	Boys			Girls			Boys			Girls		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Mother	3.55 ^a	.48	132	3.48	.58	142	3.48	.55	126	3.52 ^c	.59	141
Father	3.38 ^a	.61	130	3.44 ^b	.52	139	3.44	.61	125	3.13 ^{bc}	.71	139

Note: Scores ranged from 1.3 to 4.0 for mother and 1.2 to 4.0 for father, with a higher score indicating more availability. Means with different notations differ significantly, ^a $p < .001$; ^b $p < .01$.

Dependency. To examine age and sex differences in dependency, a 2 (age group) \times 2 (sex of child) \times 2 (sex of parent) between-within analysis of variance was again conducted, with sex of parent serving as the within-participants factor. An age \times sex \times parent interaction was found, $F(1, 527) = 7.34, p < .05$. Post-hoc two-way analyses of variance indicated that for boys, there was a main effect for age, $F(1, 250) = 22.46, p < .001$, with older boys reporting less dependency on both their parents than younger boys. For girls, an age by parent interaction was again found, $F(1, 277) = 12.60, p < .001$. Simple effects revealed that older girls were less dependent on both their mother, $F(1, 281) = 6.38, p < .05$, and their father, $F(1, 277) = 34.92, p < .001$, than younger girls. In addition, younger girls did not differ in their dependence on their mother or their father, whereas older girls were more dependent on their mother than their father, $t(139) = 5.86, p < .001$. In sum, younger children were more dependent on their parents than older children. However, whereas boys, irrespective of age, and younger girls, were equally dependent on their mother and their father, older girls reported less dependency on their father than their mother. See Table 2 for means.

Associations between Security of Attachment and Peer Relations

Presence of a reciprocated friendship. A 2 (age group) \times 2 (sex of child) \times 2 (reciprocated friendship) \times 2 (sex of parent) between-within multivariate analysis of variance was conducted on the two dimensions of attachment security (availability and dependency), with sex of parent serving as the within-participants factor. Neither the multivariate main effect for presence of a reciprocated friendship nor any of its interactions were significant.

Popularity. Popularity was examined in relation to the two security dimensions using a multiple regression analysis, after controlling for age and sex. Age and sex were entered on the first step, followed

by the four attachment subscales (dependency mother/father; availability mother/father), followed by the age by sex interaction. None of the steps were significant.

Friendship quality. Three regression analyses were conducted predicting each friendship quality attribute (companionship, positive friendship qualities, and conflict) from the two components of security (availability and dependency). For each analysis, age and sex were entered on the first step, followed by the availability and dependency subscales for each parent, followed by the age by sex interactions and the two-way interaction of availability and dependency. Results showed that for companionship, there were no significant effects. For positive friendship qualities, however, the addition of the four security subscales (step 2) was significant. These results indicate that children who viewed their parents as more available and who relied on them more in times of stress reported higher positive qualities in their close same-sex friendships. None of the subscales accounted for unique variance, and there were no age by sex interactions. For ratings of conflict in the friendship, the addition of the four attachment subscales (step 2) predicted conflict significantly, with father availability predicting uniquely. That is, the more children felt that they could depend on their parents and perceived them as available, particularly father, the less conflict they reported in their friendships (see Table 3).

Based on Lamborn and Steinberg (1993), the possibility that availability moderated the relation of children's dependence on parents to the three aspects of friendship quality was tested. The interaction of dependency and availability, for both mother and father, was significant only for positive friendship qualities, with unique variance for mother availability by dependence (see Table 3). To examine this interaction more closely, following Aiken and West (1991), children were divided into three groups based on their perceptions of maternal availability as low, medium, or high. Separate regression analyses were conducted

Table 2 Means and Standard Deviations for the Dependency Subscale, as a Function of Age, Sex of Child, and Sex of Parent

	Elementary School						High School					
	Boys			Girls			Boys			Girls		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Mother	3.38 ^a	.48	132	3.32 ^c	.56	142	3.03 ^a	.66	126	3.13 ^{ce}	.70	141
Father	3.31 ^b	.54	130	3.24 ^d	.57	139	3.00 ^b	.64	125	2.75 ^{de}	.81	139

Note: Scores ranged from 1 to 4 for mother and father, with a higher score indicating more dependency. Means with different notations differ significantly, ^{abde} $p < .001$; ^c $p < .05$.

Table 3 Hierarchical Regression Analyses for Attachment Security as a Predictor of Friendship Quality

Friendship Quality	Positive Quality			Conflict			
	R ² Δ	sr ²	B	R ² Δ	sr ²	B	
Step 1	.08***			.01			
AGE		.00	.00		.00		-.01
SEX		.09	-.29***		.01		-.09
Step 2	.05***			.05***			
AVMOM (available)		.00	-.07		.00		.04
AVDAD		.00	-.06		.02		-.22***
DPMOM (Dependency)		.00	-.08		.00		-.06
DPDAD		.00	-.07		.00		.00
Step 3	.01***			.01			
AVMDPM		.01	-.10***		.00		-.06
AVDDPD		.00	-.05		.00		-.07
Overall R ²	.19***			.07***			
Adjusted R ²	.13			.04			

Note: AGE = Younger versus Older, SEX = Sex of Child, AVMOM = Availability Mother, AVDAD = Availability Father, DPMOM = Dependency Mother, DPDAD = Dependency Father, AVMDPM = Availability by Dependency Interaction for Mother, AVDDPD = Availability by Dependency Interaction for Father.

*** $p < .001$.

for each group, with dependency on mother serving as the predictor variable and the positive friendship qualities rating serving as the criterion. Age and sex were entered on the first step. Results showed that for children who perceived their mothers as highly available, those who reported lower dependency rated their friendships higher in positive friendship quality, $R^2\Delta = .03$, $p < .001$. The regressions for the other two availability groups were not significant.

DISCUSSION

The availability of attachment figures as a secure base from which to explore the environment and the belief that attachment figures are responsive if help is needed are important elements of the attachment system (Bowlby, 1982). Nonetheless, as children confront the developmental challenges of adolescence, one important challenge being the establishment of autonomy from parental figures (Steinberg & Silverberg, 1986), reliance on parental help is expected to decrease somewhat. The main objectives of this study were to examine developmental changes for school-aged children in two components of attachment security (parental availability and child reliance or dependency on parental figures) as a function of parent (mother versus father) and sex of child and to explore the link between these components and peer relations.

Attachment to mother and father. As anticipated, there were no age differences in perceived maternal availability for either boys or girls. This is consistent with

theories of attachment in older children suggesting that mothers remain available for their children in times of stress (Kerns et al., 1996). The fact that younger and older boys did not differ in their perceptions of maternal availability is consistent with research findings which indicate that mother-son relationships do not become more distant during adolescence (Youniss & Smollar, 1985). On the other hand, younger children viewed themselves as more dependent on maternal help than older children, indicating a decrease in dependency with age.

For father, there were no age differences in boys' perceptions of availability, whereas adolescent girls perceived their fathers as less available than younger girls did. The age difference for girls is not surprising. Several studies have indicated changes in girls' relationships with their fathers during adolescence (Paterson et al., 1994; Youniss & Smollar, 1985). For example, Youniss and Smollar (1985) found that over time adolescent girls reported feeling more distant, uncomfortable, and withdrawn from their fathers and felt that their fathers did not meet their emotional needs. However, it is unclear whether or not fathers do actually become less available, withdrawing from their adolescent daughters as they begin to experience puberty (Steinberg, 1981; Steinberg & Hill, 1978), whether adolescent girls withdraw from their fathers as the differences between them grow, or whether these processes co-occur. Further research must be conducted to examine more thoroughly the changing nature of the father-daughter relationship as girls approach adolescence. It would

be especially useful to obtain father as well as daughter reports longitudinally. Consistent with our hypotheses, dependency on father decreased for both boys and girls with increasing age.

It is also interesting to note that both younger boys and older girls perceived their fathers as less available than their mothers. The finding of lower perceived father availability for older girls was expected in light of the findings discussed above. In addition, older girls may continue to view their mothers as more available than their fathers since they may be able to share and disclose with each other concerns about reproductive transitions (e.g., puberty, sexuality, pregnancy; Graber & Brooks-Gunn, in press). However, it is unclear why younger boys, but not girls, perceived their mothers as more available than their fathers. For dependency, on the other hand, it was shown that although younger children and older boys reported that they were equally dependent on their mothers and their fathers, older girls reported that they were less dependent on their fathers than their mothers. Again, there appears to be some uniqueness to the father-daughter relationship as girls approach adolescence.

These findings support the view that during late childhood and adolescence, parental commitment, rather than parental assistance, remains crucial (Weiss, 1982). In addition, some utilization of attachment figures for emotional support in times of need should also persist, though the behavior is likely to become less frequent and more subtle, especially as peers are utilized more frequently for intimacy, companionship and support (Hartup, 1993). In the present study, dependency on parents tended to decrease for both boys and girls, indicating that they may need parental help less often. This finding is consistent with age-normative changes in the parent-child relationship during the transition into adolescence (Steinberg & Silverberg, 1986). Nonetheless, it is apparent that when children do need help, they feel that they can rely on their parents, in particular, their mother, for comfort. This further illustrates developmental changes in working models of attachment to mothers. That is, although the view of the other (availability) tends to remain stable with age, the view of the self as needy of help (dependency) tends to decline with age, thus moderating the expression of attachment behaviors.

These developmental findings have implications for the measurement of attachment. They imply that an important distinction in self-report measures of security is between the views of self and others. The former would be expected to show developmental changes, whereas the latter may be less affected. Moreover, as pointed out by Maccoby and Feldman

(1972), for both categorical and continuous approaches to the measurement of attachment security, qualitative judgments must be made relative to the developmental status of the individual.

The Association between Attachment and Peer Relations

Presence of a reciprocated friendship and popularity. Contrary to expected predictions, presence or absence of a reciprocated friendship was not related to security of attachment to mother or to father. However, given that the majority of children (80%–90%) are involved in friendships, it has been suggested that it may be more important to look at the quality of the relationship in predicting children's subsequent adjustment, rather than whether or not the child has a friend or the number of friends the child has (Bukowski et al., 1993). Although a child may have a reciprocated friendship, it may be poor in quality (Parker & Asher, 1993). Also, given the intimate nature of the parent-child attachment relationship, it may be more likely to generalize to close and intimate friendships than more distant, superficial ones. Thus the structural aspect of having a friend may not be the optimal index for adjustment.

It was also surprising that popularity was not significantly related to security of attachment to either parent. However, this finding is consistent with the view that working models of attachment again generalize only to other close relationships (Bowlby, 1982). Youngblade and Belsky (1992) suggest that the attachment relationship gives children opportunities to learn how to handle intimacy and closeness, which may be more important for the formation of close friendships, rather than peer acceptance. It is also possible that children's popularity is a function of social skills learned in their family of origin (Coie & Kupersmidt, 1983; Dodge, 1983), rather than of attachment. Generalization of working models of attachment may be restricted primarily to close relationships.

Friendship quality. As expected, security of attachment was associated with some aspects of friendship quality. Positive friendship qualities (help, closeness, and security) were significantly related to overall security of attachment to both mothers and fathers. Given that these attributes are themselves characteristic of the child-parent attachment relationship, one would expect them to generalize to close relations with peers. This finding is consistent with the notion that secure attachment should be predictive of closer, more secure friendships (Youngblade & Belsky, 1992).

It was also found, however, that the particular relation of child-mother dependency to positive friend-

ship qualities varied as a function of availability; for children who perceived their mothers as most available, low dependency was associated with greater positive friendship qualities. That is, children who feel that their mothers are available if needed and who have developed a considerable sense of autonomy tend to report closer, more supportive and secure friendships. This is inconsistent with research by Lamborn and Steinberg (1993), who found that where security was high, low emotional autonomy was associated with better adjustment. Differences may reflect the fact that Steinberg's emotional autonomy measure assesses the view of parents (other) rather than of self and includes devaluation of parents, whereas the current dependency measure is restricted to the views of self as needy. The present findings are consistent with attachment theory that better adjustment, especially as indexed by positive social relationships with close peers, would be associated with those children who viewed their parents as highly available and themselves as capable.

As expected, it was also found that more secure attachment was related to lower conflict in friendship relations. This finding suggests that children who are more secure in their relationships with parents may learn better conflict resolution skills and may be better at controlling their negative affect and expressing positive affect. While both dimensions of security, to both mother and father, were associated with less conflict with friends, it is interesting that fathers' availability was particularly important for lower conflict in friendship. Perhaps available fathers spend more time in play interactions with their children, contributing to the learning of emotion regulation. Thus, fathers may play an important role in teaching skills relevant to conflict resolution (MacDonald & Parke, 1984). Finally, security of attachment was not related to the companionship provided by the friendship. Companionship, though an important provision of friendship relations (Berndt, 1982), does not necessarily reflect the closeness and intimate nature of the parent-child attachment relationship.

It is important to note that Kerns et al., (1996), in a sample of fifth-grade students, did not find an association between security of attachment to mother and friendship quality. Differential findings may be attributed to the fact that Kerns combined the companionship, intimacy and affection items of the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985) as an index of friendship quality, while in the present study the help, closeness, and security items of the Friendship Qualities Scale (Bukowski et al., 1994), which may be more characteristic of attach-

ment relationships, were combined. In the present study, rated companionship was not highly correlated with other positive friendship qualities and was not related to attachment security.

Limitations

When interpreting the results of this investigation, it is important to be aware of certain limitations. First, the primary measures of both the parent-child relationship and friendship quality are based on only the child's perspective. Nonetheless, the differential findings regarding attachment to mothers and fathers (e.g., fathers' unique contribution to conflict), and differential predictions of attachment to friendship (i.e., companionship versus positive qualities) support our findings. Also, it has been suggested that the child's perception of the quality of their best friendship is a significant factor in contributions of friendship to adjustment (Bukowski et al., 1993). In the future it would be interesting to have behavioral measures of friendship quality and of the quality of attachment to examine more closely relative differences. Finally, the results of this study are based on correlational data, limiting our ability to draw conclusions about causal links. Although we hypothesized that security to parents is an important influence on children's friendships, it is also possible that children who are socially skilled have better relationships with both parents and peers. There is likely multiple directionality of effects that need to be identified via longitudinal designs.

Summary and Conclusions

In the present study, it was shown that children's perception of parental availability, particularly mother availability, is important across both middle childhood and adolescence, whereas perceived dependency on parental help and support decrease as children develop. These findings highlight the importance of measuring attachment during the transition to adolescence and of distinguishing parental availability from child proximity-seeking behaviors. Although some authors suggest that attachment security may decrease in adolescence (Papini et al., 1991), this may in fact be an artifact of the measure used. Where the developmental challenges relevant to attachment behaviors are changing, attachment security must be assessed relative to the age group. More research is warranted on how indices of attachment security change with age in middle childhood and early adolescence and the particular circumstances under which the attachment system is triggered in older

children. In the future, it would be helpful to incorporate measures of the self as worthy of help, along with measures of perceived parental availability and child help-seeking.

It is also important to note that the parent-child attachment relationship was related to parallel aspects in children's friendship relations (i.e., help, security, and closeness) and not to general acceptance by peers or to the presence or absence of a reciprocated relationship. Thus, it may be more important to examine components of the parent-child relationship that are expected to generalize to close relations with peers, rather than peer relations in general. Perhaps other features of the mother-child and the father-child relationship (e.g., sociability, playfulness) are linked to popularity.

Finally, the role of attachment to father in influencing peer relations seems to be more important than previously believed. Although the influence of mothers on children's subsequent development has been the focus of much research, studies examining fathers' relationships with their children have lagged behind. In the present study, attachment to father was an important predictor of children's positive friendship quality, with availability of father contributing uniquely to lower conflict in children's best friendships. Further research must be conducted with fathers to understand more clearly the exact nature of father-son and father-daughter relationships in adolescence and the role of fathers in influencing older children's development and adjustment.

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APPENDIX

Items on the Dependency subscale

1. Some kids find it easy to trust their mom/dad, but other kids are not sure if they can trust their mom/dad.*
2. Some kids feel like their mom/dad butts in a lot when they are trying to do things, but other kids feel like their mom/dad lets them do things on their own.
3. Some kids find it easy to count on their mom/dad for help, but other kids think it's hard to count on their mom/dad.*
4. Some kids do not really like telling their mom/dad what they are thinking or feeling, but other kids like telling their mom/dad what they are thinking or feeling.
5. Some kids do not really need their mom/dad for much, but other kids need their mom/dad for a lot of things.
6. Some kids feel like their mom/dad really understands them, but other kids feel like their mom/dad does not really understand them.*
7. Some kids think that their mom/dad does not listen to them, but other kids do think their mom/dad listens to them.
8. Some kids go to their mom/dad when they are upset, but other kids do not go to their mom/dad when they are upset.*
9. Some kids feel better when their mom/dad is around, but other kids do not feel better when their mom/dad is around.*

Items on the Availability subscale

1. Some kids think their mom/dad spends enough time with them, but other kids do not think their mom/dad spends enough time with them.*
2. Some kids wish they were closer with their mom/dad, but other kids are happy with how close they are with their mom/dad.
3. Some kids worry that their mom/dad doesn't really love them, but other kids are really sure that their mom/dad loves them.
4. Some kids are really sure their mom/dad would not leave them, but other kids sometimes wonder if their mom/dad might leave them.*
5. Some kids worry that their mom/dad might not be there when they need her/him, but other kids are sure their mom/dad will be there when they need her/him.
6. Some kids wish their mom/dad would help them more with their problems, but other kids think their mom/dad helps them enough.

Note: * Item scoring was reversed.

REFERENCES

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage Publications.
- Ainsworth, M. D. S. (1973). Development of infant-mother attachment. In B. M. Caldwell & H. Ricciuti (Eds.), *Review of child developmental research* (Vol. 3, pp. 1-94). Chicago: University of Chicago Press.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16(5), 427-453.
- Bartholemew, K., & Horowitz, L. M. (1991). Attachment styles among adults: A test of a four category model. *Journal of Personality and Social Psychology*, 61, 226-244.
- Berndt, T. (1982). The features and effects of friendship in early adolescence. *Child Development*, 53, 1447-1460.
- Blos, P. (1967). The second individuation process of adolescence. *The psychoanalytic study of the child*, 22, 162-186.
- Bowlby, J. (1969, 1982). *Attachment and loss: Vol. 1: Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Loss*. New York: Basic Books.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. London: Tavistock.
- Bretherton, I. (1991). Pouring new wine into old bottles: The social self as an internal working model. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self processes and development: The Minnesota Symposia on Child Psychology* (Vol. 23, pp. 1-41). Hillsdale, NJ: Erlbaum.
- Bukowski, W., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement and outcome. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15-45). New York: Wiley.
- Bukowski, W., Hoza, B., & Boivin, M. (1993). Popularity, friendship, and emotional adjustment during early adolescence. In B. Laursen (Ed.), *Close friendships in adolescence* (pp. 24-38). *New Directions For Child Development*, 60, San Francisco: Jossey-Bass Publishers.
- Bukowski, W., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometrics of the Friendship Qualities Scale. *Journal of Social and Personal Relationships*, 11, 471-485.
- Cohn, D. A., Patterson, C. J., & Christopoulos, P. A. (1991). The family and children's peer relations. *Journal of Social and Personal Relationships*, 8, 315-346.
- Coie, J. D., Dodge, K. A., & Kupersmidt, J. (1990). Peer group behavior and social status. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood*. New York: Cambridge University Press.
- Coie, J. D., & Kupersmidt, J. (1983). A behavioral analysis of emerging social status in boys' groups. *Child Development*, 54, 1400-1416.
- Dodge, K. A. (1983). Behavioral antecedents of peer social status. *Child Development*, 54, 1386-1399.
- Elicker, J., Egeland, M., & Sroufe, L. A. (1992). Predicting peer competence in childhood from early parent-child relationships. In R. Parke & G. W. Ladd (Eds.), *Family and peer relationships: Modes of linkage* (pp. 77-106). Hillsdale, NJ: Erlbaum.
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology*, 21, 1016-1024.
- Fuhrman, T., & Holmbeck, G. N. (1995). A contextual-modulator analysis of emotional autonomy and adjustment in adolescence. *Child Development*, 66, 793-811.
- Goldberg, S. (1991). Recent developments in attachment theory and research. *Canadian Journal of Psychiatry*, 36, 393-400.
- Graber, J. A., & Brooks-Gunn, A. (in press). Reproductive transitions: The experience of mothers and daughters. In C. D. Ryff & M. M. Seltzer (Eds.), *The parental experience in mid-life*. Chicago: University of Chicago Press.
- Grossmann, K. E., & Grossmann, K. (1991). Attachment quality as an organizer of emotional and behavioral responses. In P. Morris, J. Stevenson-Hinde & C. Parkes (Eds.), *Attachment across the life cycle* (pp. 93-114). New York: Routledge.
- Hartup, W. W. (1993). Adolescents and their friends. In B. Laursen (Ed.), *Close friendships in adolescence* (pp. 3-22). San Francisco: Jossey Bass.
- Havinghurst, R. J. (1953). *Human development and education*. New York: McKay.
- Hollingshead, A. (1975). *Four-factor index of social status*. Unpublished manuscript. Yale University.
- Hunter, F. T., & Youniss, J. (1982). Changes in functions of three relationships during adolescence. *Developmental Psychology*, 18, 806-811.
- Kerns, K. A., & Barth, J. (1995). Parent-child attachment and physical play: Convergence across components of parent-child relationships and their relations to peer competence. *Journal of Social and Personal Relationships*, 12, 243-260.
- Kerns, K. A., Klepac, L., & Cole, A. K. (1996). Peer relationships and preadolescents' perceptions of security in the mother-child relationship. *Developmental Psychology*, 32, 457-466.
- Kerns, K. A., & Stevens, A. C. (1997). Parent-child attachment in late adolescence: Links to social relations and personality. *Journal of Youth and Adolescence*, 25, 323-342.
- Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, 59, 135-146.
- LaFreniere, P. J., & Sroufe, L. A. (1985). Profiles of peer competence in the preschool: Interrelations between measures, influence of social ecology, and relation to attachment history. *Developmental Psychology*, 21(1), 56-69.
- Lamborn & Steinberg (1993). Emotional autonomy redux: Revisiting Ryan & Lynch. *Child Development*, 64, 483-499.
- Larson, R. W., Richards, M. H., Moneta, G., Holmbeck, G., & Duckett, E. (1996). Changes in adolescents' daily interac-

- tions with their families from ages 10 to 18: Disengagement and transformation. *Developmental Psychology*, 32, 744-754.
- Lewis, M., & Feiring, C. (1989). Early predictors of childhood friendship. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 246-273). New York: Wiley.
- Maccoby, E. E., & Feldman, S. S. (1972). Mother-attachment and the stranger-reactions in the third year of life. *Monographs of the Society for Research in Child Development*, 37 (1, Serial No. 146).
- MacDonald, K., & Parke, R. (1984). Bridging the gap: Parent-child play interaction and peer interactive competence. *Child Development*, 55, 1265-1277.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood and adulthood: A move to the level of representation. In I. Bretherton & E. Waters (Eds.), *Growing points in attachment theory and research* (pp. 66-106). *Monographs of the Society for Research in Child Development*, 50(1-2, Serial No. 209).
- McCormick, C. B., & Kennedy, J. H. (1994). Parent-child attachment working models and self-esteem in adolescence. *Journal of Youth and Adolescence*, 23, 1-18.
- Papini, D. R., Roggman, L. A., & Anderson, J. (1991). Early adolescent perceptions of attachment to mother and father. A test of the emotional distancing and buffering hypotheses. *Journal of Early Adolescence*, 11, 258-275.
- Parker, J., & Asher, S. R. (1987). Peer acceptance and later interpersonal adjustment: Are low accepted children at risk? *Psychological Bulletin*, 102(3), 357-389.
- Parker, J., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, 29(4), 611-621.
- Parker, J. G., Rubin, K. H., Price, J., & Desrosier, M. E. (1995). Peer relationships, child development and adjustment: A developmental psychopathology perspective. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 2. Risk, disorder and adaptation* (pp. 96-161). New York: Wiley.
- Paterson, J. E., Field, J., & Pryor, J. (1994). Adolescents' perceptions of their attachment relationships with their mothers, fathers and friends. *Journal of Youth and Adolescence*, 23, 579-600.
- Putallaz, M., & Heflin, A. H. (1990). Parent child interaction. In S. R. Asher & J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 189-216). New York: Cambridge University Press.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (1998). Peer interactions, relationships and groups. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology: Vol. 3. Social, emotional and personality development* (pp. 619-700). New York: Wiley.
- Rudolph, K. D., Hammen, C., & Burge, D. (1995). Cognitive representations of self, family and peers in school-age children: Links with social competence and sociometric status. *Child Development*, 66, 1385-1402.
- Ryan, R. M., & Lynch, J. (1989). Emotional autonomy vs. detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development*, 69, 340-356.
- Steinberg, L. (1981). Transformations in family relations at puberty. *Developmental Psychology*, 17, 833-840.
- Steinberg, L. (1990). Autonomy, conflict, and harmony on the family relationship. In S. S. Feldman & G. R. Elliot (Eds.), *At the threshold: The developing adolescent* (pp. 255-276). Cambridge, MA: Harvard University Press.
- Steinberg, L., & Hill, J. P. (1978). Patterns of family interaction as a function of age, the onset of puberty and formal thinking. *Developmental Psychology*, 14, 683-684.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development*, 57, 841-851.
- Suess, G. J., Grossmann, K. E., & Sroufe, L. A. (1992). Effects of infant attachment to mother and father on quality of adaptation to preschool: From dyadic to individual organization of the self. *International Journal of Behavioral Development*, 15(1), 43-65.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- van IJzendoorn, M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the adult attachment interview. *Psychological Bulletin*, 117, 001-0017.
- Weiss, R. S. (1982). Attachment in adult life. In C. M. Parkes & J. Stevenson-Hinde (Eds.), *The place of attachment in human behavior* (pp. 171-184). New York: Basic Books.
- Youngblade, L. M., & Belsky, J. (1992). Parent-child antecedents of 5-year old close friendships: A longitudinal analysis. *Developmental Psychology*, 28, 700-713.
- Youngblade, L. M., Park, K. A., & Belsky, J. (1993). Measurement of young children's close friendship: A comparison of two independent assessment systems and their association with attachment security. *International Journal of Behavioral Development*, 16, 563-607.
- Youriss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers and friends*. Chicago: University of Chicago Press.