Parent–Child Attachment and Monitoring in Middle Childhood

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Research on parent–child attachment and parental child rearing practices has been pursued independently. The purpose of the present study was to test whether a secure attachment relationship is related to parental monitoring and child efforts to contribute to the monitoring process. This question was examined in a cross-sectional study of third- and sixth-grade children and their parents. Attachment-based measures were used to tap child and parent perceptions of attachment. Monitoring (i.e., parents' awareness of children's whereabouts and activities) was assessed through phone interviews with children and parents. Child contributions to monitoring were assessed with parent and child questionnaires. A more secure attachment was related to closer monitoring and greater cooperation by the child in monitoring situations, especially at sixth grade. The findings illustrate the importance of embedding attachment within a larger child rearing context.

The family serves as a major context of socialization for children. One type of influence within this context is the quality of parent–child relationships, which has been linked to children's social and emotional development. For example, the development of secure attachments to mothers or fathers is related to children's self-esteem, cooperation with peers, and self-control (Belsky & Cassidy, 1994; Contreras & Kerns, 2000). Parents can also influence their children by engaging in specific goal-oriented parenting practices. For example, children who are more closely monitored by parents are less likely to be involved in delinquent activities (Patterson & Bank, 1989). The literatures on parent–child attachment quality and specific parenting practices have not, for the most part, been integrated. Given that any child is exposed to both, it is important to understand how the two are linked. The goal of the present study was to examine how attachment interfaces with child rearing practices, specifically monitoring, in the middle childhood years.

Children first form attachments to their primary caregivers in infancy (Bowlby, 1982), but continue to need attachment figures across childhood and adolescence (Bowlby, 1989). In middle childhood, children cite parents as the primary providers of social support (Furman & Buhrmester, 1992; Levitt, Guacci-Franco, & Levitt, 1993; Reid, Landesman, Treder, & Jaccard, 1989). In addition, research on adolescents has found that detachment from parents is associated with negative behavioral and mental-health outcomes (Steinberg, 1990). Although the frequency and intensity of attachment behaviors declines from early to middle childhood, attachments to parents in middle childhood can be seen in children's secure-base or

safe-haven behavior and expectations for parental availability (Bowlby, 1979; Bowlby, 1987, as cited in Ainsworth, 1990). The maintenance of physical proximity becomes less important, and availability of the attachment figure becomes the set goal of the attachment system in middle childhood (Bowlby, 1987, as cited in Ainsworth, 1990). Availability of the attachment figure refers to whether the child views the attachment figure as open to communication, physically accessible, and responsive if called on for help (Bowlby, 1987, as cited in Ainsworth, 1990).

Parents continue to play a role in support of their children's secure-base behavior in early and middle childhood. The goal of the caregiving system is to protect the child, and the system is therefore activated when an attachment figure perceives that the child is in danger or distressed (George & Solomon, 1999). Thus, the attachment figure needs to be aware of a child's emotional needs in addition to being accessible and available to the child. Aside from studies documenting an association between maternal responsiveness and secure attachment (see De Wolff & van IJzendoorn, 1997), relatively little is known about how attachment is related to parenting practices. In addition, as children get older, they can also play a more active role by taking on greater responsibility for secure-base maintenance. By the later preschool years, children are able to enter into a goal-corrected partnership with a parent in which the child is able to take into consideration the parent's goals during social interaction (Marvin & Britner, 1999). Consequently, by middle childhood parents and children share the responsibility for regulating contact between the attachment figure and the child.

The present study examined attachment and child rearing practices in middle childhood. In examining links between the two, we found that developmental considerations suggest the need to identify salient parenting issues during this period. In contrast to their behavior in earlier periods, during middle childhood children assume increasing responsibility for self-regulation (Maccoby, 1984). At the same time, parents still need to ensure that their child is complying with family and societal rules. Therefore, a major parenting issue during the middle childhood years is how parents and children work together around issues of parental supervision and control. *Monitoring*, which refers to a parent's awareness of a child's activities and whereabouts, represents one aspect of parent–child control. Monitoring differs from secure-base support in that the function of the behavior is to ensure child compliance with adult standards as well as to promote the child's safety. Consequently, monitoring can occur in a broader range of situations (e.g., checking whether a child has completed homework). High levels of parental monitoring may indicate that parents are interested and involved with their children. In addition, parents who monitor their children's whereabouts and activities may be able to prevent problem behaviors or provide assistance to their child when needed. Consistent with these hypotheses is the fact that higher parental monitoring has been associated with lower levels of juvenile delinquency and antisocial behavior and better academic performance in middle childhood and adolescence, with effects sometimes stronger for boys (Crouter, MacDermid, McHale, & Perry-Jenkins, 1990; Patterson & Bank, 1989; Patterson & Stouthamer-Loeber, 1984; Sampson & Laub, 1994; Stice & Barrera Jr., 1995; Vuchinich, Bank, & Patterson, 1992; Weintraub & Gold, 1991).

As implied in the discussion so far, monitoring is often treated as a characteristic of parents, but, as Crouter et al. (1990) argued, it is best thought of as a dyadic process in that a child's behavior will affect a parent's ability to monitor the child. That is, some children are easier to monitor than others are because of their willingness to cooperate in the monitoring process. For example, some children may be especially prone to take responsibility for alerting their parents about their activities and whereabouts. The child's contribution to the monitoring process has not, however, been studied. In the present study, we gathered information about parent's awareness of their child's activities (i.e., monitoring). We also used a new measure designed to capture a child's tendency to cooperate in monitoring situations so that we could explicitly capture the child's contributions to the monitoring process.

Monitoring and children's willingness to be monitored may each be related to parent–child attachment quality. A general tendency to take a child-centered approach may both facilitate responsiveness to child needs (and therefore pro-

mote secure attachment) and be associated with an interest in the child that leads to closer monitoring. In addition, open communication between parent and child is a characteristic associated with secure attachment (Oppenheim & Waters, 1995), which may in turn facilitate monitoring. Waters, Kondo-Ikemura, Posada, and Richters (1991) proposed the more specific hypothesis that the development of a secure attachment relationship sets the stage for a supervisory partnership between a parent and a child in middle childhood. The notion of a *supervisory partnership* is that the child cooperates with parents around supervision and monitoring issues. Waters et al. (1991) argued that children are more likely to cooperate with parental requests regarding monitoring when they have a history of interactions with the parent in which the parent has operated as an accessible secure base and safe haven. That is, reciprocal cooperation between parent and child develops as a consequence of secure attachment.

In the one previous test of a link between attachment and monitoring, Sampson and Laub (1994) found that interviewer ratings of attachment and monitoring were correlated in a sample of delinquent and nondelinquent boys. For a number of reasons, additional research on attachment–monitoring links is needed. The Sampson and Laub article is based on secondary analysis of Glueck and Glueck's (1950) study of delinquents. The measure they labeled as *attachment* appears to tap a parental warmth/rejection dimension. It is, therefore, only loosely related to current conceptualizations of the attachment construct that focus on the parent as a secure base and safe haven. Second, their study only included boys. Third, there is a need to replicate in more recent samples that were not selected for risk factors; perhaps attachment only facilitates monitoring in the face of adversity, but has no impact in lower risk samples. Fourth, assessments of parental monitoring were limited to mothers' reports of their supervision, and we therefore lack information on whether attachment and monitoring are also related for fathers.

Mothers and fathers participated in the present study because both are important attachment figures during the middle childhood years. There may be some differences in how mothers and fathers allocate responsibility for monitoring their children's activities. Studies with

younger children have found that fathers are less involved than mothers are in monitoring and supervising their children's peer contacts (Bhavnagri & Parke, 1991; Ladd & Golter, 1988). In middle childhood, mothers tend to monitor children more closely than do fathers (Crouter et al., 1990), even in single-parent households (Maccoby, Buchanan, Mnookin, & Dornbusch, 1993). One possibility is that associations between attachment and monitoring may be stronger for mothers, given that monitoring is a more central role for them than it is for fathers. Alternatively, it may be that the degree of association between attachment and monitoring for mothers and fathers is similar, even if on average fathers monitor less closely. Attachment theory does not make differential predictions for mothers and fathers concerning how attachment would be related to monitoring and child check-ins. Including both mothers and fathers in our study allowed us to test the two alternative hypotheses.

The present study explored links between parental monitoring, child contributions to monitoring, and attachment in a sample of boys and girls not selected for any risk factors. Both mothers and fathers participated in the study, when possible. We used measures of attachment that are more consistent with recent conceptualizations of the construct. In the present study, we used attachment-based assessments of the parent–child relationship in which we tapped child and parent perceptions of the relationship. The term *attachment based* refers to the fact that the measures were designed to capture processes identified as important in attachment theory. Both child and parent perceptions were assessed to capture the perspectives of both members in the dyad. Children reported the degree to which they viewed a particular attachment figure as accessible, open to communication, and responsive to requests for help (Kerns, Klepac, & Cole, 1996). Parents reported the degree to which they were willing to serve as an attachment figure for the target child (Kerns et al., 1996).

To measure monitoring, we used a telephone interview technique developed by Crouter et al. (1990). Parents and children were interviewed separately about a child's activities and whereabouts on a particular day. The match between children's and parents' answers was used as an index of monitoring (i.e., higher match indicates

closer monitoring). In addition, to tap child con-
tributions to monitoring situations, we asked
parents and children to complete questionnaires
reporting what children typically do in monitor-
ing situations (e.g., do they volunteer informa-
tion to parents when their plans for the day
change?). We gathered separate assessments of
attachment, monitoring, and child contributions
to monitoring for mother–child and father–
child dyads to examine whether patterns were
similar for both parents.

The middle-childhood years were selected
for study given the relative lack of research on
attachment and the importance of monitoring
during this period. Even within this period,
there may be some changes in how attachment
and monitoring are linked. In the early years of
middle childhood, children may spend more
time in close proximity to parents, which would
make it easier for parents to stay aware of their
children's activities and whereabouts. At older
ages, when children spend more time physically
separated from parents, negotiating issues re-
lated to monitoring and supervision becomes
much more salient, and the child's willingness
to communicate about his or her whereabouts
may become more critical. Therefore, we ex-
pected that associations between attachment
and monitoring might be especially strong as
children approach adolescence because a more
secure attachment would facilitate child coop-
eration in the monitoring process at this time.
To test this hypothesis, we used a cross-
sectional design in which we examined how
attachment is related to monitoring and child
contributions to the monitoring process at two
ages: when children were in third and in sixth
grade. We expected associations to be stronger
for the older children.

Method

Participants

Participants consisted of 104 families with a child
in third grade (53 boys and 51 girls) and 72 families
with a child in sixth grade (33 boys and 39 girls).
Mean ages for the third and sixth graders were,
respectively, 9.12 years and 12.08 years. All third
graders attended elementary schools. Sixth graders
were attending elementary schools (25%), middle
schools serving fifth and sixth graders (35%), or
middle schools with sixth, seventh, and eighth grad-
ers (40%). Most children were White (89%), 6%
were African American, 2% were Asian or Pacific
Islander, less than 1% were Hispanic, and 2% re-
ported other ethnic origins. The sample reflected the
racial distribution in the region from which it was
drawn. Parents residing in the child's primary resi-
dence were invited to participate in the study. A
majority of the participants (63%) reported intact-
family status, 25% reported single-parent status (with
23% single mother-headed and 2% single father-
headed), and 12% reported stepfamily status (with
11% reporting stepfathers and 1% reporting step-
mothers). In some two-parents families, only the
mother participated.[1] Self-reports of highest educa-
tional level attained indicated that 3% of the mothers
and fathers had less than 12 years of education, 27%
of the mothers and 25% of the fathers had graduated
from high school, 19% of the mothers and fathers had
some college education or an associates degree, 31%
of the mothers and 27% of the fathers had more than
2 years of college or a a 4-year degree, and 20% of the
mothers and 26% of the fathers had at least some
postgraduate education. Participants were recruited
through letters to third- and sixth-grade families dis-
tributed in classrooms in local public and private
schools.

Procedure

In the context of a larger study, parent–child pairs
(mother–child, father–child) participated separately
in 1.5-hr laboratory sessions. In two-parent families,
the sessions were scheduled approximately 2 months
apart with the order of mothers' and fathers' partic-
ipation alternated across participants. Single-parent
families and families with only one participating par-
ent took part in only one lab session. During the lab
visit, parents and children first completed an interac-
tion and observation session in which they completed
tasks that measured child and parent problem solving
and discussion of emotional topics; the observation
session is not part of the present report. Following
this, parents and children separately completed a
series of questionnaires, the order of which was stan-
dardized across all participants. The questionnaire
packet included the attachment and child check-in
questionnaires. At the end of the first lab session
arrangements were made to begin a series of tele-
phone interviews that were used to assess monitoring.

Measures

Attachment-based measures. Children's self-
reports of mother–child and father–child relation-

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[1] In the intact families, 5 fathers completed phone
interviews but not questionnaires and 7 fathers did
not participate at all. In the stepfamilies, 2 stepfathers
completed phone interviews but not questionnaires
and 4 stepfathers did not participate at all.

ships were obtained using the Security Scale (Kerns et al., 1996). This measure was designed to assess children's perceptions of security in parent–child relationships in middle childhood and early adolescence. Items on the Security Scale tap the following: (a) the degree to which children believe a particular attachment figure is responsive and available (e.g., whether a child worries that a parent will not be there when needed), (b) the children's tendency to rely on the attachment figure in times of stress (e.g., whether the child goes to parent when upset), and (c) children's reported ease and interest in communicating with the attachment figure (e.g., whether a child likes to tell a parent what she or he is thinking and feeling). The measure is composed of 15 items that are rated on a 4-point scale using Harter's (1982) "Some kids. . . other kids. . ." format. Children read statements such as, "Some kids find it easy to trust their mom BUT other kids are not sure if they can trust their mom." They were told to indicate which statement was more characteristic of them and then to indicate whether this statement was *really true* (1) for them or *sort of true* (4) for them. Items on the Security Scale are presented in Appendix A. Each item is scored on a 4-point scale with higher scores indicating a more secure attachment. Scores across items were averaged so that children received a score on a continuous dimension of security. Reliability alphas for third-grade participants were .63 and .82, for mother and father, respectively, and those for sixth-grade participants were .79 and .87, for mother and father, respectively.

Other studies also provide evidence of the Security Scale's reliability and validity. Kerns et. al. (1996) reported alphas of .84 and .88, respectively, for two studies with 10- to 12-year-old children and reported a 14-day interval test–retest correlation of $r(30) = .75$. In addition, children's reports of security were related to children's ratings of self-concept, peer ratings of liking, observer ratings of interactions with friends, and mother reports of acceptance of the child (Kerns et al, 1996). There is also some evidence of discriminant validity, in that security scores were not related to school grade point average or to children's self-perceptions of athletic competence (Kerns et al., 1996). Finally, two studies have examined associations between security scores and concurrently administered projective measures of attachment. Children in the third-grade sample participated in a follow-up study 2 years later (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000; Kerns, Tomich, Aspelmeier, & Contreras, 2000). In the follow-up study, children completed the Separation Anxiety Test (SAT; Resnick, 1993), a projective interview that taps children's state of mind with respect to attachment. Security scores were related to both the ratings and classifications from the SAT; for example, children reporting greater security to mother were less dismissing and had more coherent discourse during

the SAT interview. In a second study (Granot & Mayseless, in press), child security scores were significantly related to secure classifications and ratings obtained from an attachment-doll interview measure.

Parent reports of acceptance of and willingness to serve as an attachment figure for the target child were obtained from mothers and fathers using Block's (1965) Child Rearing Practices Report (CRPR). The CRPR is a Q-sort deck of 91 cards, each containing a sentence depicting a child rearing belief or practice. Instructions were taken from Block (1965). The parent's task was to read the cards carefully and then sort them into seven piles of 13 cards each from *most characteristic* (Pile 7) to *least characteristic* (Pile 1) of their own child rearing practices and beliefs. Parents described their practices and beliefs with reference to the child participating in the study. An experimenter was available to assist parents who were confused by question content or by the sorting procedure.

Eleven of the items from Block's CRPR were chosen by Kerns et al. (1996) as indicators of parent's acceptance of and willingness to serve as an attachment figure for the child participating in the study. Sample items are "I respect my child's opinions and encourage him/her to express them" and "I feel a child should be given comfort and understanding when she/he is scared or upset." In the present study, one item was dropped because of a low item-total correlation and possible overlap with the monitoring variable.[2] The items used in this study are presented in Appendix B. The score for an item is the pile in which the item is placed. Cronbach's alphas were .74 for both mothers and fathers of sixth graders and .75 and .52 for mothers and fathers of third graders, respectively.

There is some reliability and validity data for this item cluster. Kerns et al. (1996) reported a scale alpha of .73 for mothers' reports of willingness to serve as an attachment figure. In addition, maternal reports were significantly correlated with child security scores. In another study based on the present sample (Kerns et al., 2000), parental reports of willingness to serve as an attachment figure were related to observer ratings of responsiveness for mothers and fathers at third grade and for mothers at sixth grade.

Means, standard deviations, and sample sizes for the attachment measures are presented in Table 1. In addition, we examined associations between children's reports of security and parents' reports of willingness to serve as an attachment figure. The two were significantly correlated at third grade for fathers

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[2] The item dropped from the cluster was "I make sure I know where my child is and what s/he is doing." We recommend excluding this item from the cluster in future studies.

Table 1

Means, Standard Deviations, and Number of Participants for Attachment and Monitoring Measures

Variable	Third grade			Sixth grade		
	M	SD	n	M	SD	n
Attachment						
Security Scale M	3.43	0.36	101	3.29	0.42	70
Security Scale F	3.31	0.49	78	3.15	0.52	51
M serve as AF	6.07	0.68	96	5.92	0.68	71
F serve as AF	5.90	0.55	67	5.82	0.74	44
Monitoring						
M monitoring	0.84	0.07	99	0.82	0.07	70
F monitoring	0.80	0.09	66	0.77	0.10	47
Child Check ins						
M check in	0.93	0.10	100	0.90	0.16	70
F check in	0.90	0.11	68	0.88	0.16	44
C-M check in	0.88	0.12	101	0.85	0.14	71
C-F check in	0.89	0.13	79	0.84	0.22	51

Note. Security Scale represents child report. M = mother; F = father; AF = mother and father reports of willingness to serve as an attachment figure; C-M = child reports of check-ins to mother; C-F = child reports of check-ins to father.

and at sixth grade for mothers and fathers, with rs between .25 and .40.

Parental monitoring. Monitoring, or parents' awareness of their child's activities and whereabouts, was measured with a series of telephone interviews developed by Crouter and colleagues (Crouter et al., 1990; Crouter & McHale, 1993). With two-parent families, interviews were administered over a period of 7 different evenings and consisted of three interviews with mother and child (two on weekdays and one during the weekend), three interviews with father and child (two on weekdays and one during the weekend), and one final call in which mother, father, and child were interviewed separately; thus, each parent completed four interviews. Mothers and fathers answered the same sets of questions. In single-parent families, the participating parent completed the same four interviews. Each interview assessed the parent's knowledge of the child's experiences, whereabouts, playmates, and activities during that particular day. After ascertaining that the other interviewee was not around, parents and children were separately asked a number of questions about the child's day that were scored for the extent to which the parent's report matched the child's. For example, children and parents were asked the following questions: "Did you [your child] purchase or buy anything today? [If yes] can you tell me what you [your child] bought?" "Did you [your child] have any special success in school today such as getting a good grade or being rewarded for special performances? [If yes] what?" Across the four calls 26 questions were asked. Phone interviews were scheduled in advance, but different questions were asked on each call so that parents would not be able to prepare. Total monitor-

ing scores were calculated separately for mother and father by dividing the number of correct responses for all interviews by the total number of questions asked. Therefore, a score of 1.00 reflected complete monitoring and one of 0.00 reflected a complete lack of monitoring.

Child check-in measures. To tap the child's contribution to the monitoring process, we asked parents and children to separately complete an author-constructed measure of how responsible the child is in check-in situations. The 12-item check-in measure asked each parent to indicate *yes* or *no* as to whether their child typically performs various check-in behaviors with them on days when the child has a lot of free time (e.g., Saturdays or summer days). Similarly, children were given the same instructions except they were told to answer the questions in reference to what they would do with a specific parental figure (e.g., mother or father), and completed one questionnaire for each participating parent. Examples of check-in items include "Volunteers information about plans," "Contacts parent right away if plans change," and "Understands that plans for the day may need to be negotiated with the parent." Scale scores were calculated as the proportion of *yes* responses (possible range = 0–1.0). Thus, higher scores indicated more checking in with a parent.

Means and standard deviations for parent and child reports of child check-in are shown in Table 1. The check-in variables, unlike all other variables, showed substantial negative skewness. Therefore, all check-in data were subjected to an arcsine transformation prior to the main analyses.

We had conceptualized checking in as the child's contribution to the monitoring process, and therefore

we examined whether monitoring was related to child check-ins. Parents may be able to monitor their child, even if their child is not consistent about checking in with them, by making extra efforts. Nevertheless, it might be easier to monitor a child if he or she consistently checks in with a parent. Monitoring and reports of child check-ins were significantly correlated for mother–child dyads, but not for father–child dyads. More specifically, mothers' monitoring of children in third grade was related to mothers' reports of child check-ins, $r(96) = .20$, $p < .05$. Mothers' monitoring of children in sixth grade was related to both mother and child reports of child check-ins, $r(67) = .26$, $p < .05$, and $r(68) = .24$, $p < .05$, respectively.

Results

Attachment: Associations With Monitoring and Child Check-Ins

The present study tested the hypothesis that a more secure attachment would be associated with more monitoring and with the child taking more responsibility for checking in with the parent. We examined both parent and child reports of check-ins to examine links across sources. Prior to the main analyses, we explored whether family status was related to our main variables. This was done because there were intact families, stepfamilies, and single-parent families in the sample, and monitoring in particular might occur more often in intact families in which parents may have more time available for this activity. Mother and father monitoring and mothers' reports of child check-ins were related to family status; children in intact families were monitored more closely and reported to check-in more than children in stepfamilies or single-parent families. Therefore, we included family status as a covariate in all subsequent analyses (coded as 1 = intact, 2 = stepfamilies and single parent families).

Monitoring. Correlations between attachment and monitoring are shown in Table 2. At third grade, attachment was not related to monitoring. By contrast, at sixth grade, two of four correlations were significant. More specifically, mothers who reported a greater willingness to serve as an attachment figure more closely monitored their children. In addition, sixth graders who reported greater security to fathers were monitored more closely by their fathers.

Child check-ins. At third grade, some significant associations between attachment and

Table 2
*Correlations Between Parent and Child
Attachment Measures and Parents'
Monitoring, Controlling for Family Status*

Relationship	Third grade		Sixth grade	
	r	*n*	*r*	*n*
Mother–child relationship				
Security (child)	.03	99	.19	69
Serve as AF (mother)	−.03	95	.25*	70
Father–child relationship				
Security (child)	−.01	65	.37*	46
Serve as AF (father)	.10	62	.19	43

Note. AF = willingness to serve as an attachment figure.
* $p < .05$.

child check-ins were found for mother–child dyads (see Table 3). Children who reported greater security with their mothers also reported checking in more with their mothers. In addition, mothers who reported a greater willingness to serve as an attachment figure also reported that their children checked in more with them. Thus, for mother–child dyads at third grade, effects were found within a rater. For father–child dyads, there was one marginally significant effect: Children who reported greater security with their fathers were reported by fathers to check in more.

Again, findings at sixth grade were more robust. Security and willingness to serve as an attachment figure were significantly and positively correlated with child check-in reports from both parents and children; seven of eight correlations were significant and one correlation was marginally significant. Thus, at sixth grade, effects were found both within and across raters. The significant correlations ranged from .24 to .59.

Age and Sex as Moderators

The overall pattern of results was stronger at sixth grade than at third grade: More significant effects were found, and effects were larger in magnitude, at sixth grade. To provide a stronger test of the hypothesis that age moderated the links between attachment and monitoring or child check-ins, we tested whether correlations were significantly higher at sixth grade than at third grade. We applied Fisher's *r* to *z* transformation to correlation coefficients and then cal-

Table 3
Correlations Between Parent and Child Attachment Measures and Children's Checking With Parent, Controlling for Family Status

| | Third grade | | | | Sixth grade | | | |
| | Parent | | Child | | Parent | | Child | |
Relationship	*r*	*n*	*r*	*n*	*r*	*n*	*r*	*n*
Mother–child relationship								
Security (child)	.05	100	.25*	101	.24*	69	.44***	70
Serve as AF (mother)	.29**	96	.16	96	.59***	70	.24*	71
Father–child relationship								
Security (child)	.21†	67	.12	78	.39*	43	.26†	50
Serve as AF (father)	.10	67	−.02	67	.38*	41	.42**	44

Note. AF = willingness to serve as an attachment figure.
† $p < .10$ (marginally significant).   * $p \le .05$.   ** $p < .01$.   *** $p < .001$.

culated z scores to determine if the correlations were significantly different (Snodgrass, 1977). To limit the number of tests, we performed these calculations only for those variable pairs that were significantly correlated at sixth grade ($n = 9$).

Monitoring. For monitoring, there were two marginally significant differences in correlations. Mother reports of willingness to serve as an attachment figure and monitoring were more highly correlated for the sixth graders than for the third graders, $z = 1.81$, $p = .07$. Child reports of security with father and father monitoring were correlated more highly at sixth grade than at third grade, $z = 1.90$, $p < .06$.

Child check-ins. Two significant differences in the magnitude of the correlations for sixth and third graders were found. Correlations between mother reports of willingness to serve as an attachment figure and mother reports of child check-ins were higher for sixth graders than for third graders, $z = 2.38$, $p < .05$. In addition, correlations between father reports of willingness to serve as an attachment figure and child reports of check-ins with fathers were higher for sixth graders than for third graders, $z = 2.35$, $p < .05$.

As noted earlier, in some studies, monitoring has been more highly related to delinquency and school achievement for boys than for girls. However, we had no theoretical reason for expecting associations between attachment and monitoring or child check-ins to differ by gender. We did conduct follow-up analyses to test this assumption. To limit the number of analyses, we first examined, separately by grade, whether there were variables that were signifi-

cantly correlated for one gender but not the other (i.e., 24 correlations were calculated for each gender). For the 6 cases for which a significant correlation was found for only one group, we then tested whether the correlations for boys and girls were significantly different. There was only one significant difference between correlation pairs and no marginally significant differences. Specifically, at sixth grade the association between father reports of willingness to serve as an attachment figure and child reports of check-ins was higher for boys than for girls, $z = 2.13$, $p < .05$, respective $rs = .58$ and $.02$. We concluded that patterns of association between attachment and monitoring or child check-ins were similar for boys and girls.

Discussion

In the present study, we found some evidence for the hypothesis that child and parent perceptions of a more secure attachment relationship are related to monitoring and child check-ins in middle childhood. Effects were especially strong at preadolescence. Monitoring was related to perceptions of attachment, but only at sixth grade. Children's tendencies to check-in with parents in monitoring situations, which represented the child's contribution to the monitoring process, were related to perceptions of attachment at both grades. At third grade, significant effects were found only for mother–child dyads. In addition, these effects were found only when reports of check-ins and the attachment variables were from the same source (i.e., mother or child). By contrast, at sixth grade associations between perceptions of at-

tachment and child check-ins were more robust. Effects were found for both mother–child and father–child dyads. Not only were there a larger number of significant effects at sixth grade, but also the effects were found across sources (i.e., both child and parent reports of attachment were related to both child and parent reports of child check-ins). Further, follow-up tests to explore the age differences in correlations revealed that several of the correlations were significantly stronger at sixth grade than at third grade.

In the present study, data on attachment, monitoring, and children's tendencies to check in were gathered concurrently, and therefore do not provide a basis for inferring causal direction of influence among the constructs. Several different models are consistent with the pattern of findings. First, the findings are consistent with the hypothesis that a secure attachment relationship instills in the child a cooperative orientation (Richters & Waters, 1991; Waters, Vaughn, Posada, & Kondo-Ikemura, 1995), which in turn facilitates cooperation in monitoring situations. Second, our results are also consistent with the alternative hypothesis that higher levels of parental monitoring may help promote or maintain a secure attachment relationship. For example, higher levels of monitoring may reassure the child about the availability and interest of the attachment figure. A third possibility is that the association between attachment and monitoring is due primarily to characteristics of the child or parent that impact both. For example, temperament characteristics such as the child's ability to regulate attention and emotions may make it easier to monitor a child and to form and maintain more secure attachment relationships. From the parents' side, the tendency to take a child-centered approach may foster both a secure parent–child attachment and closer parental monitoring. Sorting out these alternatives would require replication and extension of the present findings. A longitudinal study is necessary to address the question of direction of influence over time. In addition, future research would benefit from incorporating additional child or parent variables that might account for the effects found here.

More generally, the findings show that aspects of parenting other than maternal responsiveness may co-occur with more secure attachment relationships. These results highlight the need to explore further how attachment and parenting practices are linked to one another, as well as how they may jointly explain children's social development. Each of these research areas has produced a rich body of knowledge regarding how family factors are related to children's social, emotional, and cognitive development. The present findings suggest it may be fruitful to integrate these two literatures, which would lead to a new set of questions. The quality of attachment relationships may affect how easy or difficult it is for parents to achieve other socialization goals such as promoting independence or empathy for others. That is, as suggested by Darling and Steinberg (1993), the affective quality of the parent–child relationship might moderate the impact of specific parenting practices. In addition, attachment has been shown to have a diverse set of correlates, including child compliance, persistence and enthusiasm when working on tasks, and peer competence (Belsky & Cassidy, 1994). It could be that some of the correlations between attachment and socialization outcomes are due to other aspects of parenting correlated with attachment. For example, it may be that some of the effects of attachment are explained or mediated (Baron & Kenny, 1986) by more specific parenting practices (Kerns, Cole, & Andrews, 1998). Considering the effects of parenting practices and attachment jointly allows for testing these hypotheses. Finally, it is clear that children do not experience either attachment relationships or more specific parenting practices in isolation in their daily lives, and therefore understanding how the two operate together is necessary for building developmental models that can capture how family variables combine to affect children's development.

Some caution is warranted when interpreting the different patterns found for third and sixth graders, given that the study was cross-sectional and therefore data from different samples were being compared. Nevertheless, the findings do suggest that attachment is more highly related to monitoring and checking in at preadolescence than at an earlier age. It is doubtful that all specific parenting practices will be related to attachment, at all ages. Instead, it may be that attachment is most related to specific parenting practices when parents are addressing parenting issues involving transformation and challenge (e.g., negotiating independence with their child in the toddler or early-adolescent years). Thus,

the stronger findings for sixth graders than those for third graders may be due to the fact that parents and children are negotiating autonomy issues at this time. Alternatively, the weaker findings at third grade might be related to the parents' need to monitor at the two ages. For example, at third grade, parents may receive more information about child activities from other sources (e.g., reports from teachers). Before concluding that there are age differences in the associations, the question is worth exploring further with particular attention to the contexts in which parental monitoring might be important prior to preadolescence. It may be that, with younger children, attachment is related to monitoring only in certain situations (e.g., ongoing monitoring when parent and child are in a mall or how parents handle monitoring when children are entering a new situation). The present study could be extended by examining the monitoring process with preadolescents and younger children in a variety of contexts and by considering further how the social ecology of parenting might affect the need for monitoring and child check-ins at different ages.

We were also interested in examining whether associations of attachment with monitoring and child check-ins would be stronger for mothers than for fathers, as might be expected if monitoring is primarily the mother's responsibility, or whether patterns would be similar for mothers and fathers, as might be expected from attachment theory. Including both mothers and fathers in the study made it possible to evaluate whether associations varied with parent gender. Overall, there were more similarities than differences when comparing mother and father results. At sixth grade, attachment was related to monitoring and child check-ins for both mothers and fathers. At third grade, attachment and monitoring were not related for mothers or fathers, although associations between attachment and child check-ins were found for mothers only. It should be noted that the findings for third graders were generally weaker, and the differences in the magnitude of mother and father correlations at third grade were small. Additional research is needed before firm conclusions can be drawn concerning mother–father differences in associations between attachment and indexes of the monitoring process.

Although measurement issues were not the focus of this particular study, some issues deserve comment. The assessment of parent–child relationship quality was based on attachment theory and was designed to capture the children's and parents' conscious representations of their attachment relationship. As noted earlier, there is some evidence that child reports of security are related to projective measures of attachment (Contreras et al., 2000; Kerns et al., 2000; Granot & Mayseless, in press), as well as to children's self-concept and peer relationships (Kerns et al., 1996). Measure validation is, of course, an ongoing process, and additional research is needed that examines how the child and parent attachment-based measures used in this study are related to other types of attachment assessments. For example, child reports of security could be correlated with early childhood measures of attachment such as the Attachment Q-Set (Waters et al., 1995), and both parent and child reports could be validated by examining associations with concurrent parent measures, such as the Adult Attachment Interview (George, Kaplan, & Main, 1996), that tap a parent's state of mind regarding attachment. We would expect studies using other types of attachment measures to replicate our finding that attachment is related to monitoring and child check-ins at preadolescence. Second, we created a new measure to tap the child's contribution to the monitoring process. This measure was even more related to attachment than was the monitoring measure, perhaps because it more directly taps the degree to which a child is cooperative in the monitoring process. The measure could be improved by obtaining more detailed information regarding how parents and children negotiate in monitoring situations.

The present sample included families that were, in most cases, of White ethnicity and of working or middle class socioeconomic status. The sample reflected the ethnicity and social class of the area from which it was drawn. Nevertheless, it will be important to determine whether the findings of the present study generalize to more diverse populations. It is possible that monitoring and child check-ins are even more important when families are at risk (e.g., living in poverty or in a high-crime neighborhood). If so, the presence of secure attachment relationships may function as a protective factor in high-risk environments if it facilitates the monitoring process in these contexts.

In conclusion, our study showed that parent–

child attachment is related to monitoring and child contributions to the monitoring process. The findings were especially strong at preadolescence, which may be a period during which parents and children are negotiating issues of autonomy and independence as children begin to spend more time away from parents. More generally, the findings suggest the need to place attachment in a broader child rearing context. This will allow investigators to understand how attachment and child rearing practices operate together to affect children's social, emotional, and cognitive competencies. The present study could also be extended by examining further how children contribute to their own socialization through the impact of their characteristics on parent–child relationships and parenting practices.

Implications for Application and Public Policy

The findings have implications for prevention and intervention efforts that target parent–child relationships. Additional research is needed to disentangle the causal influences between parent–child relationship quality and specific parenting practices. Nevertheless, a general implication of the findings is that problems in parenting may co-occur, which has implications for both the assessment and treatment of parent–child relationship difficulties. For example, deficits in parental monitoring may signal to professionals that problems are likely in other areas of the parent–child relationship. In these cases, professionals should conduct a complete assessment of family relationships prior to developing an intervention. There may also be some positive "spillover" effects, such that treating one aspect of parent–child relationships produces positive changes in other areas.

More specifically, the findings have implications for parenting programs that target parent–child attachment and the monitoring process. The results for sixth graders were similar for mother–child and father–child dyads. These findings serve as a reminder that intervention efforts need to target both mothers and fathers. In addition, the stronger effects at preadolescence suggest this may be an especially important period to target when implementing prevention or intervention programs aimed at improving parent–child relationship quality and communication.

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Appendix A: Items on the Security Scale

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 think their [mom/dad] spends enough time with them BUT Other kids think their [mom/dad] does not spend enough time with them.

5. Some kids do not really like telling their [mom/dad] what they are thinking or feeling BUT Other kids do like telling their [mom/dad] what they are thinking or feeling.

6. Some kids do not really need their [mom/dad] for much BUT Other kids need their [mom/dad] for a lot of things.

7. Some kids wish they were closer to their [mom/dad] BUT Other kids are happy with how close they are to their [mom/dad].

8. Some kids worry that their [mom/dad] does not really love them BUT Other kids are *really* sure that their [mom/dad] loves them.

9. Some kids feel like their [mom/dad] really understands them BUT Other kids feel like their [mom/dad] does not really understand them.

10. Some kids are really sure their [mom/dad] would not leave them BUT Other kids sometimes wonder if their [mom/dad] might leave them.

11. 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].

12. Some kids think their [mom/dad] does not listen to them BUT Other kids do think their [mom/dad] listens to them.

13. 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.

14. Some kids wish their [mom/dad] would help them more with their problems BUT Other kids think their [mom/dad] helps them enough.

15. Some kids feel better when their [mom/dad] is around BUT Other kids do not feel better when their [mom/dad] is around.

Children are given instructions on item format and complete one sample item prior to filling out the Security Scale. Children are told to first pick which children are most like them, and then to indicate whether the item is *sort of true* or *really true* for them.

Appendix B: Item Cluster for Parental Acceptance of and Willingness to Serve as an Attachment Figure for the Child (Scored from Block, 1965, Child-Rearing Practices Q-Sort)

1. I respect my child's opinions and encourage him/her to express them.

5. I often feel angry with my child. (reverse scored)

11. I feel a child should be given comfort and understanding when s/he is scared or upset.

32. I feel my child is a bit of a disappointment to me. (reverse scored)

34. I am easygoing and relaxed with my child.

39. I trust my child to behave as she/he should, even when I am not with him/her.

52. I make sure my child knows that I appreciate what she/he tries to accomplish.

53. I encourage my child to talk about his/her troubles.

66. I sometimes tease and make fun of my child. (reverse scored)

69. There is a good deal of conflict between my child and me. (reverse scored)

Item cluster assesses degree to which parent communicates acceptance, appreciation, and willingness to serve as a safe haven and secure base.