ATTACHMENT AS A PREDICTOR OF ACADEMIC COMPETENCE IN PRESCHOOLERS

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Master of Science

By

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ABSTRACT

Attachment is defined as the quality of the emotional bond between children and their parents. Over the first years of life, a mental representation of a parent's emotional availability develops, termed the Internal Working Model, which becomes generalized to other settings. Guided by this model, children process relationshipbased information, predict other's responsiveness, and modify their own behaviors to insure their attachment needs are met in the best way possible. While attachment has become a central theory of child socioemotional development, the purpose of the current study was to extend the predictions from attachment to academic-related outcomes. An additional goal was to examine the degree to which academic-specific parenting is associated with children's attachment and school functioning.

Participants were 44 parents and their preschoolers, who completed assessments that measured the child's academic self-concept (via a puppet interview), parenting behaviors during a videotaped teaching task, and teacher report of early academic skills. Attachment was measured via Ainsworth's Strange Situation (1978), utilizing Crittenden's Preschooler Assessment of Attachment coding system (2001). Children were classified based on their predominant attachment strategy (A, B, C) and level of perceived risk (high A or C versus low A or C).

The major finding for this project was that children classified as having Type C attachments had lower academic skills, according to teacher-report, than those that were classified as either Type A or B. Type B children, because of their experiences with their primary caregivers, appear to have been able to give themselves wholly to the classroom experience. Their Internal Working Model likely guides them to perceive the school setting as positive in nature, allowing them to explore their environment freely and comfortably. Type A children, as predicted, also performed better in their academic skills than their Type C peers. Type A's were expected to do somewhat better academically because they likely attempt to please and perform for their teacher, just as they do with their parent. On the other hand, the C children often did poorly academically. This is a result of their over-focus on their negative affect, to the detriment of focusing on cognitive, exploratory activities.

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As expected, Type B children tended to be quite accurate in reporting their self-concept, as their report correlated highly with teacher-report of academic skills. However, Type A and C children often were inaccurate, with Type A's tending to be self-deprecating and Type C's tending to inflate their abilities. Type A's were thought to perform well but to have a subjective experience of "never being good enough," while Type C's were thought to be so focused on their own internal experiences that they might have little awareness of feedback about their performance.

However, while teacher-report confirmed the importance of attachment as it relates to academic competence, child self-report, and parenting variables had limited results. The reason for this is potentially the small sample size, particularly as including covariates (e.g., child age, family income) reduced the already low power for these analyses. In addition, it could be that measures of both child self-concept and parenting were just not sensitive enough.

Collectively, the current study emphasized the importance of attachment when it comes to children's early scholastic achievement. Parenting was not found to be as influential as one would expect, based on the measures used here. Future research needs to focus on developing more sensitive measures of parenting in order to investigate further the complex relationship between parent and child so as to garner a more accurate reflection of its influences on children's academic success.

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Accepted By: My, Chairperson <u>haurie Conch</u> <u>Wesley White</u>

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Morehead State University

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CHAPTER 1 INTRODUCTION

I. Attachment

Attachment, a concept first described by John Bowlby (1969), is defined as the quality of the emotional bond between children and their parents. The purpose of attachment behaviors, such as smiling at the parent, crying, following, or clinging, is to enhance adaptation and survival. Over the first years of life, a mental representation of a parent's emotional availability develops, termed the Internal Working Model (Bowlby, 1973; Bretherton, 1987). Guided by this model, children process relationship-based information, predict their parent's sensitivity and responsiveness, and modify their own behaviors to insure their attachment needs are met in the best way possible with this parent. Importantly, these models are thought to also provide a basis for children's relationships with peers and teachers, as well as their perceptions about themselves. Thus, attachment theory has become one of the most influential theories of children's development, explaining outcomes such as behavior problems, social relationships, and self-concept. The purpose of the current study is to extend the predictions from attachment to academic-related outcomes, as well as to examine the degree to which academic-specific parenting is associated with children's attachment and school functioning.

Although Bowlby originated the idea of attachment, it was Mary Ainsworth and colleagues (Ainsworth, Blehar, & Waters, 1987) who operationalized it via observations in the Strange Situation. This 25-minute standardized procedure method was developed to activate the child's attachment system through a series of separations and reunions. It is completed in a setting that is new to the child and involves a female experimenter that is a stranger. The first episode consists of the parent and child playing. The second episode consists of a stranger entering the room and interacting with both the parent and child. The parent then leaves the room and the stranger and child are left alone and later the child is left by themselves. These separations from the parent are thought to place mild stress on the child; thus, individual differences in attachment behaviors may particularly be seen in the two reunions when the parent re-enters the room. (For a complete description refer to the Methods section.) Ainsworth (1978) identified three basic types of attachment patterns in the infants she observed: (1) secure children (Type B) utilize the parent as a "secure base," seeking proximity and finding comfort so that they can subsequently explore the toys in the room; (2) insecure-avoidant children (Type A) focus on the toys, do not seek contact with the parent, and appear remarkably neutral in affect; and (3) insecure-ambivalent children (Type C) seek contact but are not soothed by it, remain surfeit with negative affect, and do not explore productively as a result.

Since Ainsworth first described these patterns, a number of researchers have identified additional or subtly different attachment types. This is particularly true when Ainsworth's work has been extended past infancy. For determining preschooler attachment, there are two systems that can be utilized: a) Cassidy and Marvin (1991) attempts to closely follow Ainsworth's categories, describing somewhat more mature variations on the three main types, with the addition of a Type D-controlling

category; and b) Crittenden's Preschool Assessment of Attachment (PAA: 2001), which asserts that attachment behaviors will be much more complex in the preschool years as a result of enhanced cognitive ability to mask or distort one's own affect and needs. This deception is thought to be necessary in order for insecure children's attachment needs for comfort and safety to be met under the conditions of unavailable caregivers. The latter classification system was chosen for the current study.

Within Crittenden's PAA system developmental changes in behavior and organization are reflected in a renaming of Ainsworth's basic patterns. Infant avoidance (Type A) is labeled *Defended* in the preschool years to reflect children's use of various defenses against negative affect (Crittenden, 2001). Infant ambivalence (Type C) is labeled *Coercive* to reflect children's organization of extreme displays of negative affect into a strategy designed to control the parent-child interaction (Crittenden, 2001). Secure attachment (Type B) is given the label of *Balanced* because these children generally do not need to depend upon defensive or coercive strategies with their attachment figures (Crittenden, 2001).

The attachment strategy that is utilized by the child serves many functions, including a self-protective strategy. In this instance self-protective strategies are used to resolve interpersonal problems, such as attachment needs. For the child these revolve around safety and comfort (Crittenden, 2001). These strategies are different for each attachment type. For example, among securely attached children the problems are explicitly expressed to the attachment figure through clear and direct communication. This is a safe and effective strategy to use with a parent who is

sensitive to the needs of their child. However, this communication style is not present in children with Defended and Coercive attachment types. Children that are classified as Type A minimize the importance of any problems that arise between them and their parent, hiding it behind a false appearance of harmony. This decreases the chance of making the problem worse by displeasing the attachment figure (Crittenden, 2001). Research suggests that Type A children often have parents who are consistently insensitive and view their child's needs in a negative light (Berlin & Cassidy, 2001; George & Solomon, 1999). Finally, those children that are classified as Type C exaggerate the evidence of there being a problem, thus distorting the appearance of the problem and not allowing it to be resolved. Research suggests that Type C children have parents who tend to be inconsistent in their response to their child's needs, often not attending to genuine problems and creating problems when they don't exist (e.g., seeing separation anxiety in their child that objective observers don't see) (Berlin & Cassidy, 2001; George & Solomon, 1999).

According to the aforementioned information it can be inferred that the more extreme a child's strategy the greater the amount of relationship-based information that is being distorted and not being processed (Crittenden, 2001). Both Type A and C children have an Internal Working Model that excludes some information from processing. Specifically, Type A children completely eradicate negative affect from processing, thus, disassociating it from positive affect and cognition. This allows the child to not have to think about problems in the relationship, such as unmet attachment needs. Because caregivers of Type A children tend to be consistent in

their emotional unavailability, their children learn to depend upon their own thinking to predict what can be expected next. That is, cognition is reliable, but emotions are not. Type C children, in contrast, learn their parent's words may not be trustworthy. Particularly certain Type C children (C3-4's) have parents that tend to deceive them in order to avoid tantrums or clinging. (For example, when leaving that parent may distract the child from his/her distress and subsequently sneak out while the child's back is turned.) Rather, what can be trusted are their own negative emotions about having unmet attachment needs. The Type C strategy omits cognition from processing and instead displays negative affect in the form of anger, desire for comfort, or fear (Crittenden, 2001). In sum, those children that are considered Defended can rely only on cognition to guide their behavior, whereas, those children that are classified as Coercive rely exclusively on affect. (See Figure 1 for a visual depiction of Crittenden's cognition-emotion model, as well as the subcategories of attachment.) These information processing differences, guided by the Internal Working Model, may have important implications for children's scholastic functioning.

In addition to information processing differences, the Internal Working Model leads to marked differences in the physical and psychological proximity that is evident in the various attachment types. Children that are securely attached have. confidence in the fact that they have a special relationship with their parent. The parent and the child have a shared positive relationship that is evident in their behaviors such as looks and words, no matter how distal their contact (Crittenden,

2001). In other words, there is evidence of synchronous interactions and psychological proximity and intimacy (Crittenden, 2001). For those children that are Type A there is a marked increase in physical distance. However, since Type A children do not want to offend the attachment figure in any way the child becomes an expert in subtler forms of distancing. Specifically, the Type A child becomes very adept at psychological distancing rather than physical distancing, such that play becomes object centered and not person centered (Crittenden, 2001). Finally, the Type C child displays their mixed feelings of anger, fear, and desire for comfort by intense proximity seeking or intense pushing away of the parent (Crittenden, 2001). Type C children typically alternate threatening or oppositional behavior with immature, cov entreaties for nurturance (Crittenden, 2001). These behaviors are thought to be rooted in the Internal Working Model, both in terms of expectations of others and perceptions of their worthiness of care (Bowlby, 1973; Betheron, 1987). These strategies are adaptive within a child's given attachment relationship; however, they may prove less adaptive as they are generalized to new environments and relationships.

Overall, children who have the Type A classification are characterized by the motto, "Close, but not too close," (Crittenden, 2001). However, in Crittenden's system there are different subtypes of A's. The A1-2's are inherently different from the A3-4's. For instance, the A1-2 children are characterized by inhibiting any evidence of desire for close contact with the attachment figure. There is an obvious inhibition of negative affect and if any positive affect is present it is false joy or

brightness. Parents of these children tend to be interfering, focused on play rather than emotions, but are attentive. Type A3 children, by displaying falsely bright affect and care giving or entertaining behavior, ensure a minimal level of availability from an unresponsive, often depressed attachment figure (Crittenden, 2001). The A-4 children, in contrast, have an attachment figure who is hostile and, therefore, become excessively quiet and compliant in a manner which protects them against the attachment figure's anger and rejection. Clearly, all Type A's use a strategy that focuses on the environment and other's needs, rather than their own; but, Type A's may differ in the degree of defensiveness present within their Internal Working Models. Specifically, A1-2's may have the defended, minimizing, "everything is OK" Internal Working Model proposed by Bowlby (1988) for all A's. However, A3-4's may actually have a more negative self-concept, combined with some awareness of the emptiness or futility of their compulsive achievement (Crittenden, 2001). Not surprisingly, Crittenden believes such children may be at risk of developing difficulties as they grow older, particularly depression.

Secure, Type B children find themselves in a relationship with an attachment figure that is balanced and reciprocal. Therefore, B children are able to express their feelings openly without fear of rejection. In addition, they are able to explore their environment more effectively and, thus, their play is typically of higher quality than that of the insecurely attached child. However, there are some individual differences among B children. Those children that are classified as B1-2 (Reserved) are verbally direct and initiate contact freely with the attachment figure, but they seek little

physical proximity. The B-3 child has an open relationship that is best described as remarkably comfortable and synchronous in nature. Children that are classified as B4-5 (Reactive) need more reassurance although they discuss their feelings openly with their attachment figure. They also have more anger, tend to doubt their own competence, need more help with affect regulation, seek more physical proximity, and do not explore as much as other B children (Crittenden, 2001). In spite of these differences, all Type B children are expected to have an Internal Working Model that suggests that others will be available and helpful, that they will generally succeed in their efforts, and that their own needs are important.

Then there is the Type C or coercive child. The C-1 type tends to use resistant behavior to gain the attachment figure's attention, whereas, the C-2 child utilizes more coy behavior to disarm their attachment figure (Crittenden, 2001). Children classified as C-3 have parents that are depressed or angry. Therefore, these children utilize aggressive behavior that matches their pervasively negative mood. Finally, those children that are classified as C-4 give the impression that they are so overwhelmed by their situation and that they are too incompetent to take care of themselves. These children inhibit their displays of anger, but have no problems showing their feelings of fear and desire for comfort. Their play is often inhibited as they repeatedly make sure that their attachment figure is involved by exaggerating their own incompetence (Crittenden, 2001). All Type C children's Internal Working Model consists of the prediction that others might not take care of their needs if they do not heighten their expression. Some (Cassidy & Berlin, 1994) have suggested that

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Type C's have an underlying sense of low self-worth as a result, but Crittenden's Type C's are quite different from those of Ainsworths' infant system (1978) and Cassidy and Marvin's preschool system (1991). In Crittenden's theory the C children, even those with extreme helplessness or anger, are actually controlling the relationship with their parent. This reversal of roles suggests a child who may have a sense of the over importance of his/her own needs, rather than a sense of vulnerability.

Research in child development suggests that attachment has important implications for children's adjustment that may be relevant to their scholastic functioning. Children with secure attachments to their primary caregivers engage more actively in peer interaction and exploration of the school environment, have higher self-esteem, possess more positive representations of self, show a greater capacity for forming friendships, are more popular with peers, and demonstrate less negative emotion and hostile aggression than do their insecurely attached counterparts (Hamre & Pianta, 2001). In addition, security of attachment has been found to be directly associated with more active exploration and symbolic play, and greater task persistence (Moss & St-Laurent, 2001). On the other end of the spectrum, insecurity has been linked with poorer mastery motivation and less goal orientation in play with objects (Moss & St-Laurent, 2001).

In sum, there is some initial empirical evidence that suggests the generalization of children's Internal Working Models, developed with their attachment figures, to the school setting. This model guides not only relationship-

based expectations and behaviors, but also information processing tendencies, emotional experiences, and self-concept. Unfortunately, for the insecure child, their early attachment experiences may affect their school performance, for it may place constraints on their exploration, persistence, and help-seeking and, thus, on their learning (Moss & St-Laurent, 2001).

II. Parenting

However, while attachment is an important influence on academic success and competence it is not the only one. An additional facet that is essential is parenting. In fact, features of early childhood experiences, such as parental sensitivity, foster attachment security along with other aspects of development (Aviezer, 2002). Research has indicated that parent-child communication patterns characterized by autonomy, support, and involvement predict child self-perceived competence and academic performance (Moss & St. Laurent, 2001). In addition, it has been found that parental positive affect, such as the displays of warmth, functions to promote learning by increasing attention and fostering enthusiasm, whereas, negative parental behaviors such as intrusiveness deter learning (Hubbs-Tait, 2002). For example, Diaz et al. (1991) found that maternal positive affect during teaching was positively correlated with three-year-old's performance on selective attention and sequencing tasks. Additionally, Barocas et al. (1991) found that maternal positive affect while teaching a four-year-old to fold a paper boat was positively correlated with children's verbal IQ score.

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Current views of the growth of intellectual and academic competence in early childhood emphasize Vygotskian theory (Colman, 2002). The main premise behind Vygotsky's research is that a child's mental capabilities derive from interactions with members of their environment (Herb, 1997). He felt that that a child's cognitive growth is facilitated by the interactions that they have with other individuals in their environment or culture, such as parents, siblings, and peers. The social interaction occurs on two levels: the interpersonal and the intrapersonal level. The interpersonal level is where an adult or advanced peer carries the major responsibility for structuring and guiding the learning process (Harris, 1993). The intrapersonal level occurs when the child becomes the main facilitator of his/her own learning by internalizing the strategies and skills that they have learned from others (Harris, 1993). This process of interpersonal to intrapersonal learning is an important step in the advancement of a child's cognitive growth. Later on Vygotsky re-interpreted this process into one term calling it the Zone of Proximal Development.

He defined this zone as, "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers, (Vygotsky, 1978 p. 86)." He felt that what the Zone of Proximal Development is today would be the developmental level of the child tomorrow. In other words, what the child does with assistance today they will be able to do by themselves tomorrow (Vygotsky, 1978). For example, researcher Dorothea McCarthy found that what her subjects could only do with help at age three to five

they could do independently at age five to seven (Vygotsky, 1978). This idea of helping a child to learn a task and slowly doing less and less to aid the child complete a task on their own is known as scaffolding.

Children's attachment may influence opportunities for Vygotskian learning as well. Research has found that attachment security influences the development of competence by influencing how preschool age children request and receive help from their mothers during shared problem solving (Colman, 2002). It was discovered that insecure children exhibited greater use of unnecessary forms of help seeking, a tendency to ask for help sooner, and greater expression of inability statements reflecting lessened attributions of competence, compared with more secure children (Colman, 2002). Additionally, it was found that the mother's of insecure children were more apt to provide direct assistance when their children requested it (Colman, 2002). In other words, insecure children's mother's believed that their child was not cognitively capable of following instructions; thus, they needed to be physically assisted.

III. Purpose of the Present Study

As is illustrated from the aforementioned research attachment and parenting are both important factors when facilitating the development of young children's competence. However, very little research has been conducted to ascertain the influence of attachment and parenting on academic competence specifically. No published studies appear to exist that examine parenting, attachment, and academic functioning jointly. Therefore, the purpose of the present study is to simultaneously

delineate the influence of attachment and parenting variables on the academic competence of preschoolers. While it may be argued that the academic competence of preschoolers is of no consequence; research by the National Research Council and Institute of Medicine indicate that the development of pre-literacy and numeracy cognitive abilities are imperative for later school success (McWayne, 2004). Indeed the preschool years are formative when it comes to the development of problemsolving skills, self-understanding, and social competence (Colman, 2002).

For the current study it is hypothesized that:

1). Children who are securely attached would report a positive academic concept and would do better academically than those children who are insecurely attached. Specifically, children with Type C attachments would do more poorly than either Type B or Type A;

2). There would be differences in the consistency between the academic selfperceptions of insecurely attached children. Specifically, those children classified as Type A3-4 would report a lower view of their academic self. However, teacher report should indicate that these children are high achievers in school based on the premise that Type A children want to be compliant and tend to emphasize cognition in terms of their information processing. On the other end of the spectrum, those children that are classified as Type C would report that they do well academically; however, teacher report would indicate otherwise. Type C children tend to focus on their emotions to such an extent that they may not only do poorly in school, but also have little awareness of this;

3). Vygotskian parenting would predict higher academic functioning;

4). In addition, the parents of securely attached children would also participate in parenting that is consistent with the Vygotskian model in that they would engage in more modeling, would be less intrusive, and more warm than the parents of insecurely attached children.

CHAPTER 2

METHODS

Participants

Forty-four parents and their preschoolers participated in the study as part of a larger project. Specifically, there were 39 mothers and 5 fathers. The child participants were predominately Caucasian (93% Caucasian, 2.2% African-American, and 4.5% Biracial) and there were 19 females and 25 males. The mean age of the participants was 30.0 years for the parents and 53.5 months for the preschoolers. Twenty-five of the parents were employed and 19 were not. In addition, 7 of the parents had some high school, 24 had completed some college, 8 had a college degree, and 5 had completed graduate degree work. Half of the sample was receiving public assistance and half were not. As for income 17 parents were making \$1200 or less per month, 13 were making \$1201-2000, and the remaining 14 were making above \$2000 a month. Of the parents 7 were single, 2 were living with a partner, 29 were married, and 6 were divorced or separated.

Procedure

Participants were parents and their 4-year old children, who were recruited via brochures sent home through local Head Start and preschool programs. Fliers were also distributed to businesses that our target families might visit. Parents indicating interest were contacted and scheduled for a two and half hour visit to campus with their child. Participants were paid fifty dollars for their time. The parents were read the informed consent statements for both the visit and the collection of teacher data. At the end of the Strange Situation the parent was taken to another room to complete various questionnaires and an interview, while the child stayed with the child interviewer to complete the interview. Children were first read a statement about the procedures and their rights as a research participant, such as confidentiality rules and the right to refuse to answer questions or complete tasks. After the completion of these activities, the parent and child then participated in a parent-child teaching task, the MCTT, together. At the end of the visit the parent and child were thanked for their participation and the child chose a prize. This endeavor was fully approved by the Institutional Review Board of Morehead State University and was one part of the larger Family Development Study.

Instruments

Attachment. This method for assessing the child's style of attachment was originally developed by Ainsworth, Blehar, and Waters in 1978 and is designed to assess a child's attachment style under conditions of mild stress. This technique consists of a series of separations and reunions between the primary caregiver and the child. There are six episodes that comprise the Strange Situation, each lasting three

minutes except for the last reunion which lasts for five minutes. The parent reads silently over the directions for the Strange Situation, after informed consent was given, while the child played with another researcher in the next room. These directions tell the parent that knocks would occur to communicate when they are to leave the room, but that otherwise they should do what they naturally would do. They are also reassured that an adult would be watching the child at all times and would comfort the child if he/she becomes distressed while alone. The parent and child were then lead to the play room where video taping began for the Strange Situation. The parent and child were together for a period of three minutes and then a female researcher, the family had not met before, entered the room sitting in the chair opposite the parent. At this time the stranger engaged the parent in conversation for a period of a minute and a half. Next, the stranger engaged in play with the child. When the parent heard a knock he/she left the room; at this point, the stranger returned to their seat and interacted only when initiated by the child. Then the parent returned and the stranger left unobtrusively. Next, the parent left the child in the room completely alone. However, if the child appeared distressed the stranger would enter and comfort the child. Finally, the parent returned for a final reunion. Ratings were made by trained coders, using Crittenden's Preschool Assessment of Attachment (2001) based on the videotapes of each session. This system was developed to take into account the advances shown in cognitive, emotional, and behavioral regulation among preschool-aged children. As with all attachment classification systems, emphasis is given to child reunion behavior as the separations are believed to activate

their attachment system; however, all behavior is examined. Classifications were made based upon child proximity seeking, affect, and means of communication with the parent. Children were classified into whichever of Crittenden's attachment strategies were observed, although for analysis purposes they will be grouped according to predominant strategy (A,B, or C) and level of perceived risk (high A or C versus low A or C). Thirty-six of the 44 children's attachment types were determined, due to time constraints. (See Table 1 for a breakdown of children's attachment types for this sample.) All subjects were classified by a rater who passed a reliability test with Crittenden. In addition, a subset of 33% (n=12) of the sample was rated independently by this author. Inter-rater reliability was established as 87.5% exact agreement. Also both coders were blind to other information about the families.

Mother Child Teaching Task. The MCTT was developed by Siegel in 1987 and was used as a method to assess parenting. For this task the parent and child were asked to complete an origami boat-folding task. Each of the six steps was shown on a board that was placed in the chair next to the parent and child. The participants were told to make the boat and that the parent could aid their child in any way they wished: they could touch the paper, but they could not fold the child's paper. The task was timed for five minutes and it was videotaped so that ratings could be made. The task was rated based on parenting behaviors. These rating scales were developed based on previous research by Siegel (1987) and Hubbs-Tait (2002) as well as the Emotional Availability Scales (Biringen, Robinson, & Emde, 2000).

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Parenting ratings were made for both verbal and non-verbal warmth behaviors. Verbal behavior ratings included statements reflecting empathy, praise, and encouragement. The non-verbal ratings were for observable behaviors like warm voice, hugging, kissing, smiling, and "high fives." Modeling was represented by parental behaviors that reflect the decreased use of physical assistance and the increased use of the parent's boat as a model. Parental intrusiveness reflected the parent's ability to let the child complete the task on their own and how often the parent interfered in this process. All the above ratings were made on a 1 to 4 Likert scale with higher scores reflecting more positive parenting behaviors. Child responsiveness ratings reflected the child's behaviors towards the parent. In other words, was the child actually taking the parent's suggestions into consideration or were they completely ignoring the parent's attempts at task facilitation? This 1 to 4 rating was included to assess child effects on parenting behavior. Higher scores reflected greater child cooperation with the parent. Cognitive distancing was the rating of the parent's every utterance to analyze the encouragement of the parent towards the child in their utilization of representational versus referential abilities. Each parental utterance was rated and percentages were calculated for each level based upon the total number of utterances. Level 1 included statements that the parent issued to the child without any reason or information behind the statement. Level 2 were statements or questions that the parent offered the child with some information or reason behind the request. Level 3 were statements or questions that the parent provided in an attempt to assist his/her child in making the boat. In addition, these

statements provided the child with more information than a level 1 or 2. Finally, level 4 were questions that the parent asked the child that provided the child with a high level of information and justification for the parent's request.

The entire sample was rated independently by two coders who were blind to other information about the participants. Inter-rater reliability was established as 85-95% exact agreement for all ratings.

Peabody Picture Vocabulary Test. This test was utilized to assess children's receptive vocabulary. The PPVT (Dunn & Dunn, 1981) consists of presenting the child with four pictures and asking him/her to point to the picture of the word they say. The measure was administered until the child established both a basal (8 correct in a row) and a ceiling score (6 out of 8 incorrect). The measure was scored by obtaining a raw score from the number of identified words. This raw score was then used to obtain an age-based standard score. This is a well-established standardized measure with acceptable levels of reliability and validity. In addition, research has shown that PPVT scores are associated with both child IQ and other language measures in the preschool years (Dunn & Dunn, 1981). Therefore, this measure was being utilized primarily to control for language level influences on the child interview.

Pitter and Patter Puppet Interview. This is a child interview measure that was developed specifically for this study. The method was based on the Berkley Puppet Interview by Measelle, Ablow, Cowan, & Cowan (1998) and other measures by Harter & Pike (1984), Cassidy (1988), Verschueren, Marcoen, & Schoefs (1996), and

Martinez & Richters (1993). Children were interviewed with two lion puppets named Pitter and Patter, who alternate making positive or negative statements about themselves. Children were then asked to state which puppet was most like him or her. The items were randomized and counterbalanced for both puppet order and positive versus negative statements. The child was videotaped while completing this task. A trained coder then watched the tape, recording the child's answer and then assigning a 0 or 1 rating. The zero score represented the more adaptive response, whereas, a rating of one reflected a more maladaptive response. Therefore, the higher the score the child receives the more negative their answers were. Subscales included academic self-concept, achievement motivation, and willingness to admit imperfections. Subscales were rationally derived and psychometric properties were examined. Achievement motivation Cronbach's alpha was inadequate ($\alpha = .41$), as was the academic self-concept Cronbach's alpha ($\alpha = .63$). Therefore, the two subscales were combined into one scale. After dropping one item that correlated poorly with the rest of the scale, Cronbach's alpha was comparable ($\alpha = .74$) to other measures of selfreport among young children. The willingness to admit imperfections scale was found to have inadequate internal consistency reliability ($\alpha = .35$) and therefore it was dropped from analysis, though it had been intended to be included as a control variable.

Pre-School Scale. This scale was developed for this study, with eleven items derived from other measures by Harter & Pike (1994), the Child Behavior Checklist (Achenbach & Rescorla, 2001), and the Self-Esteem Interview (Barnett, Gramzow, &

Meade, 1993). The measure was utilized to assess children's achievement motivation and academic competence, as reported by his/her teacher. Items include such statements as: "This child gets stars on papers." Some items were reverse coded. The scale is rated on a four point Likert scale with a higher score reflecting a higher level of academic competence, with some items being reverse coded. Cronbach's alpha was found to be acceptable ($\alpha = .90$).

CHAPTER 3

RESULTS

Prior to testing each hypothesis, potential covariates were examined for their relationship to study variables. These included child age, receptive vocabulary, child gender, and receipt of public assistance (as a proxy for family income). Attachment and Children's Preschool Skills, and Academic Self-Concept

For teacher report of academic skills on the Preschool Scale, neither age, receptive vocabulary, gender, or receipt of public assistance was associated with children's scores. Children's attachment was associated at the trend level with child age. Controlling for this variable in a Oneway ANCOVA illustrated that attachment was indeed predictive of children's preschool skills as reported by their teacher [F(2,30) = 4.28, p < .05]. Post-hoc analyses revealed that children with Type C attachments did more poorly, on the whole, than either their Type B or A counterparts. Further analyses were conducted to ascertain if there was an additional difference to be found when Type C was divided according to level of risk. In other words, was there a difference in the high C's (3/4) versus low C's (1/2) as compared to the other two attachment types. The Oneway ANCOVA was significant [F(3,30)]=2.95, p < .05]. Specifically, post-hoc analyses revealed that the high C's were found to have the lowest scores on the Preschool Scale followed by the low C's, A's and then B's, who received the highest scores. (Refer to Table 3 for means and significant differences for the four types of attachment.)

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For child self-report of academic competence on Pitter and Patter gender was found to be associated with child scores such that there was a trend for boys to report lower self-concepts (t(33.98)=1.92, p<.10). Additionally, higher receptive vocabulary scores were associated with more positive scores on the Pitter and Patter task (r = -.25, p<.05). The ANCOVA examining the relationship between attachment type and academic self-concept, controlling for these covariates, was not significant. *Consistency of Child Self-Report and Teacher-Report of Academic Skills and Motivation*

Overall, for the full sample, teacher-report and child self-report of academic functioning were moderately correlated (r = .28, p < .01). However, this differed according to children's attachment pattern. Specifically, Type B children's academic self-concept was validated by teacher-report (r = .74, p < .01), whereas neither Type A (r = .10, ns) nor Type C (r = .29, ns) children's self-concept was consistently related to their teacher's report of their academic skills. After closer examination it was found that children's self-perceptions often were similar to those predicted. Specifically, Type B children's reports were remarkably similar to those of their teachers. For the Type A children it was found that half of the A-3 children were roughly accurate in their self-perceptions, but the other half was self-deprecating. Finally, some of the Type C children were fairly accurate in their self-perceptions; however, a number of them were inaccurate, all in an overly positive direction, which was as hypothesized.

Parenting and Children's Academic Skills and Self-Concept

First, the relationship between the MCTT parenting variables was examined as well as potential covariates (See Table 2). Child responsiveness was associated with intrusiveness, verbal warmth, level 3 cognitive distancing, and level 4 cognitive distancing, and thus were utilized as covariates for analyses involving those variables. Child gender was found to be associated with percentage of cognitive distancing level 2 utilized, such that parents of female children utilized these statements more than did parents of male children (t(40.00)= -2.29, p<.05). Additionally, parents receiving government assistance utilized a greater percentage of cognitive distancing 1 and displayed less nonverbal warmth.

Parental modeling did not predict teacher-report or child self-report (with receptive vocabulary controlled). Parental intrusiveness, with child responsiveness controlled, predicted neither teacher nor child self-report. Parental nonverbal and verbal warmth, as well as cognitive distancing 1, 2, 3, and 4, were not associated with teacher-report or child self-report, once the pertinent covariates were included in the analyses.

Attachment and Parenting

A Oneway ANOVA demonstrated that parental cognitive distancing level 1 was associated at trend level with child attachment [F(2,33)=2.28, p<.10), with parents of secure children using the least level 1 statements and parents of Type A children using the most level 1 statements. However, this relationship was no longer significant once receipt of government assistance was controlled. Parental

intrusiveness, verbal and nonverbal warmth, and modeling were not related to children's attachment style.

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CHAPTER 4

DISCUSSION

Research in child development suggests that attachment has important implications for children's adjustment. Secure attachments, in which children feel they can rely on parents for comfort, are associated with a wide variety of positive child outcomes, particularly social and emotional. However, very little research has been conducted on the importance of attachment as it relates to academic performance. The main study to date was conducted by Moss and St-Laurent in 2001 and it revealed that secure children had higher scores than their insecure counterparts on communication, cognitive engagement, and mastery motivation. Specifically, insecure children were at greater risk for school underachievement as a result of their lower levels of mastery motivation (Moss & St-Laurent, 2001).

The purpose of the present study was to investigate the influence of attachment type and parenting on the academic competence of preschoolers. The main hypothesis was that those children who were classified as Type C would do more poorly academically than those that were classified as either Type A or B. Analyses revealed that this was indeed the case. Specifically, Type B children had teachers that reported that they did significantly better academically than their Type C peers, and slightly (not significantly) better than their Type A peers. The potential reason for the success of Type B children can be found within the child's Internal Working Model. This model represents the child's expectations of relationships and their feelings of self-worth that are formed as a result of past experiences that the

child has had with the attachment figure (Bowlby, 1973; Bretherton, 1987). In the case of Type B children their experiences with their primary caregiver may have enabled them to give themselves wholly to the classroom experience. They know that they can openly discuss their thoughts and feelings about their school experiences with their parents. In addition, they realize that the exploration of their environment is a task that is safe and supported. As a result, Type B children likley are able to explore their school environment extensively, thereby enhancing their learning and providing for ample mastery experiences. These experiences may reinforce further the expectations of success that are already inherent among Type B children. In addition, they may generalize their relationship with attachment figures to their teacher. The reciprocal relationship that they enjoy with their parent, thus, becomes one that they begin to enjoy with their teacher, enhancing their chances of academic success.

Type A children, as predicted, also performed better in their academic skills than their Type C peers. The only Type A's found in this sample (all A3: Compulsive Caregiving) would appear to do somewhat better as a result of their very nature, which is to be pleasing to authority figures. Therefore, Type A children might succeed academically because they try to perform for their teacher in the same manner that they did for their parent. Additionally, the Type A child is one that possesses an Internal Working Model that is rooted in cognition rather than affect, so as to meet their attachment needs for comfort and safety in the best way possible with emotionally unavailable caregivers (Crittenden, 2001). This over-reliance on

cognition might make them apt students, although one wonders about the potential later costs of what Crittenden describes as empty, compulsive overachievement (2001).

On the other hand, the C children often did poorly academically. This is a result of their over-reliance on affect, to the detriment of cognition. As a result of their expectations of heightened focus on unmet attachment needs from an inconsistent caregiver, their Internal Working Model is one that does not facilitate learning. Results also indicated that high C's (C3/4) were apt to have worse academic skills as compared to low C's (C1/2). This further supports Crittenden's theory (2001). Type C3's are those that act out aggressively, whereas, C4's are those that feign helplessness at the expense of having their own competence-promoting experiences. Clearly, neither strategy is conducive to learning.

However, while teacher-report confirmed the importance of attachment as it relates to academic competence, child self-report had limited results. It was hypothesized that Type B children would not only do better academically, but report a more positive academic self-concept. This was not found to be the case. Although secure, Type B children generally reported higher academic self-concepts than insecure children, these differences were not significant. It may be that defensive self-report for children with insecure attachment patterns decreased the likelihood of such findings. (See next paragraph.) Also, potentially a larger sample size would prove useful, particularly as including covariates such as children's gender and receptive vocabulary reduced the already low power for these analyses. Alternatively, the methodology of utilizing the Pitter and Patter interview could have some drawbacks. This measure required the child to listen to polar statements, such as "I like school/ I do not like school," and then to choose which puppet was more like his/her self. Items required children not only to report on concrete characteristics, such as being good at coloring, but also to report on more abstract concepts such as giving up after making mistakes. Since the sample consisted of children with a mean age of 4.5 years it is possible that the abstract concepts were more difficult to answer accurately, leading to limitations in both reliability and validity. While this measure was largely based upon a puppet interview (Measelle & Ablow, 1998) with demonstrated psychometric properties among children in this age group, some research suggests that the young child is only capable of constructing concrete cognitive representations of observable features of the self. As a result, their self evaluations are often unrealistic (Harter & Pike, 1984; Marsh et al., 2002).

Overall, it was found that teacher and child self-report of academic skills were only moderately correlated. Interestingly, and consistent with predictions made here, consistency between these reports differed according to children's attachments. Type B children's reports were remarkably similar to those of their teachers. It was hypothesized that Type A children would report a lower view of their academic self than would their teachers. About half of the A-3 children in this sample were roughly accurate in their self-perceptions, but the other half were self-deprecating. None inflated their skills. Altogether, there was little consistency between teacher and child report among this subset of the sample. Type C children were expected to be so

focused on emotion that would not only do relatively poorly in school, but also have little awareness of this. Correlations between teacher and child report for Type C's were modest. While some Type C children were fairly accurate in their selfportrayals, a number of them were wildly inaccurate. The latter were typically Types C-3 or C-4, who often reported doing as well as their Type B counterparts. Their overestimate of their abilities was striking and, again, consistent with Crittenden's theory (2001) and the author's expectations.

While attachment is an important aspect of learning, parenting was also expected to be important. It was hypothesized that the parents of securely attached children would participate in parenting that was consistent with Vygotskian theory, in that they would, relative to parents of insecure children, engage in more modeling, be less intrusive, and display more warmth. Analyses indicated that this was not the case. Again, detection of some findings may have been affected by the small sample size. For example, parents of Type B children were less likely to use the more directive, concrete level 1 cognitive distancing statements than parents of insecure children, but these results disappeared once covariates were included in the analyses. However, the measure utilized may also possess some limitations. Parenting was gauged based on a five minute origami boat folding task (Siegel, 1987). It could be that five minutes is not enough time to fully ascertain parenting attributes. Additionally, it could be that the ratings themselves were not sensitive enough. For instance when it came to modeling it was found that a parent either modeled the task or they did not. There was no "in-between." As it relates to modeling theory as posed by Vygotsky

(1978), it may be that this process needs to be measured over time. He believed that what a child did with help today they could do by themselves tomorrow; thus, it is possible that if a child repeated the task then modeling influences would invariably change. It is also possible that some children required a more difficult task to elicit modeling behavior from their caregiver.

As for parental intrusiveness and parental verbal and nonverbal warmth, ratings also may not have been sensitive enough. However, a more plausible explanation is the fact that the parent likely is trying to make a favorable impression, since they know that they are being video-taped. As for cognitive distancing, again the lack of significant findings could be related to measure sensitivity. However, of all the parenting variables this one yielded the most findings that approached significance before covariates were included in analyses. Additionally, cognitive distancing level 1 was associated with a covariate in a manner that suggested potential credibility. Specifically, parents that were receiving government assistance utilized a greater percentage of level 1 statements. Level 1 statements were commands or requests that did not provide the children with any reasoning behind them. Thus, it could be inferred that those parents who are receiving government assistance utilized level 1 statements because it was the quickest way for the task to be completed. These parents may find little time to provide "excessive" information on a regular basis because they are busy trying to make ends meet.

Unfortunately, parenting did not predict children's academic skills or self-

this null result, it may also be that there are other avenues for children to succeed academically. For example, the child may be intellectually gifted (which was not assessed in the current study) or may have a teacher who is of more help to the child than the parent. On the other hand, since attachment predicts academic success then there could possibly exist a facet of this complex relationship that is influencing child success of which researchers are not yet aware.

Collectively, the current study emphasized the importance of attachment when it comes to children's early scholastic achievement. Specifically, attachment did predict academic success as reported by the teacher and degree of consistency across child and teacher-report. Parenting was not found to be as influential as one would expect. The failure of parenting to yield results points to the need for more sensitive observational measures of parenting to be developed. Finally, future research needs to be conducted in order to investigate further the complex relationship between parent and child in order to garner a more accurate reflection of its influences on children's academic success.

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APPENDIX A

FIGURES

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Figure 1 A Dynamic Model of Patterns of Attachment

False Affect

False Cognition

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APPENDIX B

TABLES

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Table 1Distribution Frequencies of Attachment Types

Attachment Types	Frequency	1
A3	6	
B1/2	2	ļ
B3	7	(
B4/5	6	
C1/2	9	
C3/4	6	
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ntercorrelation	s of attach	ment and	parenting :	variables_w	ith covaria	tes of chi	ld gender, c	hild age, r	eceptive vo	cabulary,	and receip	ot of govern	ment assist	ance	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
& Parenting iables nent (n=36)															
nic Self- itter & Patter	.13														
Report – ale (n=39)	50**	27+											ļ		
- Child ness	27	10	.05										I		
- Parental s	17	05	.01	.33*											
- Parental	05	.15	15	.16	.62**								i		
- Parental	14	05	08	.27+	.20	.34*							1		
- Parental	21	.05	01	.17	.15	.32*	.74***						ļ		
Cognitive	.31+	.09	26+	16	48***	22	17	34*							
Cognitive	12	.02	.20	03	.21	05	05	.17	60**						
Cognitive	28+	16	.12	.42**	.46**	.38*	.30	.21	50**	31*					
Cognitive	.04	.03	08	33*	18	08	03	.05	17	28	.10				
, }ender	.19	.27+	03	.08	09	.12	.07	.11	.11	34*	.19	.17			
Age	31+	.16	.14	.16	.29+	.21	21	14	16	.02	.17	.03	17		
ve	.12	25+	.22	.15	.12	03	.13	.20	07	.17	05	13	.11	39**	
of t Assistance	24	05	.14	.33*	.22	06	.10	.26+	30*	.21	.16	06	05	00	.28*

IT=Mother Child Teaching Task; For attachment coding a '0' = Type B, '1' = Type A, & '2' = Type C. For Gender coding a '0'=Female & '1'=Male. Finally, for receipt of a '1'=receiving government assistance & '2'=not receiving government assistance.

><.01;***p<.001;+ trend p<.10.

Attachment	A	B	C (combined)	C1/2	C3/4;
Preschool	40.5 (2.74)<#	41.5 (3.20)	33.8 (8.99)	35.0(6.78)	32.2(12.15)
Scale		<*#			
Academic	3.50 (3.39)	1.87 (2.26)	2.54 (2.44)	2.89 (2.76)	1.75 (1.50)
Self-Concept					

Table 3 Attachment Type in Relation to Academic Outcomes

< = significantly different from Type C
* = significantly different from C1/2
= significantly different from C3/4</pre>

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APPENDIX C

MEASURES

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<u>Preschool Scale</u> Please rate the degree to which the following statements are true of this child's experiences in preschool or daycare.

Really True . 1	Pretty True 2	Only Sort Of True 3		Not Tr	Very ue 4		
1. Dislikes school			1	2	3	4	
2. Disinterested in lea	arning		1	2	3	4	
3. Feels bad about hi	s/her school	l work	1	2	3	4	, 1
4. Gets stars on pape	rs		1	2	3	4	
5. Good at counting	1	2	3	4			
6. Good at puzzles	1	2	3	4	ł		
7. Knows most ABC		1	2	3	4		
8. Knows colors		1	2	3	4		
9. Knows first letter	of name		1	2	3	4	
10. Messy school wo	ork		1	2	3	4	
11. Not learning as n	nuch as othe	er children	1	2	3	4	

Pitter and Patter Puppet Interview

General Instructions: To begin the interview explain to the child, through the use of Pitter and Patter, that each puppet will explain something about themselves to the child and then say, "We want to learn more about you." Before beginning the interview use the three neutral statements listed below to acclimate the child to the puppet method. Then begin the interview. Note that the puppet's name listed on the left of the script speaks first followed by the puppet on the right of the script, etc. Remember that each child is different and may answer verbally or nonverbally, by way of just pointing at the puppet that the child identifies with. Above all remember to make the interview fun and engaging for the child.

Neutral statements

1. Patter: I like hotdogs. / Pitter: I do not like hotdogs.

Patter: What about you?

2. Pitter: I like pizza. / Patter: I do not like pizza.

Pitter: What about you?

3. Patter: I like Scooby Doo. / Pitter: I do not like Scooby Doo.

Patter: What about you?

The Interview

 Pitter: When I make a mistake, I give up. / Patter: When I make a mistake, I don't give up.

Pitter: What about you?

2. Patter: I like school. / Pitter: I do not like school.

Patter: What about you?

3. Patter: I cry a lot. /Pitter: I do not cry a lot.

Patter: What about you?

4. Pitter: I like working hard at school. / Patter: I do not like working hard at school.

Pitter: What about you?

- Pitter: I never get mad. / Patter: I sometimes get mad.
 Pitter: What about you?
- Patter: Kids at school tease me. / Pitter: Kids at school do not tease me.
 Patter: What about you?
- Pitter: I do not get a lot of tummy aches. / Patter: I do get a lot of tummy aches. Pitter: What about you?
- 8. Pitter: I feel dumb. / Patter: I do not feel dumb.

• **Pitter:** What about you?

9. Patter: I am not scared a lot. / Pitter: I am scared a lot.

Patter: What about you?

- 10. Pitter: I make fun of other kids. / Patter: I do not make fun of other kids.Pitter: What about you?
- 11. Pitter: I feel that my mother loves me. / Patter: I am not sure if mother loves me.

Pitter: What about you?

12. Patter: I always pick up my toys. / Pitter: Sometimes I do not pick up my toys. Patter: What about you?

13. Pitter: I am good at coloring in the lines. / Patter: I am not good at coloring in the lines.

Pitter: What about you?

- 14. Patter: I feel good about myself. / Pitter: I feel bad about myself.Patter: What about you?
- 15. Patter: I don't have many friends. / Pitter: I have a lot of friends.Patter: What about you?
- 16. Pitter: I do not learn things well. / Patter: I learn things well.Pitter: What about you?
- 17. Patter: I am sometimes a bad boy/girl. / Pitter: I am never a bad boy/girl.Patter: What about you?
- 18. Pitter: I hardly play with any kids at school. / Patter: I play with lots of kids at school.

Pitter: What about you?

19. Pitter: When things are hard for me, I keep trying. / Patter: When things are hard for me, I give up.

Pitter: What about you?

20. Patter: I worry a lot. / Pitter: I do not worry a lot.

Patter: What about you?

21. Patter: I do a good job. / Pitter: I do not do a good job.

Patter: What about you?

22. Pitter: I am not a good listener. /Patter: I am a good listener.

Pitter: What about you?

- 23. Pitter: I know lots of numbers. / Patter: I do not know lots of numbers.
- . **Pitter:** What about you?
- 24. Patter: I do not feel smart. / Pitter: I feel smart.

Patter: What about you?

25. Patter: I do not get mad a lot. / Pitter: I get mad a lot.

Patter: What about you?

26. Pitter: Kids do not ask me to play games with them. / Patter: Kids ask me to play games with them.

Pitter: What about you?

- 27. Pitter: I try my best at school. / Patter: I do not try my best at school.Pitter: What about you?
- 28. Patter: I lie a lot. / Pitter: I do not lie a lot.

Patter: What about you?

29. Pitter: I am good at learning letters of the alphabet. / Patter: I am not good at learning letters of the alphabet.

Pitter: What about you?

- 30. Patter: My mother cares about me. / Pitter: My mother does not care about me. Patter: What about you?
- 31. Pitter: I am lonely a lot. / Patter: I am not lonely a lot.

Pitter: What about you?

32. Patter: Kids like me. / Pitter: Kids do not like me.

Patter: What about you?

- 33. Patter: Other kids get mad at me. / Pitter: Other kids do not get mad at me.
 Patter: What about you?
- 34. Pitter: I am always nice. / Patter: I am sometimes not nice.Pitter: What about you?
- 35. Pitter: My mother tells me that I am good. / Patter: My mother does not tell me that I am good.

Pitter: What about you?

- 36. Patter: Sometimes I do not feel like eating. / Pitter: I always feel like eating.Patter: What about you?
- 37. Patter: I do not feel sad a lot. / Pitter: I feel sad a lot.

Patter: What about you?

38. Pitter: Kids do not want me to be their friends. / Patter: Kids want me to be their friends.

Pitter: What about you?

 Patter: I can do schoolwork by myself. / Pitter: I need help with my schoolwork.

Patter: What about you?

40. **Patter**: Bad things are going to happen to me. / **Pitter**: Bad things are not going to happen to me.

Patter: What about you?

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41. Pitter: My mother likes my work. / Patter: My mother does not like my work.

Pitter: What about you?

- 42. Patter: I take other kids things. / Pitter: I do not take other kids things.Patter: What about you?
- 43. Pitter: I do not have scary dreams. / Patter: I have scary dreams.Pitter: What about you?
- 44. Patter: If someone is mean to me, I hit them. / Pitter: If someone is mean to . me, I do not hit them.

Patter: What about you?

- 45. Pitter: My mother listens to me. / Patter: My mother does not listen to me.Pitter: What about you?
- 46. **Patter**: I have too much energy so I get wiggly and bouncy. / **Pitter**: I do not have too much energy so I do not get wiggly and bouncy.

Patter: What about you?

- 47. Pitter: I sometimes tell lies. / Patter: I never tell lies.Pitter: What about you?
- 48. Patter: I do not get in trouble a lot. / Pitter: I get in trouble a lot.Patter: What about you?
- 49. Pitter: My mother is angry with me a lot. / Patter: My mother is not angry with me a lot.

Pitter: What about you?

50. Patter: I always do what I am told. / Pitter: I sometimes don't do what I am told. Patter: What about you?

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