THE SUPERVISION PARTNERSHIP AS A PHASE OF ATTACHMENT

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SUMMARY

The supervision partnership, which is thought to emerge in middle childhood, has been conceptualized as the last phase of parent-child attachment in childhood. The present study expands upon this idea by proposing three components of this supervision partnership for parent-child dyads. *Availability and accessibility* is similar to the traditional definition of attachment and captures that the parent is emotionally available to comfort the child; *willingness to communicate* indicates that both parent and child are willing to discuss their plans, goals, and life events; and *mutual recognition of the other's rights*, meaning that both the child and the parent recognize that they both have the right to contribute to the decision-making process. Using data from the NICHD Study of Early Child Care and Youth Development, I derived indices of the three components of the supervision partnership, and related them to attachment assessments from other age periods, as well as to concurrent maternal sensitivity. The current study found that the three components of the supervision partnership were significantly related to one another, to attachment measured in preschool and adolescence, and to maternal sensitivity measured in middle childhood. Each of the three components were significant unique predictors of both adolescent attachment and maternal sensitivity. Collectively, the findings suggest that the concept of the supervision partnership may more fully capture the secure base concept in late middle childhood than traditional approaches that focus only on availability and accessibility.

The supervision partnership as a phase of attachment

Attachment theory was introduced by John Bowlby to help explain and describe the relationship between children and their primary caregivers. Bowlby (1982) theorized that all children form an attachment to their primary caregivers, even if those people are not sensitive to the child's needs, although attachment relationships vary in quality. Securely attached infants and children receive warm, sensitive care from their attachment figures, and in turn, experience comfort from the attachment figure when distressed. The attachment behavior system (which is species-specific despite differences in genetics, culture, and individual experience) is the organizational structure of attachment behaviors within the individual, with attachment behaviors organized with reference to a specific attachment figure (Ainsworth, 1989). Attachment is manifested in safe haven and secure base behaviors, which function to maintain security (Ainsworth, 1989; Waters & Cummings, 2000; Nickerson & Nagel, 2005). Safe-haven behaviors include comfort-seeking in times of distress and advice-seeking (Waters & Cummings, 2000; Nickerson & Nagel, 2005), and secure base behaviors "encourage exploration, organize experience, and help one work effectively under uncertainty" (Waters & Cummings, 2000). The present study aims to expand on the secure base conceptualization of attachment in middle childhood to accommodate for developmental changes in parent-child attachment that occur in this time frame.

In his 1982 edition of *Attachment*, John Bowlby theorized that attachment develops in four phases; the first three phases, which occur in the first year of life, follow a child from just learning to discriminate the attachment figure from others, to showing a preference for familiar caregivers, to actively trying to maintain proximity once the child begins to move on his or her own. The fourth phase, the formation of a goal corrected partnership, was theorized to emerge somewhere between the middle of the third year and the fifth or sixth year, depending on the child's cognitive development. In this goal-corrected partnership, Bowlby theorizes that the child's cognitive development allows for the child to gain insight into the attachment figure's motives, and once the child understands that the attachment figure has goals and interests that are separate from his or her own, can take that into account and respond accordingly. Bowlby's theory of the phases of attachment did not extend into children of older ages, although he did note that the goal of the attachment system shifts in middle childhood from *proximity* of the attachment figure to the *availability* of the attachment figure (Ainsworth, 1990). In middle childhood, children experience an expansion of their social world, and they start spending more time away from home, thereby causing their parents to have less control over their environment and social contacts (Kerns, 2008). Children begin to become more comfortable spending more time away from their caregivers, as long as they know that contact and reunion with the attachment figure is possible if necessary. Although the frequency of many attachment behaviors toward parents decrease during middle childhood, children of this age still use parents as their main attachment figures (Kerns, Tomich, and Kim, 2006; Siebert & Kerns, 2009).

Everett Waters, Kiyomi Kondo-Ikemura and John E. Richters (1991) have argued that attachment has eight phases throughout childhood instead of Bowlby's four, and they proposed that Bowlby's "goal-corrected partnership" does not develop until middle childhood. They theorized that during middle childhood, when parents begin to relinquish some control over the child's social environment, a "supervision partnership" emerges as an extension of the child's secure base behavior, but unlike when the child is younger, now the responsibility for monitoring is more balanced between parent and child. This supervision partnership bridges the span of time between the end of middle childhood and the beginning of adolescence, when the main goal of the attachment relationship between the teen and parent is for the teen to gradually achieve independence (Allen, 2008). As the adolescent strives for autonomy, the habits and patterns of attachment behavior that have been established threaten the adolescent's ability to establish autonomy, and the relationship between adolescent and caregiver becomes a "negotiated effort," with both the parent and the child working together to help foster the child's autonomy through exploration of the outside world (Allen, 2008). In other words, the parent's attachment role as a "safe haven" becomes less important in every day interaction, while the role as a "secure base" continues to thrive, although in times of extreme distress adolescents still turn to their parents for help and comfort (Steinberg, 1990; cited in Allen, 2008).

In summary, somewhere between late middle childhood and early adolescence, a shift in the attachment system between child and parent occurs, in response to the child having increasingly more control over his or her social environment, and the parent-child

relationship must adjust to accommodate this change. The only components of the “supervision partnership” that Waters et al. (1991) proposed are the “parent’s initiative and consistency and the child’s willingness to participate.” In the twenty years since this article has been published, the concept of the “supervision partnership” as a phase of attachment has not been further elaborated or empirically tested. These are the goals of this study. I propose that the supervision partnership consists of more than just the traditional conceptualization of attachment in middle childhood, that is, the concept of the attachment figure serving as a safe haven and a secure base. Instead, attachment during late middle childhood and early adolescence changes to take into consideration the developing autonomy of the child, and encompasses the following aspects: actual and perceived availability and accessibility of the attachment figure to the child (i.e. parent as a safe haven and a secure base); willingness of both parties to communicate about plans, goals, and life events; willingness of both parties to effectively negotiate and recognize that both parties have a right to contribute to the decision making process. Although none of these aspects have been empirically studied under the umbrella of the supervision partnership, some of them have been studied by themselves, and some in relation to attachment.

Components of the Supervision Partnership

The first component of the supervision partnership is the availability and accessibility of the attachment figure. For a child and a parent to share the responsibility of the supervision partnership, the child/adolescent must believe that the parent is

available and accessible to them when needed, and the parent must be willing to be available and accessible to the child. This means that the parent is there to comfort the child and serve as a safe haven when the child is in distress and to serve as a secure base for exploring the world. During late adolescence, the mother is still the primary attachment figure for the vast majority of teens, indicating that even during the late teen years, adolescents still see their mother, above all others, as the most accessible and available person to go to for comfort and help during emergencies (Rosenthal & Kobak, 2010). Other researchers have found similar results at younger ages; for example, Kerns et al. (2006) found that in both third and sixth grade, children reported seeking parents to fulfill attachment needs over friends, seeking parent 85-98% of the time (See Seibert & Kerns, 2009 for similar findings). The concept of availability and accessibility is also tapped in measures of attachment patterns where secure attachment is conceptualized as the use of a parent as a safe haven (e.g. story stem measures—The Doll Story Completion Task, Granot & Mayseless, 2001; script-based attachment measures—the Secure Base Script Test, Psouni & Apetroaia, 2014; questionnaires—The Security Scale, Kerns, Aspelmeier, Gentzler, & Grabill, 2001).

The second component of the supervision partnership is a willingness to communicate about plans, goals, and life events. In late middle childhood and early adolescence, the responsibility falls to the child/adolescent to disclose details of their lives, and particularly their whereabouts and who they are with to their parent, since the parent is not with them for a good portion of the day. It is also the responsibility of the parent to inquire about these details if and when the child does not offer the information

outright. Most importantly, it is the responsibility of both the child and the parent to listen to what the other has to say. Although this component of the supervision partnership has never been studied within the attachment framework, one study has been done on attachment and parental monitoring in middle childhood. Kerns et al. (2001) studied attachment security and its relation to monitoring (parents' awareness of children's whereabouts and activities) and to children's willingness to cooperate in monitoring situations. They found that secure attachment was related to closer monitoring by the parent, and better cooperation by the child, and the effect was stronger for children in sixth grade than children in third grade. Thus, this component of attachment may become more important as a child moves from middle childhood into adolescence.

The third component of the supervision partnership is a mutual recognition of the other's rights. For a true partnership between a parent and child to work, both parties need to recognize that they each have a right to contribute to the decision-making process, and they both need to be willing to negotiate when their goals differ. If one side or the other is not willing to negotiate, or is not capable of seeing the situation from the other's perspective, then the decision-making process is no longer cooperative, and the partnership can no longer exist. The parent and child need to have a shared understanding of the instances and situations in which the child makes his or her own decisions, the situations in which it still falls to the parent to make decisions, and which decisions are to be made together. As the child is gaining autonomy, some decisions become the sole responsibility of the child/adolescent (e.g. what to wear or eat for lunch). Other decisions

(e.g. whether or not the child is to leave the country, major medical decisions), are still the sole responsibility of the parent as the child is not quite mature enough to make these decisions alone. Many decisions will fall somewhere in the middle of the continuum, with some decisions needing more parental guidance than others. In addition, the child and parent need to have a shared understanding of which rules should be negotiated as the child gains autonomy (e.g. curfew), and which rules are never to be broken (e.g. leaving the house without telling a parent).

Although Mutual Recognition of Others' Rights has not been studied as a construct of attachment, there is research on which domains fall under the parent's authority and which domains fall under the child's authority. Smetana and Asquith (1994) studied groups of sixth, eighth, and tenth graders and their parents, and found that parents and children agreed that moral and ethical decisions (e.g. stealing, breaking promises) and conventional decisions (e.g. chores, cursing) are domains where parents have legitimate authority, whereas personal decisions (e.g. watching television, choosing clothes) is a domain where the adolescents have legitimate authority. However, on the remaining domains (Prudential—e.g. smoking, drinking, Friendship—e.g. going to the movies, having a party without parental supervision, and Multifaceted—e.g. physical appearance, cleanliness of the bedroom), the parents thought they had more authority than the adolescents thought they did. This indicates that there are some decisions that parents recognize are the child's to make, some that the child recognizes that the parents should make, and others that they disagree about who is responsible for those decisions, which they should discuss and negotiate. I propose that securely attached dyads are able

to negotiate these issues, as both partners in the relationship recognize the need to consider the perspective of the other.

The Supervision Partnership Links to Attachment in Other Ages and Maternal Sensitivity

In addition to investigating whether the three proposed components of the supervision partnership are correlated with each other, I was also interested in further validating this conceptualization of the supervision partnership as a measure of attachment in late middle childhood. A number of criteria have been proposed for validating attachment measures (Solomon & George, 2008; Kerns & Seibert, 2011). I focused on two possible validity criteria that seem most central to validating attachment measures, and have been identified by multiple authors. The first criterion is the stability of attachment security across time. Parent-child attachment is expected to be moderately stable over time, because the nature of attachment is self-perpetuating, in that the child's and parent's behavior reinforce each other (Sroufe & Fleeson, 1986). Through prior interactions with the parent, the child develops a script for expectations about future interactions with the parent, and this script leads the child to respond in a way that elicits behavior from the parent similar to ways the parent has acted in the past. Another reason that parent-child attachment is expected to remain moderately stable over time is because there is frequently continuity in the child's environment. Research on the stability of attachment has found moderate stability across time. Two meta-analyses have been done on the topic. Both (Fraley, 2002; Pinquart, Feubner, & Ahnert, 2013) found a moderate

overall effect size of $r = .39$. They also both found that stability decreases when there is more than five years between two time points, and when different methodologies are used between time points (e.g., behavioral observations in infancy and preschool, and self-report questionnaires in middle childhood). Pinquart et al. also found that when the first time point is in infancy, stability is lower than when the first time point is later in life.

I used data from a longitudinal study (NICHD SECCYD) to derive the three indices of the supervision partnership in middle childhood, and to investigate how these components were related to attachment as assessed at other ages. I examined the two attachment assessments closest in time to middle childhood: a behaviorally-based preschool measure of mother-child attachment, and a questionnaire that assesses adolescent-parent attachment. Based on the prior meta-analyses, I expected that attachment assessed in middle childhood will be more strongly related to attachment assessed in adolescence than to attachment assessed in preschool, but that middle childhood attachment should significantly relate to both adolescent and preschool attachment.

The second criterion for validating the supervision partnership as a measurement of attachment is the relation to caregiver responsiveness. Bowlby (1982) theorized that caregiver responsiveness and sensitivity to the child's needs, especially early in life, builds a secure attachment between the infant and caregiver. One of the major tenants of attachment theory is that attachment security is dependent on the quality of caregiving the child experiences. Caregiver responsiveness has been shown empirically to be the most important influence on parent-child attachment (De Wolff & van IJzendoorn, 1997;

Fearon, van IJzendoorn, Fonagy, Bakermans-Kranenburg, Schuengel, & Bokhorst, 2006).

Most research on the link between caregiver responsiveness and attachment has been done with young children, but Kerns et al. (2000) and Kerns, Brumariu, & Seibert (2011a) found that maternal sensitivity is also related to mother-child attachment in middle childhood. I expected maternal sensitivity to relate to all three components of mother-child attachment in middle childhood in this study.

In summary, this study aims to further develop the concept of the supervision partnership, and to examine its components in middle childhood. I hypothesize that the three components of attachment (actual and perceived availability and accessibility, willingness to communicate, and mutual recognition of the other's rights) will intercorrelate. My second hypothesis is that the three components of the supervision partnership will correlate with measures of attachment in preschool and at age 15. My third hypothesis is that the three domains of the supervision partnership will correlate with concurrent measures of maternal sensitivity.

Method

Participants

This study used the NICHD Study of Early Child Care and Youth Development (SECCYD) dataset, which was a longitudinal study that recruited 1,364 children and their families in infancy and followed 1009 families through to adolescence. The data were collected in four separate phases. This report includes data from the first, third and fourth phases, when the children were 36 months old, in fifth grade, sixth grade, and ninth grade.

At the initial phase of data collection, 705 participants were boys and 659 were girls; 80.4% of participants were Caucasian, 12.9% were African American, 1.6% were Asian, 0.4% were American Indian, and 4.7% were from other racial backgrounds. At the first time point from which we used data, when the participants were 36 months old, the average income to needs ratio was 3.61 ($SD = 3.05$). At fifth grade, the average income to needs ratio was 4.53 ($SD = 4.06$), and at age fifteen, the average income to needs ratio was 5.26 ($SD = 5.78$). At 36 months, 62 % of families were intact, at Grade 5, 47% of families were intact, and at age 15, 42% of families were intact.

Procedure

The NICHD SECCYD includes many more variables than were investigated in this study. Relevant to the constructs examined here, research assistants coded videotaped

interactions between mother and child at 36 months from a separation-reunion procedure, which took place in a laboratory setting to measure secure attachment. When the children were in fifth grade, mothers reported on parental monitoring, and the child reported on attachment to parents. An interaction task was videotaped and later coded by trained research assistants to assess maternal sensitivity. During sixth grade, the children again visited the laboratory, and reported on decision making responsibilities. At age 15, the adolescents reported on parental attachment at a final lab visit. Table 1 shows which constructs were measured at each time point.

Table 1.

Summary of constructs measured at each time point

Constructs	Time Points			
	36 months	5 th grade	6 th grade	Age 15
Attachment Security	X	X		X
Willingness to Communicate		X		
Mutual Decision Making			X	
Maternal Sensitivity		X		

Measures

Mother-child attachment in middle childhood.

Accessibility and availability. Security in Relationship (Mother): developed from Kerns et al (2001), Security Scale Items. This questionnaire was filled out by the child during fifth grade. It has 18 items, 11 of which were taken directly from the 15-item Kerns Security Scale, and an additional 7 items from the Relatedness Questionnaire (Lynch & Cicchetti, 1997; Toth & Cicchetti, 1996). From the latter, I selected five items that were similar to the omitted items on the Security Scale. The resulting measure used in this study had 16 items, with scores on each item ranging from 1-4, with higher numbers indicating a higher degree of security in the relationship as perceived by the child. Sample items include “It’s easy to count on my mom for help” and “I go to my mom when I’m upset.” (Cronbach’s $\alpha = .83$). This set of items was used to index mother-child attachment security in a prior study (Kerns, Siener, & Brumariu, 2011b).

Willingness to Communicate. Parental Monitoring questionnaire: developed from Stattin and Kerr (2000). This questionnaire was filled out by the mother when the child was in fifth grade. It has 19 items with three subscales: parental monitoring ($n = 9$), child disclosure ($n = 5$), and parental solicitation ($n = 5$). The first two subscales were consistent with my conceptualization of the Willingness to Communicate domain of attachment, and were aggregated to be used in my analyses. I did not include the parental solicitation subscale, because although some items were consistent with my conceptualization of the willingness to communicate domain, others were not (e.g. How often do you talk with your child’s friends when they come to your home? Do you ask

your child to talk about things that happened during his or her free time?)+. Items were rated on a 4 point Likert scale, 1 = Almost never, 2 = not very often, 3 = some of the time, 4 = almost always. Sample items from the parental monitoring subscale include: Do you know what your child does during his or her free time? Do you know what your child spends his or her money on? Do you know where your child goes when he or she is out with friends? Sample items from the child disclosure subscale include: Does your child usually tell you about school when he or she gets home? Does your child keep secrets from you about what he or she does during free time? Does your child talk about how he or she is doing in the different subjects in school? Both subscales have modest internal reliability: parental monitoring, 9 items, Cronbach's $\alpha = .63$; and for child disclosure, 5 items, Cronbach's $\alpha = .61$. For a broader perspective on parental monitoring to access the idea that communication from both parent and child is important, the parental monitoring and child disclosure subscales were combined, and the average of the two scores was used. Cronbach's $\alpha = .76$ for the 14 item scale used.

Mutual Recognition of Other's Rights. Making Decisions questionnaire: developed from Brody et al. (1994) and Eccles et al. (1991). This questionnaire was filled out by the child in sixth grade. It has 8 items that address how the child and his/her family make decisions. This measure is consistent with my conceptualization of the Mutual Recognition of the Other's Right's domain of attachment. For each item, the child chooses one of five response choices: 1 = My parents decide, 2 = My parents decide after discussing it with me, 3 = We decide together, 4 = I decide after discussing it with my parents and 5 = I decide all by myself. Sample items include how late you can stay

up on a school night, whether you can go on an afternoon outing with a friend, how you dress, and what you do with your money. To be more consistent with the idea that the child and parent should make decisions together, I recoded the scale so that We decide together is worth 3 points, My parents decide after discussing it with me and I decide after discussing it with my parents are worth 2 points, and My parents decide and I decide all by myself are worth 1 point, so that higher scores indicate more mutual decision making (Cronbach's $\alpha = .63$).

Mother-child attachment in preschool. Strange Situation (Cassidy & Marvin and the MacArthur Working Group on Attachment, 1992): Attachment was measured at 36 months with a modified version of the Strange Situation. Mother and child were videotaped through two separations and reunions, and two coders rated each videotape on several variables. Coders rated the child's attachment security on a scale from 1 = highly insecure to 9 = highly secure. (Observer agreement, $r = .71$).

Parental attachment in adolescence. Parental Relationships questionnaire: (Furman and Wehner, 1999). This questionnaire was filled out by the child at age fifteen, and asks about both parents collectively instead of separately. There are 3 items on one subscale that assess secure attachment to parents, which was consistent with my conceptualization of parental availability and accessibility (3 items Cronbach's $\alpha = .83$, sample item: I consistently turn to my parents when upset or worried). Items were rated on a 5 point Likert scale, from 1 = Strongly Disagree to 5 = Strongly Agree.

Maternal sensitivity. Mother/Child Interaction Task: Mother and child participated in a discussion task and a problem solving task during the fifth grade visit in

the lab. During the discussion task, mother and child discussed three topics they disagree on. In the problem solving task, mother and child worked together to create a bungee device so a raw egg would bounce and not crack when dropped. Videotapes of the mothers and children during the structured interaction were coded by trained observers. The Maternal Sensitivity score is a composite of the ratings for the mother's supportive presence (inter-rater reliability, $r = .66$), her respect for the child's autonomy(inter-rater reliability, $r = .64$), and hostility (reflected) (inter-rater reliability, $r = .62$) for both interaction tasks together. This variable has a range of 5 to 21, with higher scores representing more support and autonomy, and less hostility (Cronbach's alpha = 0.87).

Results

Preliminary Analyses

Before running the main analyses, demographic variables were analyzed to determine whether regression analyses should control for any of these characteristics. The demographic variables included were gender, race (Caucasian or minorities), income to needs ratio, household type (intact family or not), and mother's relation to the child (biological or other). Each of these variables were significantly correlated with my variables of interest (see Table 2). In general, the demographic variables show that girls tended to have higher attachment security ratings than boys, (except at 36 months, when boys had higher security ratings than girls). Caucasian children also demonstrated higher attachment security ratings than non-white children. Children from higher income households and intact families scored higher on most indices of attachment. Therefore, each regression analysis controlled for these characteristics from the relevant phase of data collection.

To decide how to handle missing data, analyses were conducted using both listwise deletion in SPSS and with Maximum Likelihood estimation in MPlus. Correlations using listwise deletion were similar to those using Maximum Likelihood estimation, and the cases lost to listwise deletion did not significantly impact power. Regressions using multiple steps could not be done using MPlus, so listwise deletion in

Table 2.

Summary of zero-order correlations between demographic variables and the supervision partnership and other variables of interest

Demographic Variables		Accessibility and Availability	Willingness to Communicate	Mutual Decision Making	Secure Attachment 36 months	Secure Attachment age 15	Maternal Sensitivity Grade 5
Gender	Pearson Correlation	.044	.147***	.166***	-.064*	.080*	.069*
	N	1010	1012	1000	1140	978	946
Race	Pearson Correlation	.082**	.188***	.098**	.094**	.061	.173***
	N	1010	1012	1000	1140	978	946
Mother's relation to child (grade 5)	Pearson Correlation	.022	.061	.019	.084**	-.016	.024
	N	1010	999	964	931	944	935
Income to Needs ratio 36 months	Pearson Correlation	.134***	.135***	.143***	.078**	.039	.208***
	N	978	980	972	1130	948	915
Income to needs ratio grade 5	Pearson Correlation	.139***	.146***	.112**	.088**	.046	.211***
	N	984	993	949	916	928	915
Income to needs ratio age 15	Pearson Correlation	.091**	.143***	.113**	.051	.073*	.167***
	N	891	890	887	856	916	835
Household type 36 months	Pearson Correlation	.111**	.115***	.106**	.122***	.099**	.219***
	N	984	986	978	1138	954	921
Household type grade 5	Pearson Correlation	.157***	.180***	.110**	.142***	.127***	.238***
	N	1003	1002	980	950	957	941
Household type age 15	Pearson Correlation	.174***	.154***	.103**	.148***	.137***	.234***
	N	943	941	937	905	956	883

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. For gender, positive correlations reflect a more secure attachment for girls; for race, positive correlations reflect a more secure attachment for Caucasians; for mother relationship, positive correlations reflect a more secure attachment for biological relationships; for income to needs ratio, positive correlations reflect more secure attachment for more wealthy families; for household type, positive correlations reflect a more secure attachment for intact families.

SPSS was used in all analyses to handle missing data to ensure that the same participants were included in all analyses.

Primary Analyses

Inter-correlated components of the supervision partnership. Zero-order correlations were computed to test the first hypothesis, that the three components of the supervision partnership would be related to one another. As shown in Table 3, the three components were significantly, but modestly related to each other. Using Cohen's criteria, the effect sizes range from small to medium.

Table 3.

Summary of zero-order correlations between the three components of the supervision partnership and other variables of interest

		1.	2.	3.	4.	5.	6.
1. Accessibility and Availability	Pearson Correlation	1					
	N	1010					
2. Willingness to Communicate	Pearson Correlation	.176***	1				
	N	999	1000				
3. Mutual Decision Making	Pearson Correlation	.144***	.236***	1			
	N	964	964	1012			
4. Attachment 36 months	Pearson Correlation	.082*	.081**	.104**	1		
	N	931	931	925	1140		
5. Attachment Age 15	Pearson Correlation	.252***	.216***	.198***	.025	1	
	N	944	942	941	907	978	
6. Maternal Sensitivity Grade 5	Pearson Correlation	.145***	.200***	.142***	.094**	.124***	1
	N	935,	930	904	870	884	946

*Note: * $p < .05$, ** $p < .01$, *** $p < .001$*

Supervision partnership relation to preschool and adolescent attachment. To test the second hypothesis, that the three components of the supervision partnership would be related to attachment measured in preschool and adolescence, I calculated correlation and regression coefficients. As shown in Table 3, preschool attachment was significantly correlated with all three components of the supervision partnership, with small effect sizes. A linear regression was computed using the three components of the supervision partnership as predictors, and secure attachment at 36 months as the dependent variable, controlling for relevant demographic variables. Together, the three components of the supervision partnership accounted for a small portion of the variance in preschool attachment $\Delta R^2 = .008$, $F(3,848) = 2.280$, $p = .078$, a small effect size. Results (Table 4) indicate that accessibility and availability and willingness to communicate were not unique predictors of preschool attachment, but mutual decision making was a significant unique predictor.

The three components of the supervision partnership were also tested by a series of correlations and a regression model to predict attachment at age 15. As shown in Table 3, adolescent attachment was significantly correlated with all three components of the supervision partnership, with small to medium effect sizes. Results of the regression analysis (Table 5) indicate that together, the three components accounted for a significant portion of the variance in adolescent attachment $\Delta R^2 = .08$, $F(3,827) = 24.585$, $p < .001$, a medium effect size. Results also indicate that all three components of the supervision partnership were unique predictors of secure attachment at age 15.

Table 4.

Summary of Hierarchical Regression Analyses for Variables Predicting Preschool Attachment

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>
Gender	-0.146	0.113	-.044	-1.292	.197	-0.209	0.116	-.062	-1.798	.073
Race	0.207	0.160	.047	1.297	.195	0.166	0.162	.038	1.022	.307
Mother's Relationship to Child	0.425	0.402	.036	1.057	.291	0.419	0.401	.036	1.045	.296
Household Type 36 months	0.170	0.156	.046	1.094	.274	0.157	0.156	.043	1.007	.314
Household Type Grade 5	0.337	0.145	.097	2.325	.020*	0.307	0.146	.089	2.095	.037*
Income to Needs Ratio 36 mo.	-0.013	0.028	-.022	-0.453	.650	-0.016	0.028	-.028	-0.589	.556
Income to Needs Ratio Grade 5	0.020	0.021	.045	0.959	.338	0.018	0.021	.041	0.874	.382
Accessibility and Availability						0.116	0.127	.032	0.915	.361
Willingness to Communicate						0.139	0.248	.020	0.563	.574
Mutual Decision Making						0.036	0.017	.074	2.091	.037*
Total R^2			.031					.039		
<i>F</i> change			3.944***					2.280		

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 859

Table 5.

Summary of Hierarchical Regression Analyses for Variables Predicting Adolescent Attachment

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>
Gender	0.173	0.054	.109	3.182	.002**	0.098	0.053	.062	1.843	.066
Race	0.085	0.073	.042	1.166	.244	0.033	0.071	.016	0.462	.644
Mother's Relationship to Child	-0.185	0.185	-.035	-0.999	.318	-0.176	0.178	-.033	-0.988	.323
Household Type Grade 5	0.043	0.104	.026	0.415	.679	-0.020	0.101	-.012	-0.197	.844
Household Type Age 15	0.184	0.102	.114	1.795	.073	0.157	0.098	.097	1.595	.111
Income to Needs Ratio Grade 5	-0.029	0.011	-.144	-2.535	.011*	-0.034	0.011	-.167	-3.069	.002**
Income to Needs Ratio Age 15	0.024	0.008	.159	2.868	.004**	0.023	0.008	.148	2.780	.006**
Accessibility and Availability						0.343	0.059	.197	5.835	.000***
Willingness to Communicate						0.370	0.116	.112	3.181	.002**
Mutual Decision Making						0.027	0.008	.117	3.400	.001**
Total <i>R</i> ²			.043					.121		
<i>F</i> change			5.313***					24.585***		

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 838

Supervision partnership relation to maternal sensitivity. I also tested my third hypothesis with a series of correlations and a regression to see if the three components of the supervision partnership predicted maternal sensitivity at fifth grade. As shown in Table 3, all three components of the supervision partnership were significantly correlated with maternal sensitivity, with small to medium effect sizes. Again, all relevant demographic variables were controlled for in the regression analysis. Results of the regression (Table 6) indicate that together, the three components of the supervision partnership accounted for a significant portion of the variance in maternal sensitivity. $\Delta R^2 = .03$, $F(3,857) = 9.823$, $p < .001$, a small to medium effect size. Results also indicate that all three components were unique predictors of concurrent maternal sensitivity.

Table 6.

Summary of Hierarchical Regression Analyses for Variables Predicting Maternal Sensitivity

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Sig.(p)</i>
Gender	0.358	0.175	.067	2.046	.041*	0.175	0.176	.032	0.990	.322
Race	0.688	0.240	.098	2.865	.004**	0.547	0.239	.078	2.295	.022*
Mother's Relationship to Child	-0.529	0.607	-.029	-0.871	.384	-0.518	0.599	-.028	-0.864	.388
Household Type Grade 5	0.868	0.197	.157	4.412	.000***	0.705	0.196	.127	3.595	.000***
Income to Needs Ratio Grade 5	0.112	0.024	.162	4.673	.000***	0.101	0.024	.146	4.262	.000***
Accessibility and Availability						0.423	0.194	.071	2.180	.030*
Willingness to Communicate						1.412	0.380	.127	3.710	.000***
Mutual Decision Making						0.051	0.026	.066	1.970	.049*
Total <i>R</i> ²			.095					.125		
<i>F</i> change			18.134***					9.823***		

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; N = 866

Discussion

The goal of this study was to test a three-component conceptualization of the supervision partnership construct including accessibility and availability of the attachment figure, willingness to communicate about plans, goals and life events, and mutual recognition of the other's rights. In support of my first hypothesis, the three components of the supervision partnership were found to be modestly related to each other. I tested my second hypothesis, that the components of the supervision partnership would be related to attachment in preschool and at age 15. All three components of the supervision partnership in middle childhood were correlated with measures of attachment security from the preschool and adolescent years. In regression analyses, I found that one of the three components, mutual decision making, was a unique predictor of preschool attachment, and that the three components together accounted for a small portion of variance in preschool attachment. Each of the three components were significant unique predictors of adolescent attachment, and together predicted a significant amount of variance. In testing my third hypothesis, that the three components of the supervision partnership were all related to maternal sensitivity, I found that all three components were correlated with maternal sensitivity, and that in a regression, all three components were unique predictors of maternal sensitivity, and together predicted a significant amount of variance. My results lend support to the idea that the three components together predict

more variance than the traditional conceptualization of attachment in middle childhood (accessibility and availability alone).

Inter-correlated components of the supervision partnership

The moderate correlations between the three components of the supervision partnership lend support for the idea that accessibility and accessibility, willingness to communicate, and a mutual recognition of others' rights may all be part of the same higher-order construct of attachment during this late middle-childhood period. Traditional conceptualizations of parent-child attachment during this period focus mainly on safe haven behaviors (Kerns, Mathews, Williams, Koehn, & Siener, 2014). Current measures of attachment in late middle childhood include interviews that ask the child what they do when they are upset, and what their relationships with their parents are like (Steele & Steele, 2005), story stem procedures that ask the child to use dolls to act out a situation in which the child expresses an upsetting problem (Granot & Mayseless, 2001; Kerns et al., 2011a), script-based measures in which the child's knowledge of secure base scripts are assessed (Psouni & Apetroaia, 2014), and self-report questionnaires like the Security Scale, in which children report their perceptions of their reliance on attachment figures when distressed (Kerns et al., 2001). The results of the present study suggest that I may need to broaden my conceptualization of parent-child attachment during this period to include the latter two of the three components, willingness to communicate and mutual decision making.

The modest size of the associations between the three components of the supervision partnership may be due, in part, to limitations of the current study. Although

I was able to capitalize on the use of an established longitudinal study, I was also therefore subject to the constraint that the exact constructs involved in the supervision partnership could not be measured precisely. For the Availability and Accessibility construct, NICHD decided to include only part of the Security Scale in their study, thereby limiting the validity of the measure. For the Willingness to Communicate construct, the measure used looks specifically at monitoring, and neglects to inquire about communication about other topics, such as goals and life events. And for Mutual Recognition of Other's rights construct, I was only able to look at decisions made together, as opposed to mutual agreement about who should make decisions. Since the measures used approximate the measurement of the constructs I intend to measure, my results still lend support to my hypotheses, but further research is needed to ensure the entire construct is measured. All of the indices for the three components of the supervision partnership were questionnaires filled out by either the child or mother. This introduces another limitation, in that other measurement modalities, such as interviews, were not able to be used.

Supervision partnership: relation to preschool and adolescent attachment

I found that all three components were significantly correlated with preschool attachment, although in regression analyses they together predicted a small but not significant portion of variance in preschool attachment after controlling for the demographic variables, and only one out of three components was a unique predictor. Research on the stability of parent-child attachment from infancy through to adolescence has found somewhat conflicting results. Some researchers have found evidence that

attachment remains fairly stable (Main and Cassidy, 1988; Hamilton, 2000; Waters et al, 2000), while other researchers have found evidence that attachment is not stable from infancy to adulthood (Lewis, Feiring & Rosenthal, 2000). Two meta-analyses have investigated the stability of attachment across time. Fraley (2002) found an overall effect size of $r = .39$, but that levels of stability declined with larger lengths of time between measurement points, with $r = .27$ for studies with five to twenty-one years between time measurement points. Pinquart et al. (2013) performed a more recent meta-analysis on the topic, and found a similar moderate overall effect size of $r = .39$. Pinquart et al. also found that attachment stability is lower when the first time point is measured earlier in life compared to when the first time point is measured in middle childhood. In addition, stability decreases when the first time point uses a behavioral measure, and later time points use representational measures of attachment, as was done in the present study.

There are many possible reasons for the modest stability between preschool and middle childhood and the stronger stability of attachment from middle childhood to adolescence in this sample. One possibility is that life events may have occurred between ages 3 and 11 years that caused other changes in the environment, thereby affecting the parent-child relationship. Another reason could be the difference in measurement methodologies between the Strange Situation, a standardized observational method, and the self-report nature of the middle childhood and adolescent questionnaires. These two methodologies differ in that self-report questionnaires assess perceptions of a relationship, while coded observations assess behavior. Another possibility is a difference in the elapsed time between measurements, with about 8 years separating the preschool

and middle childhood time points, and 4 years between the middle childhood and adolescent time points. Pinquart et al. (2013) found in their meta-analysis that attachments remain more stable the closer together the time points are, but that with more than five years between time points, the stability significantly decreases. Thus, my findings are consistent with Pinquart et al. (2013) and Fraley (2002), in that I found a stronger association between attachment security measured in middle childhood by the supervision partnership and adolescent attachment, than between the supervision partnership and preschool attachment. These results are to be expected, due to the difference in elapsed time between measurement points and the changes in measurement methodology beginning in middle childhood.

Supervision partnership relation to maternal sensitivity

Research has shown that maternal sensitivity is the best predictor of mother-child attachment in infancy, among all other possible predictors (De Wolff & van IJzendoorn, 1997; Fearon et al., 2006). Most research on the relationship between attachment security and parental sensitivity focuses on infancy and toddlerhood, rather than middle childhood or early adolescence. Since maternal sensitivity has been shown to be important to the development of mother-child attachment in infancy (De Wolff & van IJzendoorn, 1997), it may also be important for the maintenance of a secure attachment in middle childhood. Kerns et al. (2000) and Kerns et al. (2011a) found that maternal sensitivity is a significant correlate of mother-child attachment in middle childhood. In the present study, all three components of the supervision partnership were related to maternal sensitivity, and together accounted for a significant amount of variance in

maternal sensitivity. In addition, all three components were unique predictors of maternal sensitivity. The findings illustrate that the three domains of the supervision partnership more fully capture attachment in late middle childhood, as reflected in each of the three domains contributed to the prediction of maternal sensitivity.

The current study has multiple strengths, but also has some limitations. One strength is that the large sample size allows for greater power for detecting relationships. Second, the longitudinal nature of this study allows for comparisons among many different ages in the same sample. Third, the current study combines questionnaires from both the child and mother about their relationship with observations about their relationship from an objective third party. This allows us not only the opportunity to include data from multiple informants, but also allows us to use multiple measures and measurement methods. Despite the strengths of using a large, longitudinal data set like the NICHD Study of Early Child Care, with its assessment of multiple constructs across time, the choice of using this data set also introduced some limitations. A limitation in using an existing data set is that the authors were constrained by measurement choices made by others. In addition to the limitations discussed earlier, another constraint is that parent-child attachment was assessed at multiple time points throughout infancy and toddlerhood, but was not assessed as often throughout middle childhood and adolescence. Therefore, the authors were not able to ensure equal spacing between time points. The authors were also constrained by the measurement choices that the NICHD made, which resulted in the reliance on self-report questionnaire measures of attachment in middle childhood and adolescence. While measures used in preschool and middle childhood

were specific to the relationship between child and mother, the adolescent attachment measure was not relationship specific, and asked the teen about both parents in the same question. Finally, I was not able to explore the supervision partnership in relation to the father-child relationship, as some questionnaires (particularly those in relation to the willingness to communicate and mutual decision making domains) were only given in relation to the child's mother.

Future research on the supervision partnership could help further test the relationship between the three proposed components by developing measures that more fully capture the willingness to communicate and mutual recognition of others' rights constructs, and by integrating additional measurement modalities, such as interviews, to supplement questionnaires. This conceptualization of the supervision partnership could also be tested with fathers' relationships with children. In addition, future studies could test a wider age range to explore the development of these constructs across the middle childhood and adolescent years. Finally, future research should also further validate the supervision partnership as a measurement of attachment by exploring other validity criterion proposed by Solomon and George (2008) and Kerns & Seibert (2011), such as predicting important aspects of development and demonstrating good discriminant validity. The results of this study highlight the need to take into account developmental changes in the expression of the attachment system when studying attachment at older ages.

In conclusion, this study provides preliminary support for a supervision partnership conceptualization of attachment in the late middle childhood years. I found

that the three components of the supervision partnership were modestly related to each other, and significantly related to attachment measured in preschool and adolescence, as well as to maternal sensitivity. All three components of the supervision partnership were unique predictors of both adolescent attachment to parents and concurrent maternal sensitivity, indicating that the supervision partnership conceptualization may more fully capture the parent-child attachment relationship at this age. Traditional conceptualizations of attachment during middle childhood and early adolescence focus on safe haven support, but the results of the present study suggest that the traditional conceptualization may not represent the developmental changes in the attachment relationship that occur during the late middle childhood and early adolescent years.

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Appendices

Appendix A

My Family Questionnaire (Mother Version)

The following directions are read to the child: “Now I’d like to talk with you about different people that you know. First, I’m going to ask you some things about you and your mom. Then I’ll ask the same types of questions about you and your dad/other adult’s name. And finally, I’ll ask the same questions about you and your teacher, [Questionnaire Teacher’s name]. When you answer, let me know what you think and how you really feel about them.”

Go over the response scale with the child. Say: “Before we get started, here’s the card you’ll use to answer. There are four possible choices: ‘Not at all True,’ ‘Not very True,’ ‘Sort of True,’ and ‘Very True.’ Do you have any questions about how to answer?” Make sure that the child understands the scale. “Okay let’s get started.” Ask all the questions for the mother version.

1. I wish my mother paid more attention to me.
- 2. I wish my mother could spend more time with me.**
- 3. I wish my mother knew me better**

4. I wish my mother knew more about how I feel.
5. I enjoy the time I spend with my mother.
6. I wish I was closer to my mother.
7. I wish I could talk about more things with my mother.
8. It's easy to trust my mom.
9. My mom butts in a lot when I'm trying to do things.
10. It's easy to count on my mom for help.
11. I do not really like telling my mom what I'm thinking or feeling.
12. I don't really need my mom for much.
13. I worry that my mom does not really love me.
14. I sometimes wonder if my mom might leave me.
15. I worry that my mom might not be there when I need her.
16. I think my mom does not listen to me.
17. I go to my mom when I'm upset.
18. I wish my mom would help me more with my problems.

Note: Items 1-7 were adapted from the Relatedness Questionnaire. Items 8-18 were adapted from the Security Scale. Bolded items were used for analyses in this paper.

Appendix B

Parental Monitoring Questionnaire

Directions: These items are about the knowledge that parents have about what their son or daughter does. Please tell us how much you know about the following. Circle one response for each questions.

Response Scale: 1 = Almost Never, 2 = Not very often, 3 = Some of the time, 4 = Almost Always

- 1. Do you know what your child does during his or her free time?**
- 2. Do you know who your child has as friends during his or her free time?**
- 3. Do you usually know what type of homework your child has?**
- 4. Do you know what your child spends his or her money on?**
- 5. Do you usually know when your child has an exam or paper due at school?**
- 6. Do you know how your child does in different subjects at school?**
- 7. Do you know where your child goes when he or she is out with friends?**
- 8. Do you normally know where your child goes and what he or she does after school?**
- 9. In the last month, have you ever had NO idea where your child was?**
- 10. Does your child talk about how he or she is doing in the different subjects in school?**
- 11. Does your child usually tell you about school (e.g. how he or she did on exams, relationships with teachers, etc.) when he or she gets home?**

- 12. Does your child keep secrets from you about what he or she does during free time?**
- 13. Does your child hide from you about what he or she does during nights and weekends?**
- 14. Does your child tell you, when returning home after being out with friends, what he or she did?**
15. In the last month, how often has your child talked with you about his or her friends?
16. How often do you talk with your child's friends when they come to your home (ask what they do or what they think and feel about different things)?
17. During the past month, how often have you started a conversation about your child's free time?
18. Do you ask your child about things that happened during a normal day at school?
19. Do you ask your child to talk about things that happened during his or her free time (e.g., whom he or she met when out in the city, free time activities, etc.)?

Note: Items 1-9 are part of the Parental Monitoring subscale, items 10-14 are part of the Child Disclosure subscale, items 15-19 are part of the Parental Solicitation subscale. Items in bold are used in analyses in this paper.

Appendix C

Making Decisions Questionnaire

In your family, how do you make most of the decisions about the following topics?

Response scale: 1 = my parent(s) decide, 2 = my parents decide after discussing it with me, 3 = we decide together, 4 = I decide after discussing it with my parents, 5 = I decide all by myself

1. How late you can stay up on a school night
2. Which friends you can spend time with
3. Which after-school activities you take part in
4. Whether you can go on an afternoon outing with a friend
5. How you dress
6. What you do with your money
7. What you watch on TV or whether you watch TV at all
8. Whether you take part in religious training or education

Note: All items were recoded so that “We decide together” is worth 3 points, “I decide after discussing it with my parents” and “My parents decide after discussing it with me” are worth 2 points, and “My parent(s) decide” and “I decide all by myself” are worth 1 point. All items were used for analyses in this paper.

Appendix D

Parental Relationships Questionnaire

Directions: For this questionnaire we are interested in how you **TYPICALLY** feel and act in your relationships with your parents. By parents, we mean all the people you consider to be parental figures; these figures may include natural, adopted, or stepparents—whomever you consider to be parental figures. Of course, your answers may be more influenced by the parent or parents that is/are more important to you. Some of these questions may not apply to all of your parental figures, but consider how they **TYPICALLY** apply.

Response scale: 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree

- 1. I consistently turn to “my parents” when upset or worried.**
- 2. I seek out “my parents” when something bad happens.**
3. I do not often ask “my parents” to comfort me.
4. I feel that “my parents” believe that I depend on them too often.
5. I worry that “my parents” think I need to be comforted too much.
6. I rarely turn to “my parents” when upset.
- 7. I seek out “my parents” for comfort and support.**
8. I do not like to turn to “my parents” when I’m bothered about something.
9. I am afraid that “my parents” think I am too dependent.

Note: The items used in the analyses in this paper are items 1, 2, and 7