CHILD-PARENT ATTACHMENT AND THE ASSESSMENT OF SELF

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Abstract: The study examined whether attachment classification at age 4 was related to children's self-concept at age 6 and age 12. The data was part of a larger longitudinal project. Attachment was assessed at Time 1 (age 4) in Ainsworth and colleagues' Strange Situation procedure (1978) and coded using Crittenden's preschool classification guidelines (2004) with 54 children. At Time 2 (age 6) the Attachment Story Completion Task (Bretherton et al., 1990; Solomon & George, 1998) was conducted with 35 children, as well as the Pitter and Patter Puppet Interview. In the former, children were asked to use family dolls to finish stories that centered around attachment-related threats, while the latter required the child to choose between two puppets making opposite self-statements. At Time 3, the Piers-Harris 2 (Piers, Harris, & Herzberg, 2002) self-report questionnaire was administered to assess self-concept, as well as the ACES (Diperna & Elliott, 2000) and RCSB (Frick, 1996) questionnaires. Time 3 data collection involved 21 children. All questionnaires, as well as the puppet interview, assessed peer status and academic
competence and motivation. The School Age Assessment of Attachment (Crittenden, 2010), a projective story telling task, was used to evaluate self at Time 3 also. During the SAA, cards depicted situations with salient threats were shown and children were asked to tell a pretend story about the card, as well as to talk about if anything similar had happened to them. Like in the Time 2 ASCT, ratings were made for each story of the presence of content indicating vulnerable/unsafe self and positive self. We hypothesized that there would be a main effect for attachment on the different measures of self at Time 2 and Time 3, specifically that B (secure) children would have the highest self-concept, followed by A (avoidant) children and then C (ambivalent) children. The results showed that at Time 2, B children reported greater peer and academic competence on the puppet interview, compared to A children and C children. The ASCT results revealed that C children scored highest in vulnerable self coding, followed by B and A children. A, B, and C children did not differ on positive self coding. At Time 3 when children were 12, the Piers-Harris 2 showed that A children reported the most school success, followed by B and C children. This might be due to Type A’s tendency to not admit imperfection, though this possibility was not confirmed comparing defensiveness scores among 3 groups. ACES and RCSB subscales did not differ among A, B, and C children. Results of the SAA demonstrated that C children scored highest in the unsafe coding in pretend stories, followed by A and B children. Unsafe coding in real stories and positive self coding in both pretend and real stories did not differ among A, B, and C children. Overall, the findings indicate that secure-B children tended to report the highest self-concept and
had the least vulnerable/unsafe internal representations of self, compared to A and C children. C children were likely to report less achievement and motivation and to have the highest vulnerable self coding. The results suggest that interventions to prevent self-concept difficulties will need to begin at a young age and that it may be especially fruitful to do attachment-based parent-child interventions. Additionally, the projective story-telling tasks can be a very useful task to assess children’s self-concept. In the future, more families will be contacted for Time 3 participation, and teachers’ data will be collected to test for differences in behaviorally-enacted self.

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Introduction

Children’s concept of themselves is their internal representation of their characteristics in a specific domain. Children’s self-concept can influence their way of thinking, feeling and behaving. Interactions between children and their attachment figure in the early years have long been acknowledged to have a significant impact on children’s later self-perception and adjustment. Bowlby proposed that parental figures influence how children organize their concept of self through cognitive representations (i.e., internal working models). Some research evidence has shown that insecure attachment is associated with more negative representation of self. However, due to the difficulty of assessing self in younger children and paucity of validated methods to assess the self, the research studying attachment and children’s self-concept has been rare.

In this study, the relationships between attachment at age 4 and children’s self at both age 6 and age 12 were examined. Attachment classifications were completed using Crittenden’s coding system, which is highly differentiated and, therefore, allows for specific predictions about the self for different types of insecure children. Self was assessed using a puppet interview and a projective story-telling at age 6 and was measured with self-report questionnaires, and a projective story-telling task at age 12. Thus, this study is expected to add meaningfully to the literature, particularly with respect to longitudinal data, the use of Crittenden’s attachment theory, and comprehensive measurement of children’s self.
The origin of the concept of Attachment

According to Bowlby (1987), the origin of the concept of attachment came from psychoanalytic theory. Sigmund Freud pointed out that the way a person comprehends, interprets and arranges the situations and events he/she comes across from the outside world has an impact on his internal world and influences the way a person thinks, feels and behaves. For many years, clinicians with a psychoanalytic orientation have found that a person’s mental state has a significant relationship with whether his intimate relationships are warm and peaceful or tense and fearful, or even possibly nonexistent. A variety of terms describing this phenomenon were used at that time: significant other, dependency, symbiosis, object relations, etc. Bowlby believed that there was a need to develop a new theoretical system to conceptualize this phenomenon. One opportunity helped him develop the concept of attachment: in the late 1940s, Bowlby was appointed to study the needs of homeless children and the negative effects on personality development of institutional care. After completing behavior observations and reviewing the literature during this experience, Bowlby started to ponder how maternal deprivation can have an influence on personality. Even if there were only short-term distress and behavior disruption, Bowlby intended to discover what evidence could account for the ill effects that continued into children’s life (1969/1982).

In 1957, Bowlby presented the article “The Nature of the Child’s Tie to His Mother” but the word “attachment” first appeared in 1980 with the publication of *Loss, Volume 3*. He defined attachment as being one’s strong tendency to seek
comfort, proximity and contact with another specific person. He argued that attachment was a fundamental form of behavior, and it is correspondingly important for survival, just like feeding and sex, although they share a different internal motivation. Attachment behavior can be seen when the person is terrified, tired or sick, and those are the times that this person needs comfort and caregiving the most. The availability and the responsiveness from the caregiver can provide the person with a powerful and pervasive feeling of security. These behavioral tendencies were regarded as an essential part of human nature - what we share to remain within easy access of a familiar individual. And it has protection and survival value. Besides conceptualizing attachment as a relationship specific strategy, attachment could also be perceived as a manifestation of transforming real relationship patterns into representations of self and attachment, which Bowlby first named internal working models (Bowlby, 1987).

**Internal Working Model**

Towards the end of the first year, a child is starting to be able to absorb a significant amount of knowledge of his/her world, e.g. knowledge about self, primary caregivers, etc. During subsequent years, this knowledge will be organized as internal working models (i.e., schemas) of others. The role of the model is to predict and plan their behavior in the future to facilitate adaptation. With a model in mind, the child is able to engage in a complicated subjective relationship with their parent. Because of the constant use of these models, their impact on thought, feelings and behavior could
go beyond awareness. These models can foresee and explain the attachment figure’s behavior in order to organize current and future responses (Bowlby, 1982).

Bowlby also believed that young children develop internal working models of the self that are complementary to their relationship with primary caregivers. A child who experiences attachment figures as rebuffing is likely to establish a matching internal model of the self as not good enough or undesirable. However, a child who experiences his/her caregiver as helpful and “emotionally available” is likely to build a corresponding internal working model of the self as worthwhile and capable. Thus, the self is thought to develop very much within the context of the attachment relationship.

Additionally, Mary Main and Inge Bretherton and colleagues (Bretherton, Ridgeway, & Cassidy, 1987; Main, Kaplan, & Cassidcy, 1985) further described internal working models in terms of their information processing and interpersonal qualities. Because the working models of self and others in attachment relationships originated from actual relationship interactions, the working model and experiences in the real world are believed to reciprocally impact each other. Specifically, these models influence how individuals think, feel, and behave, which in turn make the very things they expect to experience happen. For example, expecting others to not be available or helpful may cause a child to withdraw, which may make it less likely for others to provide support. Over time, therefore, children’s internal working models of self and others become more and more consolidated and become a possession of the self (Bowlby, 1987). Looking back on the past 20 years of theory
and research, Bowlby’s concept of internal working model was described as “prophetic” (Bretherton & Munholland, 2008, p.102), given modern neuroscience and cognitive tapping into similar constructs.

**Defensiveness**

As stated by Bowlby (1987), if the parents cannot be responsive and sensitive to the children’s needs for a period of time, the signs that would activate attachment behavior normally will stop functioning. The system controlling attachment behavior is temporarily or permanently incapable of being activated, and the whole range of feelings and desires that normally accompany this are incapable of being aroused. In the Strange Situation, this would typically be seen as children ignoring their parent during reunion episodes. For older children, they would not rely on their parents for comfort, but would think everything is “fine” in order to comfort themselves.

This is an example of what Bowlby called “defensive exclusion” (1980). He described “segregated” memory systems (i.e., internal working models) that contained the conflicting information. Not being aware of the actual negative state of the parent-child relationship is less threatening to a child’s sense of security than openly acknowledging it; thus, this is an adaptive process at least temporarily. However, over time this state of denial may become maladaptive, especially when applied to new, more positive circumstances. Bowlby (1980) also stated that under particularly unsafe conditions, it would likely be less threatening to see the self as “bad” than the caregivers as rejecting and non-caring. Consequently, assessing
perceptions of self and others may be difficult, and behavioral or projective/semi-
projective measures may prove necessary (Bretherton & Munholland, 2008).

Mary Ainsworth and Attachment

Ainsworth, who was a student of Bowlby’s, and her colleagues (Ainsworth, 
Blehar, Waters, & Wall, 1978), pioneered the empirical study of patterns of 
attachment. The pattern of attachment that leads to healthy development is secure 
attachment. An individual who is securely attached is confident that the parental 
figure will be accessible, responsive and helpful when frightening situations are 
encountered. The individual feels safe to explore the world and is also competent in 
dealing with it. This pattern is usually found in children with parents who are 
sensitive to the child’s needs and responsive when the child searches for security, 
consolation or help. A second pattern is anxious-resistant attachment, which is 
commonly called ambivalent attachment today. The individual in this situation is 
uncertain when the parent will be available, sensitive, or useful when needed. This 
uncertainty leads the individual to be clingy, and to feel anxious about exploring the 
world. Parents of children with this attachment style are accessible and helpful on 
some of the occasions, but not on others. They may use separation and threats of 
abandonment as a mean of control. The third attachment pattern is anxious avoidant 
attachment. The individual with this attachment style has no confidence that he will 
be responded to and cared for when needed; he expects to be snubbed or rejected. 
These individuals tend to strive to live a life without love and support from others. 
Parents of these children consistently turned their requests down or simply ignored
them when approached for comfort or protection. The most extreme case would be ill
treatment or prolonged institutionalization.

In terms of the impact of early attachment styles on later functioning, Bowlby
(1987) integrated the initial empirical studies and stated that attachment developed in
the early years has a long-term effect on the person’s life later on. To be specific, it
impacts the degree of the person’s resilience or vulnerability to stressful life events.
Children with affectionate, responsive and helpful parents are being provided with a
secure base from which to explore the world and also a base to return to when
difficulties are encountered. These children are more likely to grow up to be happy
and socially-skilled, and they are less likely to break down in times of adversity.
Children who did not have encouragement and sufficient support from parents are
less likely to be happy, to have satisfying intimate relationships, and are more likely
to be especially vulnerable in conditions of adversity. Furthermore, they are also more
likely to have marital and family difficulties later on in their lives.

Ainsworth (1978) developed the Strange Situation examining the individual
differences in qualitative forms of the attachment, which includes identifying three
major patterns of behavior in a laboratory setting. Initially, The Strange Situation was
devised to complement a natural, longitudinal investigation of the development of
attachment in the first year of a child’s life. The standard procedure to measure
attachment advanced our understanding by distinguishing individual differences in
attachment behaviors. Her identification of the various attachment patterns also gave
us the ability to study the enduring effect of attachment on later development.
In Ainsworth's coding system, children were classified into three groups: A (Avoidant), B (Secure), and C (Ambivalent). Group B babies used their mother as a secure base to explore before the separation. They appeared to be distressed after the separation; their exploration behavior decreased. Upon the reunion, B children sought physical contact and proximity to their mothers. Group C children tended to show signs of distress even before the separation. They appeared to be intensely anxious after separated. In the reunion episode, they were ambivalent with the mother; they tended to resist contact or interaction but also sought close contact with the mother. Group A children, in contrast, rarely cried during separation and avoided the mother during reunion. They either mixed proximity-seeking and avoidant behavior or ignored the mother (Ainsworth, 1989).

Crittenden and Attachment

Crittenden, who was a student of Ainsworth, expanded her ABC model by including an A/C pattern for infants who are at high risk, A3-4 and C3-4 for preschool children and A5-6 and C5-6 patterns for school-age children (Crittenden, 2008). The array of expansions was later known as Dynamic Maturational Model of Attachment and Adaption (DMM model) (Crittenden, 1994, 1995, as cited in Crittenden. 2008). The model depicted a conceptualization of self-protective strategies based on continuously evolving aspects of information processing. It suggested that maturation is in dynamic interaction with experience, leading to the potential for changes in patterns of attachment. These changes are expected to be particularly frequent upon periods of rapid neurological changes, which usually take
place at several points prior to adulthood. The information processing comprised in
the self-protective strategies means that in children’s early years, parents create a
sensory context for children to select stimuli that they attend to, then children are able
to transform those stimuli into representations that will organize their behavior. Each
person construes his/her own representations autonomously. Crittenden also states
that early attachment could predict later functioning because of how the early
relationship shapes the children’s way of processing information. Crittenden (1997 c,
1997 b, as cited in Crittenden, 2008) proposed that the experience of danger has the
potential to alter attachment processes and organize the specific attachment
relationship in each individual. They argue that each attachment pattern in this model
has both adaptive and maladaptive facets. In sum, attachment conceptualized in the
DMM model has three components: (A) a relationship construct, (B) the pattern of
mental processing of information about danger and safety and (C) a self-protective
strategy.

The uniqueness of the DMM is that even though children who deviate from
“normal” attachment can be at risk to develop psychopathology and be maladaptive,
according to Crittenden (2011), these specific ways of information processing have
both adaptive and protective values for the children. This proposition is different from
Ainsworth and Bowlby’s general stance that insecure attachment predicts worse
functioning later in life. Furthermore, Crittenden’s model creates a range of
functioning (e.g. A1-A8, C1-C8, A/C, B1-B5) that helps to better identify less safe
and/or maltreated children who may develop complicated strategies (see Appendix A for a visual depiction of the DMM wheel).

According to the DMM system, self-protective strategies are classified into ABC categories and then we assigned a numerical number to each category. The higher the number, the higher the child is at risk, and the more “non-B” the individual is. The basic difference between Type A and Type C strategies is that Type A relies on cognitive information processing, and inhibit affect or emotions, whereas Type C heavily relies on affect, to the point of leaving out the use of cognition. Type A children tend to ignore their own perspective, intentions and feelings and also absorb the perspectives, desires and feelings of others. As one moves down the “wheel,” Type A patterns with low numerical value may omit display of negative affect and replace it with false positive affect; Type A children with high numerical value (A7-8) may even deny the affective response until they feel no response to pain. On the other hand, children with Type C patterns are obsessed with the perspective of the self and they tend to dismiss others. They behave in line with their feelings or arousal. They have a split between the invulnerable exhibition of anger, and the vulnerable appearance of fear and desire for comfort. Sometimes Type C children exhibit submissive, and helpless behaviors, while other times they appear to be angry and aggressive; both are part of their coping strategies when they sense danger or threat from the environment. Crittenden (2008) believes that the unpredictability of the C parents makes the alternating of these strategies necessary at times. For example, coy and submissive behavior might be needed to turn off parental anger when a
noncompliant child had hit the limit of what his/her parent is willing to take. Type B is labeled as “balanced” because people with Type B strategies can balance and integrate affect with cognition. They are expected to be flexible in information processing even in an adverse environment. These individuals are less likely to deceive themselves; they can apply any of the strategies to specific problems and explain the reasons that they are using the particular method (Crittenden, 2008).

The DMM is a developmental model. Children are believed to use the information provided by both the environment, and their own thoughts and feelings to find the most adaptive strategy for the present time. When conditions change, new strategies will be tried out; if they seem to provide greater perceived self-protection, they will be kept in the repertoire. For example, an A1/2 infant may seem to avoid their seemingly inattentive or rejecting caregiver in separation and reunion in the Strange Situation. A preschooler, however, has developed cognitive capacities to better predict the parents’ response to their avoidant behavior. Perceiving that a contingency exists whereby the unresponsive parent may withdraw his/her caregiving behavior even further, compulsive caregiving (A3) may be a better strategy at this age. This increases the child’s sense of protection and connectedness and decreases concerns about being abandoned or unloved. Thus, compulsive caregiving over time may be adopted as the child’s primary attachment strategy.

Children’s Self

According to Harter and Bukowski (2012), the definition of self is “attributes or characteristics of the self that are consciously acknowledged by the individual
through language.” In this paper, “self-representations,” “self-perceptions,” and “self-descriptions” will all be used to indicate the concept of the self. The primary focus of the description of self is “evaluative” in essence and to make specific indication to the positivity or negativity of one’s self characteristics. The measures from research should denote the degree of “self-judgment” when moving along a scale of positive to negative assessment. By age 6 and certainly by age 12, children should have evaluative perceptions within different domains of self, such as academic competence, peer competence, physical appearance and so on. Sometimes people confuse self-concept with self-esteem; in fact, self-concept is different from self-esteem in that self-esteem is referred to as the “global” measure of self, the inclusive assessment of one’s worth or value as an individual (Harter & Bukowski, 2012).

Harter and Bukowksi (2012) believe that self is both a cognitive and a social formation (p.20). Cognitive components emphasize developmental characteristics of the self. Social factors (e.g., parenting, cultural practice) lead to individual differences in terms of how self is created. As cognitive structures undertake “normative-developmental” changes, the construction of self will also go through changes. Therefore, the specific cognitive restriction and development at each period will affect the emerging features of the self-portrait that can be verbalized. The social construction will decide the subject matter and depth of self. The “evaluative-content” self will be influenced by how the person is cared for by the significant other. Thus, feedback from others will become internalized when children become concerned about how others see them. Peer groups, teachers, and other adults could all
contribute to one's self-evaluation process. School can also be a small-scaled society and exert profound impact on self.

To expand on developing self as a cognitive entity, the similarities in self-concept among individuals are explored at a developmental level. The development of self is considered a continuous process. Cognitive theory on self-representation mainly impacts the degree of "differentiation" and "integration." Differentiation means to separate actual and perfect self-concept, in order to compare the two in the future. In view of integration, the developmental process allows individuals to assemble an abstract generalization of self using trait labels (e.g., doing well at school is categorized under the self-concept of "smart"). Abilities that mature in middle childhood also allow the individual to form a concept of his/her worth as a person, in other words, an appraisal of one's global self-esteem. Further cognitive progress permits one to integrate opposing self-features (e.g., feel both happy and sad) into consequential abstraction about the self.

To expand more on self as a social construct, the opinions of others will shape the individual's self-concept through social interactions. The outcome is that a child comes to accept the opinions that significant others have of them. Through this internalization process, the child comes to perceive these appraisals as his/her own assessment about self. Harter and Bukowski (2012) stated that significant others who provide "nurturance, support, and approval" will be reflected in a self-appraisal as positive. Approval will be internalized as "acceptance of self." On the other hand, the child is likely to develop a negative image of self, if the significant others are
"rejecting, punitive, or neglectful." To the extreme, the child who has suffered abuse and neglect would form the images of self as contemptible.

Besides the representation of self, the appraisal from significant others also brings about "self-affect" in the form of pride and shame. The child who always obtains praise and support for her accomplishment will develop the feeling of pride in her achievement. However, the child who is always evaluated negatively for her performance will build up a sense of shame that could put her in a psychologically disadvantaged position. Furthermore, individuals who internalized positive views of the self tend to be more joyful. On the contrary, negative evaluation of self is commonly associated with depression. To the extreme, depression is associated with negative self-perceptions that can give rise to suicidal thoughts and behaviors (Harter & Bukowski, 2012).

There is also a hierarchy of self-evaluation in which there are general self-schemas at the summit (e.g., global self-esteem) under which multi-domains of self (e.g., social competence, academic competence) are housed. Language denotes another significant asset for the development of the self. The capacity to describe self through verbal languages permits one to exceed and perhaps alter one's immediate experience, and to create a false formation of self. Language also provides expressive labels; for example, "good" versus "bad." The appearance of other cognitive organization that creates all-or-non thinking may guide young children in the face of excessive failure or disapproval, to deduce that they are "all bad." Harter and Bukowski (2012) stated that the internalization of the opinions of significant others
does not mature until middle childhood; however, children may start to be able to interpret other's perspectives in their own way at an much earlier age, much as was stated in the preceding sections on Bowlby and Crittenden.

**Literature Review**

Although the self has always been considered an important correlate of attachment, the published studies examining these constructs together are slim. In one previous study (Verschueren, Marcoen & Schoefs, 1996), attachment was found to predict self-concept at age 5. Attachment was assessed using Attachment Story Completion Task (ASCT) with both categorical classifications and continuous rating scales. Self was assessed using puppet interview, with 5 items assessing openness to imperfection and 15 items assessing positivity of self. The researchers used four classification categories: open - if the child can admit an imperfection at least on one occasion; perfect - if never admits imperfections, even on one item; positive - if the child does not make any negative statements about the self during the 15 puppet interview questions; and negative - if the child makes one strong or two mild negative statements about the self. It was found that children with a positive working model of self were likely to be classified in the secure attachment category, while children with a negative working model of self tended to be placed in the insecure attachment categories. Seventy-two percent of children in the positive puppet interview categories were securely attached, while only 25% of the children with a negative model of self were securely attached. Openness to imperfection was not associated with attachment security on the ASCT. However, interesting additional results were
obtained. The authors combined the positivity of self and openness to create 4 groups (positive-open, positive-perfect, negative-open, negative-perfect). The latter group, who admitted no imperfections on the 5 “openness” questions but made negative self-statements on the other questions, were the most likely of all to have been classified as insecurely attached. This article illustrated that attachment at age 5 predicted concurrent self-concept in a projective assessment (i.e., puppet interview).

Other literature has shown that attachment at an earlier age can predict self-concept at a later age. In a study completed by Goodvin, Meyer, Thompson & Hayes (2008), attachment was measured using attachment Q-sort (AQS), in which expert raters assessed child attachment behaviors after a 2-hr home visit. The AQS results in a continuous security scale. Self-concept was assessed by a 29-item puppet interview. The results showed that attachment at age 4 was associated with children’s positive self-concept at age 5.

Furthermore, attachment can also account for changes in self-concept (Toth, Rogosch, Sturge-Apple & Cicchetti, 2009). In this study, attachment was gauged at 3 years of age using the Strange Situation procedure. Self-concept was measured using family doll story, a variation of the Attachment Story Completion Task, when children were 3 and 4 years old. Ratings of each story were made for both positive and negative self-representation. The findings showed that attachment insecurity at age 3 was a significant predictor of changes in children’s negative representations of the self from age 3 to age 4, but a non-significant predictor of changes in children’s positive representation of self.
Cassidy (1988) was the only study that examined insecure attachment subtypes when studying children’s self-concept. An adaptation of the Strange Situation was performed to assess attachment at 6. Children were classified as secure, insecure/avoidant, insecure/ambivalent, and insecure/controlling. Puppet interview and doll story task were utilized to assess self. In the puppet interview, the answers were classified into (a) perfect (b) negative (c) open/flexible. The ease of response and generally positive/negative tone of the response was also rated on a 5 point scale, with perfect and negative classifications rated 1-3 and open/flexible classifications rated 4-5. It was found that in the puppet interview, children with more secure attachments obtained more optimal scaled scores. Children classified as secure were split between the open and perfect categories; insecure/avoidant children were likely to be placed in the perfect category; and insecure/ambivalent were placed mainly in either the perfect or negative category. In the incomplete doll story task, stories were classified according to the child’s depiction of himself/herself in relation to attachment figures. Secure children’s stories tended to be rated as warm, reciprocal, and safe, whereas insecure/avoidant children’s stories suggested isolation and rejection. The story content of ambivalent children was not significantly associated with their attachment pattern.

The Current Study

The current study examines whether these findings can be replicated and extended. Each of the studies described above found that children with higher level of security had a more positive self-concept compared to insecure children. All
utilized projective tasks to assess the self, similar to those used in the current study (e.g., puppet interview and Attachment Story Completion task). This seems advisable given Bowlby’s defensive exclusion concept. However, the aforementioned studies have no further measure of self-concept, nor do they have assessments beyond age 5-6 years. Additionally, none of these studies examine self across types of attachment insecurity. In this study, attachment was measured with the Strange Situation procedure and coded using Crittenden’s coding system for preschoolers at Time 1. Self was assessed through puppet interview and projective story telling task (ASCT) at Time 2 (age 6), and self-report measures and projective story-telling task at Time 3 (age 12). A strength of the current study is its comprehensive assessment of children’s self. This study can also meaningfully add to the extant literature via longitudinal measurement of self-concept and comparison of Crittenden’s insecure types A and C. Additionally, these constructs are examined among moderate-risk, rural families, a most under-studied population whose development we need to better understand.

Bowlby (1980) proposed that insecure-avoidant children prefer not to acknowledge negative states of the self and others, so that the situation and environment would be less threatening to them. Crittenden’s (2008) theory furthers the idea that Type A idealize their parent, deny problems, and may even falsify positive affect as a substitute for true well-being. Crittenden also stated that older children who use A strategies would not rely on their parents for comfort, but would think everything is “fine” and learn to comfort themselves instead. These children
may give socially desirable answers on self-report questionnaires. Therefore, there is a need to use projective tasks to measure children’s self, making it more difficult for Type A children to give the “perfect” answer.

**Hypotheses**

It was hypothesized that attachment at Time 1 would predict self-concept at Time 2 and Time 3. Specifically, Type B children would have higher self-concept compared to A and C children. It was expected that Type A children would have higher self-concepts than Type C children, as the latter were not expected to show defensive or idealizing response styles. After the defensiveness was controlled, we still expected to see that B children have higher self-concept; however, the pattern between A and C would be uncertain due to the paucity of literature studying self-concept in subgroups of insecurely attached children. These patterns were expected to occur for all measures of self-concept across the two time periods. Specifically, self-concept would be highest for Type B, followed by Type A and then Type C for the following assessments:

1) Time 2 puppet interview scores for academic and peer competence;

2) Time 2 attachment story-telling task vulnerability and positivity of self scores;

3) Time 3 self-report questionnaire of academic and peer competence;

4) Time 3 attachment story-telling task vulnerability and positivity of self scores.
Method

Participants:

This data was collected as part of a larger study. Families were recruited through community announcements and local preschools. Participants were given a monetary compensation for their participation. All parents participating in the study were primary caregivers. Families were of primarily low to moderate income. Families who participated in this study lived in a rural Appalachian state in the USA and were mostly Caucasian. Fifty-four families had completed data for Time 1, with children averaging 4.5 years old. Thirty-five families had complete data for Time 2, with children averaging 6.2 years old. Twenty-one families completed Time 3 data collection thus far, with children averaging 12.0 years old (See Table 1 for demographics information at three time points).

Materials and Procedures

Demographic information. Demographic information was collected at all time points. A cumulative demographic risk variable was calculated in order to facilitate examination of attrition and the association such risks have with study variables. Eight risks were examined and coded for presence or absence, including: the parent not being married, not graduating high school, being unemployed, perceiving frequent and/or intense financial stress; and the family having more than 3 children and receiving Aid to Families with Dependent Children and/or receiving this assistance four years or longer. The mean sum of these eight variables was 3.39 (SD = 1.73) at Time 1, 2.63 (SD=2.14) at Time 2, and 2.81 (SD=2.14) at Time 3.
Attachment. At Time 1, in the Strange Situation, (Ainsworth, Blehar, Waters, & Wall, 1978), children and their parents participated in this standardized, videotaped procedure with 2 separation and 2 reunion sessions lasting 20 minutes in length. Classifications of children’s attachment were made primarily through reunion behaviors. Attachment classifications for this sample were made using Crittenden’s coding system for preschoolers (2004). Dr. Kidwell, who was trained by Crittenden and has established reliability, classified the children’s attachment. Eleven children were coded independently by a second trained rater, resulting in 91% agreement for exact subcategory (e.g., C1-2 vs. C3-4) (Cohen’s κ = .87, p< .000). Disagreements were resolved through discussion. Both raters were blind to other information about the families. Sixteen children were assigned to Type B, 20 to A, and 18 to C. In the five cases where an A/C combination was assigned, the predominant classification was used for analyses.

Language skills. Since language is necessary to both understand and complete our interview measures of self, these skills were assessed at all ages. At Time 1, the Peabody Picture Vocabulary Test- Revised (PPVT-R) (Dunn & Dunn, 1981) was utilized to gauge children’s language ability. The Wechsler Preschool and Primary Scale of Intelligence (WPPSI-III: PsychCorp, 2002) Vocabulary subtest was administered at Time 2 (PsychCorp, 2002). Similarly, the Wechsler Intelligence Scale for Children (WISC IV: PsychCorp, 2003) Vocabulary subtest was used to measure children’s verbal skills at Time 3.
Self-Concept Measures.

**Pitter and Patter Interviews.** At Time 2, The Pitter and Patter Puppet Interview was conducted. This is a standardized 50-item interview, which was developed for this study using items and methodology adapted from previous published work (Cassidy, 1988; Harter & Pike, 1984; Martinez & Richter, 1993; Measelle & Ablow, 1998; Verschueren et al., 1996). Children were interviewed with two lion puppets, which made 50 statements (positive or negative) about themselves. Children were asked to state which puppet was most like him or her. Items were randomized and counterbalanced for puppet order and positive vs. negative statements. (i.e., For half of the questions, Pitter was the puppet who made the positive statement, and half of the time he made the first of the two statements.) Scores were created to reflect peer relationships, academic achievement, and willingness to admit imperfections. Defensiveness/ willingness to admit imperfections was intended as a potential covariate for the interview. Sample items from different scales are listed as follows:


c) Defensiveness: Patter: “I always pick up my toys.” Pitter: “Sometimes I forget to pick up my toys.”

Responses were coded on a 2-point system, with 0 points being the answer showing a negative self-concept, and 1 point showing the answer with a positive self-concept. Then the total points were added up for each subscale.
The Peer Competence subscale contained 6 items, but internal consistency reliability was brought into an acceptable range by dropping one item (alpha=.69). Academic Competence/Motivation included 13 items and internal consistency reliability was slightly improved by dropping an item with a low inter-item correlation (alpha=.74). The Defensiveness subscale was comprised of 6 items and internal consistency reliability was improved by the deletion of one item; however, the obtained alpha coefficient of .61 was a bit below the generally accepted range. Therefore, it is unlikely to serve as a useful covariate for Time 2 child interview data.

This interview also included scales for maternal acceptance and internalizing and externalizing symptoms; however, these were not utilized for the current project.

**Attachment Story Completion Task.** Vulnerability and positivity of self were assessed via the ASCT (Bretherton et al., 1990) at Time 2. This task is made up of a series of story stems that depict attachment-relevant themes. The interviewer asked the child to finish the story using dolls and props. Four stories were rated for each child: the hurt knee, monster in the bedroom, overnight separation, and reunion. Based upon coding schemes in the literature (George & Solomon, 1998; Page & Bretherton, 2001), ratings were made of child’s self-perception evident in each story, including positive vs. negative self and vulnerable/unsafe vs. safe. Each story was rated for presence or absence of each of the above, and the scores were then summed for each child. Two raters independently coded 10 children’s ASCT’s, achieving inter-rater reliability of greater than 80%.
**Piers-Harris 2.** At Time 3, the Piers-Harris Self-Concept Scale- 2 (Piers, Harris, & Herzberg, 2002) was used. This 60 item self-report questionnaire includes six scales, two of which were used for this study (intellectual/school status and popularity.) Two validity scales (response bias and inconsistency) are used to identify biased responding and the tendency to answer randomly. Children indicate whether the items apply to them by selecting a “yes” or “no” response. For example, “My friends like my ideas” and “I make good grades.” The response reflected positive self was scored as 1 point; the response reflected negative self was scored as 0 point. All the scores were added up, and then converted to T-scores.

The authors state that the Piers-Harris 2 has demonstrated good internal consistency (.81 for Intellectual/School Status and .80 for Popularity for 11-12 year olds). It also showed good construct and convergent validity (Piers, et al., 2002). For this sample, the 15-item Intellectual Status subscale had a bit lower internal consistency (alpha=.70) and the 12-item Popularity subscale had an unacceptably low internal consistency (alpha=.54). Deletion of one item with a poor item-total correlation would improve the alpha coefficient for Popularity to only .63. Thus, this scale was not considered a useful measure of children’s self-concept in this study.

**Other Self-Report Measures of Academic Motivation and Peer Relationships.** We intended to use these as teacher questionnaires; however, due to time constraints, teachers’ data has not been collected. However, the same measures were collected via child self-report and these had somewhat higher internal consistency than the Piers-Harris 2. The Motivation subscale of the Academic
Competence Evaluation Scales (ACES: Diperna & Elliott, 2000) and the Ratings of Child Social Behavior (RCSB: Frick, 1996) were used. The latter is a 30-item measure with scales for prosocial behavior, withdrawal, peer victimization, and bullying. Both questionnaires are rated on a 1-5 scale, with 1 = "never" and 5 = "always". On the ACES motivation scale, Cronbach alpha in our sample was .78. Example items are: “Attempt to improve on previous performance” and “Is goal-oriented.” On the RCSB bullying subscale, the alpha was .84. A sample item is “Starts verbal argument with peers.” On the RCSB prosocial subscale, the alpha was .73. A sample item is “Tries to cheer up peers.” On the RCSB Victimization subscale, the alpha was .79. A sample item is “Gets made fun of by peers.” The Cronbach alpha for the RCSB introversion scale was considerably below acceptable standard for internal consistency reliability, so it was not included in later analyses.

School-Age Assessment of Attachment Interview (SAA). This measure was administered at Time 3. The SAA (Crittenden & Landini, 2006) consists of seven cards with pictures that address developmentally salient threats, such as being rejected by one’s best friend or having one’s father leave home. The interview asks children to tell both an imagined and a real story in response to each card. As an attachment measure, the SAA discriminates between clinical and normative status (Crittenden, Kozlowska, & Landini, 2010).

The interview was coded for internal working model of self, just as the ASCT story-telling task was coded at Time 2. That is, it was rated for content denoting presence or absence of safe vs. unsafe/vulnerable and positive vs. negative self-
perceptions (See Appendix D-4 for SAA coding manual). Resolution and self-concept were coded separately for the real and pretend stories. Thus, 14 sets of ratings were made for each child, assuming he/she told a story for each. Resolution was coded as safe, magical, unresolved, or unsafe and these categories were mutually exclusive. Safe was coded as 1 point, magical 2 points, unresolved 3 points, and unsafe 4 points. Self-concept was also coded as non-negative (positive/neutral) or negative for each story. Positive/neutral was coded as 2 points and negative 1 point. For both positivity and vulnerability of self, the sum of ratings was divided by the number of stories told. Nineteen percent (4 of 21) of children's SAA stories were coded independently by the author and a trained undergraduate rater to assess inter-rater reliability. The raters agreed greater than 90% of the time for unsafe/vulnerable and positivity of self coding.

**Defensiveness.** A 12-item defensiveness scale was administered at Time 3 (Anan & Barnett, 1999), for use as a potential covariate. A sample item is “Sometimes I don’t listen to my parents.” Cronbach’s alpha for the sample on which the measure was developed was .67 (Anan & Barnett, 1999). For our sample, Cronbach’s alpha was .82, possibly reflecting the higher age of our sample relative to the former (age 12 vs. age 7).

**Results**

Prior to analyzing data further, effects of attrition were examined. As illustrated in the demographics section above, the sociodemographic risk composite variables were not found to differ significantly across Time 1, 2 and 3. (See also
Table 1). The proportion of children who had used B-secure attachment strategies at Time 1 was also roughly similar at Time 2 and 3 (See Table 2). These findings suggest that substantive attrition effects did not occur; in other words, the risk for self-concept difficulties attributed to sociodemographic variables and the percentage of preschool insecurely attached children appear to be roughly equivalent across the time points.

Additionally, a conservative approach was taken to examine the study's hypotheses. First, concurrent family sociodemographic risk, child age, verbal abilities, and defensiveness were explored as potential confounds for each measure of self-concept. Likewise, gender effect was examined. If found to be significantly associated with any measure, these variables were controlled for in subsequent analyses (i.e., ANCOVA or MANCOVA was computed). Additionally, correlations between scales within the same measure were examined. When found to be significantly inter-correlated, a MANOVA was run rather than an ANOVA.

In each analysis, child attachment at age 4 was treated as the independent variable (Types A vs. B vs. C), and each measure of self-concept at either age 6 or age 12 was treated as the dependent variable. Significant F-tests were then followed-up by Tukey post-hoc tests to examine the hypothesis that Type B’s would score better than Type A’s, who would score better than Type C’s in terms of self-concept. Findings are arranged below according to the method of data collection used/specific hypothesis tested.
Time 2

Pitter and Patter Puppet Interview: Hypothesis 1. There was a significant correlation between academic competence/motivation and peer competence \[r(35)=.45, p<.01\]. The defensiveness scale on the puppet interview did not have sufficient psychometric properties to be utilized as a covariate, nor to examine differences across attachment pattern. None of the remaining potential confounds (WPPSI verbal skills, child age, gender, and family sociodemographic risk composite), was significantly associated with children's ratings of their academic competence. A MANOVA was conducted to test the attachment group effect on Peer and Academic Competence subscales together, with the result significant (Wilk’s \(\lambda\) \(p<.01\)).

Two Oneway ANOVA’s were then conducted to test the hypothesis for each subtest. It was found that academic competence ratings varied among children with different attachment classifications \([F(2, 34)=5.16, p<.01]\). Secure-B children had higher scores than A (avoidant) and C (ambivalent) children, with C (ambivalent) children scoring the lowest. A Tukey post-hoc test showed that, as predicted, B (secure) children and C (ambivalent) children differed from each other significantly in self-reported academic competence. Type A children scored somewhat lower than B children \((p<.10)\), and A and C children showed no significant difference. A separate Oneway ANOVA showed that peer competence ratings also varied by attachment \([F(2,34)=3.93, p<.05]\). Secure-B children had higher scores compared to
A and C children, with C children scoring the lowest. A Tukey post-hoc suggested that B and A children differed from each other, but not B and C or A and C children (See Table 3).

**Attachment Story Completion Task: Hypothesis 2.** First, the correlation between ASCT vulnerable self and positive self coding was examined and found to be significant \[r(35) = -.421, p<.05\]. Next, potential covariates (i.e., child concurrent age, WPPSI vocabulary scores, family sociodemographic risk, and gender) were assessed. Only gender was associated with positive self-concept scores. Girls' ASCT stories were coded as containing more positive self content, compared to boys \[t(1,33) = -2.58, p<.05\]. None of the potential confounds was associated with unsafe/vulnerability scores.

A One-way ANOVA for attachment classification and unsafe/vulnerable ASCT self scores was found to be significant at trend level \[F(2,34) = 3.10, p<.10\]. The Tukey post-hoc revealed that B (secure) children scored significantly lower than Type C children in vulnerable self coding, but found the other comparisons among group means not significant. When gender was controlled in a One-way ANCOVA, positivity of self failed to show a relationship with children's attachment strategy (See Table 3).

Due to the unexpected gender finding, the difference of language scores across gender was examined. It was found that there was a trend vocabulary difference for WPPSI vocabulary score at Time 2. This showed that boys had somewhat higher verbal abilities compared to girls \[t(1,33) = 2.02, p<.10\]; thus
vocabulary advantages for girls cannot explain the finding of more positive self scores.

**Time 3**

**Piers-Harris 2: Hypothesis 3.** There was a trend association between school/intellectual status and popularity \( r(21)=.39, p<.10 \). The Popularity subscale was found to have somewhat inadequate internal consistency reliability and was, thus, not included in analyses. The Inconsistency Scale was related to Popularity at \( p<.05 \), but was associated only at trend level for the Intellectual Status scores. The Response Bias scale was not associated with either content scale. Also, none of the other potential confounds (i.e., age, vocabulary, sociodemographic risk, SDS defensiveness, or gender) were correlated with Intellectual Status scores.

A One-way ANOVA was performed to examine the connection between attachment and self-reported intellectual/school status. Findings suggest that this scale varied among the three attachment groups, \( F(2,20)=4.74, p<.05 \). Examining group means revealed results different from our expectations: A (avoidant) children reported the highest level of school status, followed by B (secure) and C (ambivalent) children. A Tukey post-hoc was performed, which found a trend for school status being different for B vs. C and significant result (i.e., \( p<.05 \)) comparing A vs. C. (See Table 3).

**ACES Motivation and Ratings of Child Social Behavior: Hypothesis 3 Continued.** First, correlations between the ACES Motivation subscale and RCSB subscales were examined. ACE Motivation scale was correlated with the RCSB
prosocial scale, \( r(21) = .437, p < .05 \). It seemed that the more motivated children were at school, the more prosocial they reported themselves to be when interacting with their peers. The RCSB victimization scale was correlated with the RCSB bullying scale, \( r(21) = .614, p < .01 \). It seemed that children who reported to have bullied other children may have had experience being bullied by others before (See Table 4).

Potential covariates such as vocabulary, gender, concurrent age, SDS defensiveness, and sociodemographic risk were assessed. The results showed that SDS scale was correlated with the ACES motivation subscale \( r(21) = .61, p < .01 \), and with RCSB bullying \( r(21) = -.55, p < .05 \), prosocial behavior \( r(21) = .44, p < .05 \), and victimization subscales \( r(21) = -.45, p < .05 \). Children who reported themselves to have more prosocial behavior and more motivated attitudes in school also showed the tendency to respond in a socially desirable way, whereas children who’ve endorsed greater items on the bullying and victimization subscales showed less tendency of presenting themselves in a positive way. The remaining variables were not associated with the ACES or RCSB subscales (See Table 4).

The association of the ACES and RCSB self-report scales with attachment was studied via a series of ANCOVA’s (controlling for SDS defensiveness), but all failed to reach significance (See Table 3 for means of ACEs and RCSB).

**School Age Assessment of Attachment (SAA): Hypothesis 4.** First, the correlations between SAA coding were examined. SAA positive self in real stories was correlated with SAA unsafe coding in real stories, \( r(21) = -.522, p < .05 \); positive self coding in
real stories was also correlated with unsafe coding in pretend stories, $r(21)=-.465$, $p<.05$, indicating the more positive the child presents themselves in the real stories, the safer the ending of both the pretend and the real stories would be (See Table 4). SAA unsafe/vulnerable and positive self coding in both pretend and real stories were not correlated with any potential confounds that were examined (i.e., WISC-IV vocabulary score, SDS defensiveness, gender, or concurrent age).

Individual main effects for attachment were then tested. Four ANOVA’s were conducted between attachment and different SAA coding (positive self pretend, positive self real, unsafe coding pretend, unsafe coding real). The effect of unsafe coding in pretend stories was significant across attachment groups, $[F (2, 20) =9.635, p<.01]$. B (secure) children had the lowest unsafe scores, and C (ambivalent) children had the highest unsafe scores. A Tukey post-doc showed that the difference between B(secure) children and C(ambivalent), and B(secure) children and A (avoidant) children were both significant $p<.01$, indicating secure children’s pretend stories had safer endings (e.g. children’s scary feelings were comforted or otherwise positively resolved).

There was no main effect for attachment on SAA unsafe/vulnerable coding for their real stories. Nor was attachment associated with positive self-coding in either pretend or real stories (See Table 3).

Lastly, although not specifically related to study hypotheses, the correlations of the various measures of self across Time 2 and 3 were computed. It was found that Time 2 ASCT vulnerable self score was negatively correlated with Time 3 Piers-
Harris 2 intellectual/school status score, r(21)=.551, p<.05. The more vulnerable children presented the child figure in the stories at Time 2, the less academic success they reported they've achieved in school at T3 (See Table 4).

**Attachment and Defensiveness.** Although also not explicitly predicted, our defensiveness measures were examined for systematic variance across attachment type. The Pitter and Patter Defensiveness scale did not have sufficient psychometric property to be utilized. The SDS and Piers-Harris 2 defensiveness scales at Time 3 were examined with several One-way ANOVA's. The SDS and Piers-Harris Response Bias Index were not found to be associated with attachment. However, the Piers-Harris Inconsistency Index was related to attachment [F(2,20)=4.19, p<.05]. Tukey post-hoc testing suggested that children using a C strategy were actually more variable in their responding, relative to children who used an A strategy.

**Discussion**

From the results we obtained, children using different attachment strategies in preschool did show a pattern in their self-concept. Attachment at age 4 can generally predict self-concept in academic success domain at age 6 and age 12. B (secure) children scored highest on most of the tasks, followed by A (avoidant) children and C (ambivalent) children. However, on the Piers-Harris self-report at Time 3, A (avoidant) reported being the most successful in school. Children with type C attachment strategies consistently reported the lowest self-concept of the three groups.

In terms of the theory and literature reviewed, one might have expected that there would be a relationship between attachment and defensiveness, in particular that
type A children would have higher defensiveness. This was not formally predicted, as these measures only provide a gross sense of defensiveness; nor were such findings revealed. For the puppet interview at Time 2, the defensiveness scale could not be utilized due to insufficient psychometric properties. For Time 3 measures, defensiveness was examined in association with self-concept and with attachment. Defensiveness— inconsistency, response bias and SDS scale—was not associated with the Piers-Harris II self-report. However, it was found that only the Inconsistency Index differed across attachment type. In contrast to expectations, type C children (not type A) had significantly higher levels of inconsistency in their response to similar items on the Piers-Harris.

The first hypothesis was that self assessment at Time 2 would show that B (secure) children had the highest self scores compared to insecure (A and C) children. In particular, A (avoidant) children would have better self-concept scores compared to C (ambivalent) children. This hypothesis was confirmed in Pitter and Patter puppet interview. For the academic competence and motivation subscale, B children reported the highest level of school success, while C children reported the lowest. For the peer competence scale, B children also reported the highest level of acceptance by peers, followed by A children and C children. This is consistent with the findings of Goodvin et al. (2008), that attachment at 4 years old predicted self at 5. Secure children scored better compared to insecure children. It is also in line with Cassidy (1988)'s finding, that compared to avoidant and ambivalent children, secure children obtained more optimal puppet interview self-concept scale scores.
The Attachment Story Completion Task at Time 2 was utilized to assess the second hypothesis. This hypothesis was partially confirmed. It was found that B (secure) children had the least stories with vulnerable self coding, while C children had the most stories. These were coded when the child character appeared to be vulnerable because the caregiver did not provide comfort and the “danger” was unresolved. The number of positive self representations in the ASCT stories (e.g. have a good problem strategy, present child as capable and worthy of care) did not differ among A, B, or C children. Similar to Toth and colleagues’ finding (2009), attachment insecurity can predict negative representation from age 3 to 4, but it could not explain positive representation of self. It may also be that positive representations are just more difficult to measure, free from confounds (including defensiveness). Interestingly, though, ASCT positivity self scores were related to vulnerable/unsafe self scores. Although we cannot infer causation, this finding suggests that positive self concept may be related to lower feelings of vulnerability and better ability to resolve problems, whether through their independent efforts or through seeking comfort from attachment figures. It is thought that the ASCT is accessing, on at least some level, children’s internal working models of the self and others.

Gender had an effect on the scores for positivity of self in the ASCT. However, we also found that boys seemed to have a slightly better expressive vocabulary compared to girls, so the effect of ASCT can not be explained by language ability. Earlier research had indicated that even at an early age, girls may be more cooperative and engaged with their interviewers (Harter and Bukowski, 2012).
Thus, they may tell more socially appropriate stories and give stories with benign endings, possibly via stronger social desirability effects.

At Time 3, our third hypothesis was that children with different attachment strategies approximately eight years earlier would differ in their self-concept; secure children would still have better self-concepts compared to A and C children. Findings from the Piers-Harris self-report measure confirmed the hypothesis partially. It was demonstrated that A children reported to function the best at school compared to B children and C children, with C children reporting the lowest. In previous research, A children were likely to be placed in a “perfect” category on a puppet interview, and not to admit any imperfections (Cassidy, 1988). Many of this sample’s children using A attachment strategies are classified as A3-compulsive caregiving in the DMM method. Such children may show high social desirability to please their interviewers, thus elevating their scores on self-report. Additionally, for such relatively high-risk A children, from Bowlby and Crittenden’s perspectives, defensiveness may protect them from psychological pain in interaction with their attachment figures. And it is certainly adaptive for compulsive individuals to find a niche in which to succeed, and academics offer very different conditions than does home life for such children.

For Time 3 SAA data, our last hypothesis was partially confirmed. It was found that attachment was associated with children’s scores for unsafe/vulnerable coding in the SAA pretend stories, but not in their real stories. C children’s stories were most likely to not have safe, protected endings, followed by A children and B children. C children’s stories tended to have more bizarre content and clear negative
feelings left unresolved in the end. Interestingly, this pattern was not shown for unsafe coding in children’s real stories, which may indicate the value of a projective task. When asked to describe a story about the other boy/girl and his/her parents, children’s attachment system may be activated without awareness. Their feelings and experience in the pretend story may resemble their way of thinking and feeling in everyday life. But when being asked “Has anything like this happened to you?”, children may be too embarrassed, upset, and/or defended to be open about their unpleasant experience to the interviewer; thus, the effect of unsafe coding in children’s real stories was not found. These findings are consistent with recent work indicating that 5 year old insecurely attached children had greater cortisol releases after completing the Attachment Story Completion Task (Smeekens, Riksen-Walraven, Van Bakel, & de Weerth, 2010). This task involved only pretend stories and children used dolls in order to facilitate their story-telling. It may seem to children that they were playing rather than speaking about themselves; yet, their biological stress system was activated by this experience.

The positive self coding also did not differ among A,B,C children in either pretend or real stories. Consistent with previous finding in Toth, Rogosch, Sturge-Apple, & Cicchetti (2009), attachment insecurity may not account for positive self-representations, but only for negatively self-presentation. In addition, we found that the more positive self children showed in the real story, the less unsafe the real story’s ending would be. If children are more active in seeking support and help from adults or more likely to think of situations in balanced ways, their story endings would
likely indicate safety. Furthermore, the more positive children presented themselves in real stories, the less unsafe their pretend stories are. That these children have good strategies of solving problems and interpreting things in their real experience stories relates to safe, comforted endings for pretend stories, indicating that pretend stories may predict how children would respond in similar situations in real life.

Self-report measures were somewhat disappointing in this sample. The ACES school motivation subscale and Ratings of Child Social Behavior at Time 3 had better internal consistency than the Popularity scale on the Piers-Harris 2 and the Peer scale on the Pitter and Patter Interview. The former measures have a full Likert-scale range of responses, whereas both the Piers-Harris and Pitter and Patter use forced choice, which restricted the range of scores, potentially leading to lower reliability. Anecdotally, even at age 6, a number of children wanted to talk through their choices on the puppet interview, or wanted to pick something “in between” the two extremes.

It is also interesting that the self-report measures, which lack internal consistency, both involve children rating their own social behavior and popularity. Even the RCSB, which had adequate psychometric properties for most scales, failed to differentiate children who used different attachment strategies at age 4. Teacher data might have revealed patterns of enacted social self-concept. Collecting teacher data will be a top priority in the coming year, with most intensive coding completed and family visits winding down.

Overall, there was a consistent finding across different time points that B children and C children differed in their measures of self, with C children having the
most vulnerable internal representations of self and reporting to function the worst at school at both Time 2 and Time 3. However, B and A children did not differ for all the measures, except for the SAA unsafe coding in pretend stories at Time 3 and peer competence in the puppet interview at Time 2. Type B children told stories with safer, more comforted endings and reported better peer relations, compared to A children. A and C children also did not differ on all the measures, except for the School/Intellectual Status subscale of the Piers-Harris at Time 3, on which A children reported greater scores than C children. Thus, compared to A and B, C children seem to be more at risk. Secure-B children, as expected, were the most likely across measures and time points, to have the optimal functioning.

Data collection at Time 3 is still ongoing and it is estimated that we can obtain accurate contact information and study participation for approximately 10-15 additional families. Future analyses will then involve a larger sample size, which will enhance power. Undoubtedly, the manner in which our data has been examined might have been improved if we had the sample size to complete a principal components analysis of the large number of self-concept items/scales. A larger sample size could also allow for more sophisticated model testing.

On the other hand, the comprehensive assessment of self is a strength of this study. It would be interesting to consider whether children using an A strategy would score higher in assessments other than self-report. Narrative stories have been shown to be an effective way to explore children's way of thinking and feeling. From the SAA transcripts, which contained some degree of nonverbal observations, the coder
was able to obtain more information about children's feelings and thoughts. This is much more complex than quickly going through a "yes" or "no" questionnaire. Sometimes the nonverbal notations indicated things like "child's voice becomes lower," "child starts fidgeting," or "child's voice starts to get defensive and then child shuts down from the interviewer completely." Such observations may provide useful insight into children's real feelings while imagining the event or the interactions between themselves and their attachment figures. This may not necessarily be shown in their verbal narrative. For this study, narrative story-telling and projective tasks seemed to have greater potential to assess children's self-concept, relative to self-report questionnaire measures.

There was also one interesting finding that Time 2 story completion task vulnerable self scores showed a relationship with Time 3 self-report academic domain scores. Children who rated themselves as more successfully and motivated at school at Time 3 also presented the child character more positively in their ASCT stories at Time 2. Thus, there is some suggestion that self may have some degree of consistency over time, and that past experience and cognitions may help develop future self-concept.

Additionally, one might wonder whether it would be more useful to examine children's concurrent attachment strategies and self-concept, rather than the prospective approach taken here. The School Age Assessment of Attachment will also be used, independently, to classify children's current attachment patterns. Tentative analyses, however, suggest considerable continuity in attachment
classification from preschool to age 12. The current study may offer some
explanation for such continuity. Perhaps as predicted by Bowlby, Bretherton,
Crittenden, and others, children's internal working model of self and caregivers
extends the effects of earlier experiences. It is our hope that with future work we can
examine the self more fully as a potential mechanism for such continuity in child and
family development.

Furthermore, attachment at age 4 was able to predict self-concept at ages 6
and 12 years. These findings indicate the importance of early intervention to prevent
attachment and self-concept difficulties. Developing a secure attachment by
preschooler age may be crucial for children's later psychological development. Once
their internal working models have been established and children start to apply them
strategically to various situations, then intervention will likely become more difficult.
Also, as language and other cognitive capacities grow rapidly during this period,
further influencing the developing brain, it may become increasingly challenging to
counteract the effect of adverse experiences on children's developing self-concept.

In summary, knowing children's earlier attachment has predictive value for
understanding their later self-concept. Secure children reported the highest level of
self-concept at age 6 and age 12. C (ambivalent) children had the lowest self-concept
at both ages. Type A children did not score significantly higher on indices of
defensiveness and future work is needed to replicate their report of the highest
academic self-concept. Projective story-telling tasks have also proven effective in
assessing children’s self. Our study also has implications for earlier intervention to improve attachment relationships.
References


Table 1. Demographic variables across the three time points

<table>
<thead>
<tr>
<th>Category</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
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<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Mean (SD)</td>
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<td>2.63 (2.02)</td>
<td>2.81 (2.14)</td>
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<tr>
<td>Child Age</td>
<td>4.49 (.40)</td>
<td>6.15 (.85)</td>
<td>12.00 (1.05)</td>
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<tr>
<td>Parent Age</td>
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<td>31.75 (6.17)</td>
<td>37.70 (7.56)</td>
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<td>Employed(^a)</td>
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<td>38.1%</td>
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<td>Education(^c)</td>
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<tr>
<td>Income(^d)</td>
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<td>Marital(^e)</td>
<td>58.6%</td>
<td>62.9%</td>
<td>52.4%</td>
</tr>
</tbody>
</table>

Note: \(^a\) The percentage of the employment rate of the parent who took the child to the research study. \(^c\) The percentage of parent who at least have received some level of college courses. \(^d\) Monthly family income. \(^e\) The percentage of parent who was married at the time of research study.
**Table 2.** Distribution of preschool-aged attachment classification at different time points

<table>
<thead>
<tr>
<th>Time</th>
<th>B (Secure)</th>
<th>A (Avoidant)</th>
<th>C (Ambivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td>N</td>
</tr>
<tr>
<td>Time 1</td>
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<td>30%</td>
<td>22</td>
</tr>
<tr>
<td>Time 2</td>
<td>13</td>
<td>37%</td>
<td>14</td>
</tr>
<tr>
<td>Time 3</td>
<td>7</td>
<td>33%</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 3. Self-concept scores across different attachment classifications at different time points using One-way ANOVA

<table>
<thead>
<tr>
<th>Measure</th>
<th>B (Secure)</th>
<th>A (Avoidant)</th>
<th>C (Ambivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>PP Acad (T2)</td>
<td>10.69</td>
<td>1.18</td>
<td>8.79</td>
</tr>
<tr>
<td>PP Peer (T2)</td>
<td>4.15</td>
<td>.99</td>
<td>2.64</td>
</tr>
<tr>
<td>ASCT Vul (T2)</td>
<td>.62</td>
<td>1.19</td>
<td>.93</td>
</tr>
<tr>
<td>ASCT Pos (T2)</td>
<td>2.62</td>
<td>1.26</td>
<td>2.43</td>
</tr>
<tr>
<td>PH Sch (T3)</td>
<td>54.43</td>
<td>7.93</td>
<td>58.50</td>
</tr>
<tr>
<td>ACES (T3)</td>
<td>37.00</td>
<td>5.51</td>
<td>38.63</td>
</tr>
<tr>
<td>Bullying (T3)</td>
<td>13.71</td>
<td>5.96</td>
<td>9.63</td>
</tr>
<tr>
<td>Prosocial (T3)</td>
<td>25.71</td>
<td>3.77</td>
<td>28.50</td>
</tr>
<tr>
<td>Victimi (T3)</td>
<td>19.14</td>
<td>3.77</td>
<td>15.63</td>
</tr>
<tr>
<td>SAA unsafep(T3)</td>
<td>1.42</td>
<td>.37</td>
<td>2.25</td>
</tr>
<tr>
<td>SAA selfp(T3)</td>
<td>1.96</td>
<td>.07</td>
<td>1.92</td>
</tr>
<tr>
<td>SAA unsafert(T3)</td>
<td>1.59</td>
<td>.37</td>
<td>1.66</td>
</tr>
<tr>
<td>SAA selfr(T3)</td>
<td>2.00</td>
<td>0.00</td>
<td>1.85</td>
</tr>
</tbody>
</table>

Table 4. Correlation of measures of self across different time points.

<table>
<thead>
<tr>
<th>Measure</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP Acad (T2)</td>
<td>.346*</td>
<td>.094</td>
<td>-.046</td>
<td>-.107</td>
<td>.068</td>
<td>.275</td>
<td>.147</td>
<td>.211</td>
<td>-.187</td>
<td>-.301</td>
<td>-.059</td>
<td>.430</td>
</tr>
<tr>
<td>PP Peer (T2)</td>
<td>-.150</td>
<td>-.117</td>
<td>.166</td>
<td>.234</td>
<td>.472*</td>
<td>-.072</td>
<td>.330</td>
<td>-.268</td>
<td>-.146</td>
<td>.405</td>
<td>.323</td>
<td></td>
</tr>
<tr>
<td>ASCT Vul (T2)</td>
<td>-.421*</td>
<td>-.002</td>
<td>.040</td>
<td>.032</td>
<td>.218</td>
<td>-.022</td>
<td>-.208</td>
<td>-.248</td>
<td>.052</td>
<td>.265</td>
<td></td>
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</tr>
<tr>
<td>ASCT pos (T2)</td>
<td>-.551*</td>
<td>-.154</td>
<td>.372</td>
<td>-.321</td>
<td>.082</td>
<td>.131</td>
<td>.012</td>
<td>-.323</td>
<td>.174</td>
<td></td>
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<tr>
<td>PH Sch (T3)</td>
<td>.341</td>
<td>-.380</td>
<td>.067</td>
<td>-.290</td>
<td>.036</td>
<td>-.243</td>
<td>.372</td>
<td>-.259</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>ACES (T3)</td>
<td>-.351</td>
<td>.437*</td>
<td>.209</td>
<td>-.054</td>
<td>.211</td>
<td>.444*</td>
<td>.082</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bullying (T3)</td>
<td>-.093</td>
<td>.614**</td>
<td>-1.56</td>
<td>.253</td>
<td>-.400</td>
<td>.334</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosocial (T3)</td>
<td>.304</td>
<td>.182</td>
<td>.065</td>
<td>-.022</td>
<td>.065</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victimi (T3)</td>
<td>-.065</td>
<td>.316</td>
<td>-.338</td>
<td>.125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SAA unsafe (T3)</td>
<td>.342</td>
<td>.169</td>
<td>.465*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAA unsafe (T3)</td>
<td>.350</td>
<td>.522*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAA self (T3)</td>
<td>.249</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Appendix A. DMM model

A Dynamic-Maturational Model
of Patterns of Attachment in Infancy

Copyright: Patricia M. Crittenden, 2001
A Dynamic-Maturational Model of Patterns of Attachment in the Preschool Years

Copyright: Patricia M. Crittenden, 2001
A Dynamic-Maturational Model of Patterns of Attachment in School Age

Copyright: Patricia M. Crittenden, 2001
### Appendix B

**Time 1**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strange Situation</td>
<td>Children’s attachment</td>
</tr>
</tbody>
</table>

**Time 2 (See Appendix C)**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitter-Patter Puppet Interview</td>
<td>Academic and social self-concept</td>
</tr>
<tr>
<td>Attachment Story Completion Task</td>
<td>Representation of self from story</td>
</tr>
</tbody>
</table>

**Time 3 (See Appendix D)**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piers-Harris 2</td>
<td>Academic and social self-concept</td>
</tr>
<tr>
<td>Ratings of Child Social Behavior</td>
<td>Social competence</td>
</tr>
<tr>
<td>ACES Academic Evaluation Scale</td>
<td>Academic Motivation</td>
</tr>
<tr>
<td>School Age Assessment of Attachment</td>
<td>Representation of self from story</td>
</tr>
<tr>
<td>SDS</td>
<td>Defensiveness</td>
</tr>
</tbody>
</table>
Appendix C-1

Pitter and Patter Puppet Interview

Instructions:
Place Patter on your left hand and Pitter on your right. Then say the following:
“I want you to meet my friends Pitter and Patter. We’re going to talk with them for a
while. Each puppet will say something about themselves. Then you’ll say something
about yourself. We want to learn more about you.”

Academic and Achievement subscale items:

1. Pitter: When I make a mistake, I give up./Patter: When I make a mistake, I don’t
give up.
19. Pitter: When things are hard for me, I keep trying./Patter: When things are hard
for me, I give up.
13. Pitter: I like working with numbers./Patter: I do not like working with numbers.
16. Pitter: It’s easy for me to learn things./Patter: It’s hard for me to learn things.
21. Patter: I do a good job at school./Pitter: I do not do a good job at school.
23. Pitter: I can count really high./Patter: I cannot count really high.

Peer Competence subscale items:

6. Patter: Kids at school tease me./Pitter: Kids at school do not tease me.
15. Patter: I don’t have many friends./Pitter: I have a lot of friends.
18. Pitter: I hardly play with any kids at school./Patter: I play with lots of kids at
school.
26. Pitter: Kids do not ask me to play games with them./Patter: Kids ask me to play
games with them.
32. Patter: Kids like me./Patter: Kids not do not like me.
38. Pitter: Kids do not want me to be their friends./Patter: Kids want me to be their
friends.

Defensiveness subscale items:

12. Patter: I always pick up my toys./Pitter: Sometimes I forget to pick up my toys.
17. Patter: I sometimes don’t share my toys./Patter: I always share my toys.
34. Pitter: I am always nice. / Patter: I am sometimes not as nice as I should be.
47. Pitter: Sometimes I forget to say “please” and “thank you.” / Patter: I always say “please” and “thank you.”
50. Patter: I always do what I am told right away. / Pitter: I sometimes don’t do what I am told.
Appendix C-2

Attachment Story Completion Task
Warm-up/ Birthday story
1. Hurt Knee Story
2. Monster in the bedroom
3. Separation from parents
4. Reunion

ASCT coding manual

Resolution:
Safe: benign appropriate resolution, with caregiving or nurturance.
Unsafe: violent resolution, unresolved danger, or chaotic story.
Magical: premature resolution where the story suddenly ends and the problem no longer exists, such as “magical” or fairytale endings.
Unresolved: story is left “hanging,” with emotions or events uncertain or unfinished.

Self-perception:
Positive: child is presented as competent, independent, or worth nurturing.
Vulnerable: child is presented as incompetent, helpless, or vulnerable.
Aggressive: Child presented as bad, aggressive, or non-compliant.
<p>|   | My classmates make fun of me. | I am a happy person. | It is hard for me to make friends. | I am often sad. | I am smart. | I am shy. | I get nervous when the teacher calls on me. | My looks bother me. | I am a leader in games and sports | I get worried when we have tests in school. | I am unpopular. | It is usually my fault when something goes wrong. | I cause trouble to my family. | I am strong. | I am an important member of my family. | I give up easily. | I am good in my schoolwork. | I do many bad things. | I behave badly at home. | I am slow in finishing my homework. | I am an important member of my class. | I am nervous. | I can give a good report in front of the class. | In school I am a dreamer. | My friends like my ideas. | I often get into trouble. | I am lucky. | I worry a lot. | My parents expect too much of me. | I like being the way I am. | I feel left out of things. | I have nice hair. | I often volunteer in school. | I wish I were different. | I hate school. | I am among the last to be chosen for games and sports | I am often mean to other people. | My classmates in school think I have good ideas. | I am unhappy. | I have many friends. | I am cheerful. |
|---|-----------------------------|---------------------|---------------------------------|-----------------|-----------|--------|--------------------------------|------------------|-----------------------------|-------------------------------|----------------|--------------------------------|----------------|----------|-------------------------------|-----------------|----------------|-----------------------------|-----------------|---------------------|------------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|------------------------|----------------------|-----------------|----------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<table>
<thead>
<tr>
<th></th>
<th>I am dumb about most things.</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>I am good-looking.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>44</td>
<td>I get into a lot of fights.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>45</td>
<td>I am popular with boys.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>46</td>
<td>People pick on me.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>47</td>
<td>My family is disappointed in me.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>48</td>
<td>I have a pleasant face.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>49</td>
<td>When I grow up, I will be an important person.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>50</td>
<td>In games and sports, I watch instead of play.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>51</td>
<td>I forget what I learn.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>52</td>
<td>I am easy to get along with.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>53</td>
<td>I am popular with girls.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>54</td>
<td>I am a good reader.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>55</td>
<td>I am often afraid.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>56</td>
<td>I am different from other people.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>57</td>
<td>I think bad thoughts.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>58</td>
<td>I cry easily.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>59</td>
<td>I am a good person.</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

School/Intellectual Scale items: 5, 7, 12, 16, 18, 21, 22, 24, 25, 26, 34, 38, 45, 48, 58, 60.

Popularity subscale item: 1, 3, 6, 11, 32, 37, 39, 41, 47, 51, 54, 57.

Response bias scale: The number of "yes" answer, then converted to T-score.
### Ratings of Child Social Behavior (RCSB)

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seldom</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Often</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Always</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

1. I am kind to peers
2. I start verbal arguments with peers
3. I spend recess and play time alone
4. I tease and name calls
5. I am a lot smaller or larger than peers
6. I say supportive things to peers
7. I would rather play alone
8. My feelings get hurt easily by peers
9. I try to help other kids
10. wish I had few friends
11. I start fights with other kids
12. I cry when others are mean
13. I threaten and bullies others
14. I get made fun of by peers
15. I am well-liked by opposite sex peers
16. I have a unique sense of style
17. I try to overpower or dominate others
18. I am well-liked by same sex peers
19. I have been hit or pushed by other kids
20. I get others to gang up on another kid
21. Kids try to hurt my feelings
22. I have unusual hobbies
23. I am easily bothered by other kids
24. I try to cheer up classmates and friends
25. I get back at friends by excluding them from my group.
26. I get beat up sometimes
27. I don’t usually initiate social interaction
28. I am friendly to almost everyone
29. I threaten to stop being friends when people don’t do what I want
30. I am very shy
### Academic Evaluation Scale (Motivation subscale)

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. is motivated to learn</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. prefers challenging tasks</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. produces high-quality work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. critically evaluates own work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. attempts to improve on previous performance</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6. makes the most of learning experiences</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. persists when task is difficult</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. looks for ways to academically challenge self</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. assumes responsibility for own learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. is goal-oriented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. stays on task</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix D-3

School-Age Assessment of Attachment

The Basic Interview Procedure
Take out the cards and say:

"I am going to show you some pictures. For each one, you should tell me a story about what happens in the picture. Then we'll talk about your story. If something like that has happened to you, we can talk about that too. Do you understand? Any questions?"

1.) Place the card in front of child, read the caption, and say:

"Now you tell me a about a boy/girl who [...]"

Ask follow-up questions, with more time spent on the latter cards and/or the ones that present the child with more difficulty.

2.) after his/her story, say:

"Has something like this happened to you?"

Yes → Ask for their story and ask follow up questions.
No → Ask the expanded topic questions for that card (see last section). Direct follow-up questions.

3.) Ask at least one integrative question per card in the follow-up questions, either in the imagined and/or "real" story. The integrative questions include:
   a) Why did the girl/boy/you [do that]?
   b) How scary or bad was that compared to other things, on a scale of 1-10, with 1 being not bad/scary at all and 10 being so bad/scary you can barely stand it?
   c) If something like this happened to you in the future, what would you do?

After the last card. Say:

"Let's pretend we were going to add a card about what was really nice in your family (or life), what would that card show?"

Expanding the recalled episode questions

If the child says no such event on the card has happened to him or her, expand the questions. Some possible explanations are offered below:

1. Going out alone: Have you ever been out with your brother or sister or with a friend, but without any grown-ups?
2. Rejected: Can you remember some time when you wanted to play with someone, but they said no? What happened the last time you played with a friend?
If all questions produce “no, not me”, ask, *Are you sure because most people get left out at some point.*

3. **Moving house:** Have you ever changed school? Class? Joined a new church, club, etc?

4. **Bullying:** What happened when you had a fight with your best friend?

5. **Father leaving:** What about when he goes to work? Had you mother even left? Have they ever gone on vacation without you? Depending on what the child introduces, follow-up about (1) separation or (2) parental fights.

6. **Run away:** Have you ever wondered if you were adopted? Did you ever want to live in your friend’s family?

7. **Mother to hospital:** No? Is there anything that ever happened to you that was scary or unsafe or made you worry? Can you remember being afraid? What happened to make you feel that way?
Appendix D-4

SAA Coding Manual

Resolution:

Safe: Benigh appropriate resolution, with caregiving or nurturance.

Examples:

In the “Bully” story, a safe ending would be that the child talked to the mother that her friend would not play with her. The mother told the child to talk to the friend about how she feels. She talked to her and they started playing with each other again (seek comfort from caregiver. There is a valid procedure that led up to safe ending).

In the “Mother being sent to hospital” story, mother kept comforting the child when mother was in hospital, and mother returned home safely. (Child knew what’s going on and feelings are recognized and comforted).

Unsafe: Violent resolution, unresolved danger, or chaotic unresolved story. (Danger is not resolved by either kids or adults).

Examples:

In the “Bully” story, the boy’s friend is playing with his other friends. The boy got mad and went to argue with him. They got into a fight. Now two boys still had the tendency to become aggressive when they saw each other.

In the “Father is leaving” story, father was being abusive to the child. Father left home occasionally, but he and mother were not divorced (Danger still exists at child’s house or the ending is likely to be violent).

Magical: Premature resolution where the story suddenly ends and the problem no longer exists. (story has a positive ending without any precursor or events that lead up to it).

Example:

In the “Bully” story, the child says that the girl’s friend was playing with other friend, but at the end of the school year, they started playing with each other again. The interviewer asked how that happened and what the girls had done to become friends again. However, the child did not provide detailed answer (The story usually has safe and nice ending, but the ending seemed to come out of nowhere. The child does not seem to have strategies to solve the problem).

Unresolved: Story is left “hanging,” with emotions or events uncertain or unfinished. (Usually the ending is safe, but the negative feelings are not comforted and left hanging).

Examples:

In the “Bully” story, the child talked to the teacher, and the teacher stopped the bullying. However, the child still felt sad about the experience that she was being teased by others. The child also expressed that she did not understand why those people did that
to her. (The ending is safe, but the child’s feeling is not resolved or comforted. Also, the child does not have a balanced thinking to comprehend the situation).

In the “Father is leaving” story, the father was not being nice to the child, he was out of the child’s life now. However, the child still had negative feelings talking about him or thinking about all the mean things he had said to him.

N/A: when the interviewer does not ask the ending of the story. If there is evidence indicating the story’s ending, use the above existing categories.

Self-concept:

Positive/Neutral: Solve the problem, seek comfort, use good problem solving strategies. Or the story does not involve lots of narrative about self.

Example:
In the “Bully” story, the child talked to the parent or teacher about the situation. Or the child understands others’ intentions of their behavior and would not be hurt easily because he/she has balanced way of thinking. The child may say that those bullies have low self-esteem, when they put down others, they feel better about themselves. Or the child may say that I am not bothered by those people because I am defined by their words.

In the “Family is moving” story, the child expressed that she would miss her friends. When she moved to the new place, she kept in touch with her friends in different ways. Also, she was also open about making new friends in new place (Child has its own strategy to actively seek help or use them to help her to adapt to a new situation/solve problems).

Negative: Has negative words to describe self in the story. Feel bad about self for not what happened or not being able to solve it.

Example:
In “The father is leaving” story, the child was not being told anything about the divorce and the father suddenly left. The child missed her father, but could not do anything about it.

In the “Bullying” story, the child did not talk to anyone about being bullied, but still felt bad about herself (The child does not actively seek help or comfort, nor does she have useful thinking/strategy in her repertoire to solve the problem).

Note:
1. Violence scene does not necessary count as negative self-concept. However, it is not the best problem solving strategies (not positive) either.
2. Feeling does not necessary equal to self-concept. Strong feelings of shame can infer negative self-concept. Pride can indicate positive concept. Guilt does not necessary indicate negative self-concept. Other feelings need to be interpreted independently.
Appendix D-5

SDS
Below are a list of questions for you to answer. Circle YES if it is sometimes true about you and NO if it’s not ever true about you. Let’s do a sample item together first.

Sample A: Sometimes I hate hot dogs. YES/NO (Circle YES if you sometimes or always hate hot dogs. But circle NO if you usually like hot dogs.)

1. Sometimes I tell lies. YES/NO
2. Sometimes I don’t share my toys or games. YES/NO
3. Sometimes kids who are smaller than me are a pain. YES/NO
4. When I do something wrong, sometimes I don’t say, “I’m sorry.” YES/NO
5. Sometimes I get mad. YES/NO
6. Sometimes I forgot to say “please” or “thank you.” YES/NO
7. Sometimes I feel like teasing other kids. YES/NO
8. Sometimes I don’t listen to my parents. YES/NO
9. Sometimes I forget to pick up my things. YES/NO
10. Sometimes I forgot to wash my hands after I go to the bathroom. YES/NO
11. Sometimes I talk back to my parent. YES/NO
12. Sometimes I am not as nice as I should be. YES/NO